Earning indices of social groups in Guntur districts

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Introduction

Human development is a comprehensive term encompassing the levels of income, education and health conditions of members of households. There may be spatial variations even within Guntur district, say among different mandals or villages depending upon several factors. Apart from this in a stratified society like India, these indicators may not be found on equal footing for all social groups like Scheduled Tribes (STs), Scheduled Castes (SCs), Backward Classes (BCs), and Open category (OCs). Hence, there is a need to analyse levels of income, education and health conditions and other human development variables in different mandals of Guntur district as well as among different caste-groups. In this chapter, an attempt is made to analyse the levels of income in absolute terms, using absolute values relating to these variables.

Objective and methodology

This paper aims to analyse the disparities in economic status of sample households in the Gunture district. The study covers the period 2008-2009 and primary data was collected through designed questionnaire. The total sample size is 360 households in the district. Statistical techniques such as percentages, ratios, compound growth rates, ANOVA, coefficient of variation (C.V), ANCOVA analysis have been used to analyse issues appropriately. Simple statistical tests are used to test the significance levels and accuracy of estimates with regard to various aspects of empirical analysis.

Distribution of Households According to Levels of Household Income

Income is an important indicator of the standard of living in any country. The income levels determine the consumption levels and consequently the welfare levels of households. In fact income is an important means to get many other ends of human life. Table 1 shows the information on the distribution of all households among different income levels in different mandals of Guntur district. It may be observed from the table, that among 360 sample households in Guntur district, 34 households constituting only 9.44 per cent are found to be below the income level of Rs.20,000/- per annum at current market prices. In fact, the highest number of 127 out of 360 households (35.28 per cent) are getting annual income between Rs.20,001/- and Rs.40,000/- per annum. It may also be noted that about 44.77 per cent of households are in the (40001 -100000) per annum. Only 27 households (7.50 per cent) are above the income level of Rs.1,00,001/- per annum.

There are also noticeable variations in the distribution of households among different income categories in different mandals of

Guntur district. The low-income households, i.e., below the income level of Rs.20,000/- per annum are found to be in the largest number in Bellamkonda mandal (06) followed by Nuzendla (05), Narasaraopet (04), Cherukupalli (04) and Nizampatnam (04). On the other hand, the rich households above the income level of Rs.1,00,001/- were very high in Narasaraopet (05) mandal and in the developed delta mandal of Ponnuru (05).

Table 1: Distribution of Households According to level of annual income in different mandal

S. No	Name of The Mandal	Below 20000	20001 to 40000	40001 to 60000	60001 to 80000	80001 to 100000	100001 & Above	Total
1	Narasaraopet	4	6	6	4	5	5	30
2	Karampudi	1	18	6	0	3	2	30
3	Veldurthi	3	11	6	4	3	3	30
4	Nuzendla	5	9	7	3	5	1	30
5	Ponnur	3	9	7	4	2	5	30
6	Cherukupalli	4	13	6	0	6	1	30
7	Kollur	0	13	9	2	4	2	30
8	Nizampatnam	4	8	6	6	4	2	30
9	Guntur	0	8	7	8	5	2	30
10	Pedanandipadu	2	12	6	3	5	2	30
11	Tadepalle	2	11	8	4	3	2	30
12	Bellamkonda	6	9	10	5	0	0	30
Total		34 (9.44)	127 (35.28)	84 (23.33)	43 (11.94)	45 (12.50)	27 (7.50)	360 (100.00)

Note: Figures in parenthesis are percentages to the total.

Source: Computed from Primary Data.

Households other than those belonging to Scheduled Tribe (ST), Scheduled Caste (SC), and Backward Classes (BC) are known as households belonging to open caste-group (OC) households. Due to historical and socio-political reasons these households were relatively better off in terms of economic and social status. Table 2 shows the information on the distribution of OC households among different income groups in various mandals of Guntur district.

