REPORT
ON
CONSUMPTION PATTERN OF ODISHA.
POOLED RESULT OF NSS 66th Round (2009-10)

Directorate of
Economics and Statistics
Government of Odisha.
BHUBANESWAR

PREFACE

Directorate of Economics and Statistics, Odisha has been participating on equal matching sample basis with NSSO since 1958. Time and again the reports are published on the basis of State Sample Data. Our endeavour to publish NSS State sample report at par with central sample has gone a mile way despite of huge shortage of staffs at various levels.

As sample size is not adequate to obtain sub-state level estimation, a professional committee constituted by NSC on pooling of central and state sample data under the chairmanship of Professor R. Radhakrishna, Ex-Chairman, National Statistical Commission (NSC) to enhance the sample size and to obtain district level estimation. Poolability test on central and state sample data has been done by DPD, NSSO for Odisha. As per the report of NSC in rural Odisha the poolabilty test on MPCE (monthly percapita consumer expenditure) has been satisfied for all districts except three districts i.e. Gajapati, Koraput and Malkanagiri on URP (uniform recall period) and five districts named Cuttack, Mayurbhanja, Ganjam, Gajapati and Malkanagiri on MRP method (mixed recall period).But in urban Odisha poolability test has been satisfied in all the districts on URP method and except Koraput on MRP method .But on the indicators of employment the poolabilty test has not been satisfied in nine districts i.e. Baragarh, Mayurbhanja, Bhadrak, Kendrapara, Jajpur, Nayagarh, Khurdha, Boudh, Nuapada, Rayagada and Koraput in rural sector and three districts viz, Kendrapara, Khurdha and Bolangiri in urban sector. Hence ignoring the part of employment situation the district wise and region wise results on some important indicators on 'household consumer expenditure' has been published in this report. If the normal sample size will be increased then the result will be more accurate. But lack of manpower is the main constraint for this. Anyhow with the existing sample size the district wise results have been published in this report. The results have been concentrated on household expenditure on food and non-food items for all the districts of Odisha in both urban and rural sectors. Though this report is not conclusive one but it gives a picture of standard of living of the people and employment situation among the districts. This will be very useful for Planning and Policy makers of state mechanism. I must be thankful to all the officers and staff of NSS division for their valuable efforts to bring this report into the present form. Suggestions for improvement of its content and coverage will be highly appreciated.

Sri Dushasan Behera

Director

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ABBREVIATION

CSO – Central Statistical Office
CWS – Current Weekly Status
CDS – Current Daily Status
DE&S – Directorate of Economics and Statistics
DPD – Data processing Division
FOD – Field Operation Division.
FSU – First Stage Unit
HG – Hamlet Group
KBK –Undivided Koraput, Bolangir and Kalahandi districts are popularly known as KBK region. But now it is comprised of 8 (eight) districts i.e., Koraput, Malkangiri, Nabarangpur, Rayagada, Bolangir, Sonepur, Kalahandi and Nuapada.
MPCE – Monthly Percapita Consumer Expenditure
MRP – Mixed Recall Period
MMRP – Modified Recall Period
NSS – National Sample Survey
NSSO-National Sample Survey Office
NSC – National Statistical Commission
OBC – Other Backward Class
ST – Scheduled Tribe
SC – Scheduled Caste
URP – Uniform Recall Period

Highlights of the Report

- The rural coastal Odisha recorded highest per-capita expenditure with Rs 786/- followed by rural Northern regions with Rs 703/- and Southern regions with Rs 588/- as per **MRP** methods
- Similarly in urban Odisha, the per-capita expenditure in coastal region as per MRP was highest with Rs 1429/- followed by Northern and Southern regions with Rs 1393/- and Rs 1251/- as against State average of Rs 1375/-. Thus it depicted a rural-urban divergence of 81.8% in Coastal, 112.67% in Southern and 98.3 % in Northern regions.
- In terms of **URP** estimates, the per-capita expenditure in rural coastal Odisha was estimated as Rs 732/- and that of urban coastal Odisha was Rs 1345/-, which were highest compared to other two regions and above the State average of Rs 656/- and Rs 1326/- respectively.
- The average MPCE of ST and SC families were below State average of Rs 693/-, although the level of livings of SC families was better off compared to ST families as per MRP.
- The average MPCE level of different social groups in Urban Odisha was ranging from Rs 972/-to Rs 1728/-. It is interesting to note that the ST families in urban Odisha were better off compared to SC categories as per MRP.

- In terms of MRP based methodology , the average MPCE (rural) of 04 Districts (13.3 %) namely Rayagada, Nabarangpur, Koraput and Malkangiri were estimated below Rs 500/- (Rs 16.66 per capita per day) , while 04 districts (13.3 %)i.e., Khurdha, Puri , Jagatsinghpur and Jajpur had the highest MPCE ranging between Rs 800/- to Rs 969/-. The average MPCE of Jagatsinghpur was highest with Rs 969/-, which was around three times higher than Koraput district with Rs 369/-. There were 22 districts (73% of 30 districts), which had the per capita expenditure ranging between Rs 500/- to Rs 800/-.

- In case of Urban Sector, there were three districts namely Sonepur, Nuapada and Malkangiri, which had lowest MPCE varied between Rs 787/- to Rs 976/-. The top MPCE districts in the range of Rs 1596/- to Rs 1797/- were Sundergarh, Angul, Keonjhar, Khurdha and Jajpur (05 districts).

CHAPTER PLAN

This report based on 66th round NSS pooled data of state and center,contains five chapters.

Chapter-I Constitutes introduction, objectives of pooling central and state sample, pooling tests, limitations and assumption.

Chapter-II Explainsmain features of 66th round NSS and conceptual framework.

Chapter-III Explains regional level analysis of MPCE by sectors, social groups and household type based on MRP and URP, KBK and Non-KBK regions by sectors.

Chapter-IV Highlights district level analysis of MPCE by sectors based on MRP and URP.

Chapter-V consists of brief conclusion of the entire report and some suggestion to the policy makers and researchers.

Chapter-I
Introduction

Background:

The National Sample Survey Office (NSSO) conducts nationwide sample surveys on various socio-economic issues with “central sample” and the State – Odisha also participates in these surveys with matching sample basis called “ state sample “. The National Sample Survey on household consumer expenditure provides data on level of living, pattern of consumption expenditure etc., which are being used for planning and policy decisions. But the NSSO or the State does not release sub-state level estimates mainly due to inadequate sample size and such estimates are subject to high variability.

The development policies of Government and other agencies are now focused on the district level planning. The demands for district level estimates are increasing day by day. One of the prime objectives behind collection of data by the DES was that the two data sets, one collected by NSSO and another collected by DES, may be pooled together to get a better reliable estimates and benefit will be derived in the case of estimates at sub-state level like regions / districts. Therefore, pooling of central and state sample data may be considered as one of the important way out of the problem of inadequate sample size for releasing district level estimates.

1. Pooling Methodology

The theoretical framework of pooling methodology as well as the issues concerning operational and technical aspects of poolability of NSS central and state sample data was detailed in the report submitted by one of the professional committee constituted by NSC on pooling of central and state sample data under the

chairmanship of Professor R. Radhakrishna, Ex-Chairman, National Statistical Commission (NSC). There was genuine problem in pooling the data of Odisha state as the State DES followed their own software for data entry and validation. State DES of Odisha was thus asked by DPD, NSSO