Table 2: Distribution of OC Households According to level of Annual Income							
S. No	Name of the Mandal	Below `20000	`20001 to `40000	`40001 to `60000	`60001 to `80000	`80001 to `100000	`100001 & Above	Total
1	Narasaraopet	0	0	0	3	3	3	9
2	Karampudi	0	2	3	0	3	2	10
3	Veldurthi	0	0	3	1	3	3	10
4	Nuzendla	0	0	3	0	5	1	9
5	Ponnur	0	0	3	3	2	2	10
6	Cherukupalli	0	2	3	0	5	1	11
7	Kollur	0	1	3	2	3	1	10
8	Nizampatnam	0	0	1	4	3	0	8
9	Guntur	0	0	0	3	4	1	8
10	Pedanandipadu	0	1	1	3	4	1	10
11	Tadepalle	0	1	2	2	2	2	9
12	Bellamkonda	0	1	3	4	0	0	8
Total		0 (0.00)	8 (7.14)	25 (22.32)	25 (22.32)	37 (33.04)	17 (15.18)	112 (100.00)
Note: Figures in parenthesis are percentages to the total. Source: Computed from Primary Data.							

As may be observed from the table, out of 112 sample OC households in Guntur district, the highest number of 37 households (33.04 per cent) was found to be in the income range of Rs.80, 001 to Rs.1, 00,000. It is very interesting to note from the table that not even a single household is found to be below the income level of Rs. 20,000/- in OC caste. On the other hand, nearly 17 households (15.18 per cent) of OC total households are getting income more than Rs.1, 00,001/-.

Table 3 provides the details of distribution of BC households in different income levels in various mandals of Guntur district. As may be observed from the table, out of 136 sample BC households in Guntur district, the highest number of 57 households (41.91 per cent) are found to be in the income range of Rs.20,001 to Rs.40,000. Only two households (1.47 per cent) are having income below Rs. 20,000/- in BC. On the other hand, 8 households (5.88 per cent) of BC total households are having income more than Rs.1,00,001/-.

Table 3: Distribution of BC Households According to level of Annual Income							
S. No	Name of the Mandal	Below 20000	20001 to 40000	40001 to 60000	60001 to 80000	80001 to 100000	100001 & Above	Total
1	Narasaraopet	0	3	5	1	0	2	11
2	Karampudi	0	8	3	0	0	0	11
3	Veldurthi	0	5	2	3	0	0	10
4	Nuzendla	0	4	4	3	0	0	11
5	Ponnur	0	5	2	1	0	2	10
6	Cherukupalli	0	6	3	0	1	0	10
7	Kollur	0	5	4	0	1	1	11
8	Nizampatnam	0	3	5	2	1	2	13
9	Guntur	0	4	4	4	1	0	13
10	Pedanandipadu	0	5	4	0	1	1	11
11	Tadepalle	0	6	5	1	0	0	12
12	Bellamkonda	2	3	7	1	0	0	13
Total		2 (1.47)	57 (41.91)	48 (35.29)	16 (11.76)	5 (3.68)	8 (5.88)	136 (100.00)
Note: Figures in parenthesis are percentages to the total. Source: Computed from Primary Data.							

Another socially and economically Backward Caste group is Scheduled Caste (SC). Table 4 incorporates the details of distribution of SC households in different income levels in the sample mandals of Guntur district.

A cursory glace at the table clearly indicates that 13 households (16.67 per cent) out of total SC households are getting income less than Rs.20,000/- per annum. On the other hand the rich SC households above the income level of Rs.1,00,001/- are only 2 households (2.56 per cent) of total SC households. 50 households (64.10 per cent) of SC households in Guntur district are earning Rs. 20,001 to Rs. 40,000 per annum. This data clearly brings out the economic backwardness of SC households in Guntur district.

Table 4: Distribution of SC Households According to Level of Annual Income							
S. No	Name of the Mandal	Below `20000	`20001 to `40000	`40001 to `60000	`60001 to `80000	`80001 to `100000	`100001 & Above	Total
1	Narasaraopet	2	2	0	0	2	0	6
2	Karampudi	0	7	0	0	0	0	7
3	Veldurthi	0	5	1	0	0	0	6
4	Nuzendla	3	5	0	0	0	0	8
5	Ponnur	1	3	2	0	0	1	7
6	Cherukupalli	1	5	0	0	0	0	6
7	Kollur	0	5	2	0	0	0	7
8	Nizampatnam	2	4	0	0	0	0	6
9	Guntur	0	2	2	1	0	1	6
10	Pedanandipadu	1	5	1	0	0	0	7
11	Tadepalle	0	4	1	1	0	0	6
12	Bellamkonda	3	3	0	0	0	0	6
Total		13 (16.67)	50 (64.10)	9 (11.54)	2 (2.56)	2 (2.56)	2 (2.56)	78 (100.00)

Note: Figures in parenthesis are percentages to the total. Source: Computed from Primary Data.

Table 5 contains data on the distribution of Scheduled Tribe (ST) households in different income classes in different mandals of Guntur district. It is heartening to note from the table that 19 out of 34 ST households or about 55.88 per cent are getting income less than Rs.20,000/- per annum. It is to be noted that no ST household is getting income more than Rs.1, 00,001/- per annum. Out of total ST households, only 3 households (8.82 per cent) are earning income above Rs. 40,001/- per annum. The data clearly brings out the abysmally low level of income received by ST households in different mandals of Guntur district.

The disparities in the levels of income among different mandals and communities in various mandals of Guntur district are amply out by the empirical evidence provided above. The same is evident by the data on the average incomes of the households in different mandals. The relevant data are furnished in Table 6.

It may be seen from the table that there are considerable variations in the average incomes of the households in different mandals of Guntur district. The average annual household income varies between Rs. 41,867 in Bellamkonda mandal to Rs. 82,500 in Narasaraopet

mandal. Bellamkonda is relatively a dry mandal where there are very few opportunities for earning income from business and agricultural activities. Hence, the lowest is the average income in the Bellamkonda mandal. Narasaraopet is a delta mandal and one of the revenue divisions in Guntur district. It is also relatively more developed in terms of agriculture due to canal irrigation through Krishna canal from Nagarjuna Sagar project. Hence, the highest is the average household income in Narasaraopet mandal even surpassing the district capital viz. Guntur.

S. No	Name of the Mandal	Below `20000	`20001 to `40000	`40001 to `60000	`60001 to `80000	`80001 to `100000	`100001 & Above	Total
	Table 5: Distribution of ST Households by Annual Income							
1	Narasaraopet	2	1	1	0	0	0	4
2	Karampudi	1	1	0	0	0	0	2
3	Veldurthi	3	1	0	0	0	0	4
4	Nuzendla	2	0	0	0	0	0	2
5	Ponnur	2	1	0	0	0	0	3
6	Cherukupalli	3	0	0	0	0	0	3
7	Kollur	0	2	0	0	0	0	2
8	Nizampatnam	2	1	0	0	0	0	3
9	Guntur	0	2	1	0	0	0	3
10	Pedanandipadu	1	1	0	0	0	0	2
11	Tadepalle	2	0	0	0	1	0	3
12	Bellamkonda	1	2	0	0	0	0	3
Total		19 (55.88)	12 (35.29)	2 (5.88)	0 (0.00)	1 (2.94)	0 (0.00)	34 (100.00)
Not:Figures in parenthesis are percentages to the total. Source: Computed from Primary Data.								

Table 6: Distribution of Average Income of Households (Rs)					
S. No	Name of the Mandal	OC	BC	SC	ST	Average Income
1	Narasaraopet	127556	78727	58167	28000	82500
2	Karampudi	92400	42364	33571	22500	55667
3	Veldurthi	83800	47100	35167	21250	53500
4	Nuzendla	66889	50000	30625	19500	47867
5	Ponnur	79900	56300	65000	20000	62567
6	Cherukupalli	75727	51550	31833	20667	53383
7	Kollur	73800	63636	38857	26000	58733
8	Nizampatnam	80375	63369	28000	19667	56460
9	Guntur	114125	59846	64000	39333	73100
10	Pedanandipadu	86500	54455	26714	17500	56200
11	Tadepalle	84778	48833	60000	45333	61500
12	Bellamkonda	63000	41077	23667	25333	41867
Average Income		85446	54796	41013	25853	58612
Not: Figures in parenthesis are percentages to the total. Source: Computed from Primary Data.						

The disparities in average income levels are also observed among different social groups viz., OC, BC, SC and ST. The average income is the highest at Rs.85, 447 for the OCs. This is followed by BCs with average income of Rs.54, 796, SCs with Rs.41,013 and STs with Rs. 25,853/- per annum. Thus the OC households have more incomes than BC, SC and ST households.

The analysis of variance (ANOVA) carried out to test the significance of difference in the average incomes of households in different mandals, however, indicates that the differences are statistically significant. As may be seen from Table 7, the calculated 'F'-value (2.445) is greater than the F-critical value of 2.1512 at 5 per cent level. It means that the apparent differences in the average incomes of households in different mandals may not be due to fluctuations of sampling.

Table 7: ANOVA for Income of Households - Descriptive Statistics

Total Income	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Narasaraopet	30	82500.000	65993.077	12048.632	20000	325000
Karampudi	30	55666.667	39952.846	7294.358	20000	190000
Veldurthi	30	53500.000	31728.101	5792.732	15000	150000
Nuzendla	30	47866.667	22286.123	4068.871	11000	90000
Ponnur	30	62566.667	46146.456	8425.152	19000	250000
Cherukupalli	30	53383.333	30013.125	5479.622	18000	150000
Kollur	30	58733.333	28717.030	5242.988	22000	140000
Nizampatnam	30	56460.000	30604.537	5587.598	17000	120000
Guntur	30	73100.000	42276.879	7718.667	32000	250000
Pedanandipadu	30	56200.000	37214.569	6794.420	15000	180000
Tadepalle	30	61500.000	35588.404	6497.524	18000	160000
Bellamkonda	30	41866.667	18911.287	3452.713	18000	80000
Total	360	58611.944	38510.845	2029.700	11000	325000

ANOVA Test

Mandal	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	38189911638.889	11	3471810148.990	2.445	0.006
Within Groups	494237667000.000	348	1420223181.034		
Total	532427578638.889	359			

Not: Figures in parenthesis are percentages to the total. Source: Computed from Primary Data.

Similarly, the analysis of variance carried out to test the significance difference in the average incomes of different caste-group households also indicates that the differences found are not real and statistically significant. As may be observed from Table 8, the calculated F-value (43.690) is greater than the table F-value (2.866) at 5 per cent level of significance.

However, the p-value, the level at which the null hypothesis (that there is no significant difference in the average incomes of different caste-group households) becomes significant is very close (0.000) to 0.01 or 1 per cent level. It is to be noted that the corresponding 'p' value when the average incomes in

different mandals of Guntur district are analyzed is very high at 0.000. It means that there exist real differences among different caste-groups in the average incomes in Guntur district.

Summary and conclusions

An analysis of household income data reveals that as much as 35 per cent (127 households) of total sample households have annual income between `20,000 - `40,000 and about 9 per cent (34 households) are having income less than `20,000 in the district. Only 27 households constituting 7.5 per cent are having the income more than one lakh per annum.

Table 4.8 ANOVA for Income of Households in Different Caste Groups						
Descriptive Statistics						
Total Income	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
OC	112	85446.429	42840.546	4048.051	11000	325000
BC	136	54796.324	26587.737	2279.880	18000	200000
SC	78	41012.821	32738.830	3706.943	18000	250000
ST	34	25852.941	15043.638	2579.963	15000	98000
Total	360	58611.944	38510.845	2029.700	11000	325000
ANOVA Test						
Caste	Sum of Squares		df	Mean Square	F	Sig.
Between Groups	143276100020.326		3	47758700006.775	43.690	0.000
Within Groups	389151478618.563		356	1093122130.951		
Total	532427578638.889		359			
Not: Figures in parenthesis are percentages to the total. Source: Computed from Primary Data.						

This shows that there exists a wide inequality of income in Guntur district not withstanding its high per capita income in the state. An analysis of household annual income across the sample mandals shows similar variations across mandals. The large number of households having below `20,000 income have been reported in Bellamkonda mandal followed by Nuzendla, Narasaraopet, Cherukupalli and Nizampatnam. The largest numbers of households having income more than Rs.1 lakh are found in Narasaraopet and

Ponnur mandals. It is surprising to note that there are no households having income above `80,000 in Bellamkonda mandal. It is indicates that the most backward mandal among all the sample mandals in Guntur district.

An attempt is made to analyse the variations in the household incomes among different castes. It may be noted that there are no households belonging to OC and BC having income below `20,000 among all the sample mandals except only 2 BC households. Similarly there are no ST households having income above `60,000 except one household in Tadepalle medal large numbers of households are having income from `2000 to `4000. Similarly the SC households having income above `60,000 are very few.

The average annual household income has been calculated and similar variations are also found both among sample madals and castes. The average annual household income values between `42000 in backward Bellamkonda mandal to `83,000 in the developed mandal of Narasaraopet. In the same way the average household income of ST households with `26000 varies to `85000 for the OC communities. These variations of average household incomes have been proved to be statistically significant when analysis of variance (ANOVA) is carried out. When similar analysis is carried out with reference to different caste groups, the same has been proved among caste groups in Guntur district.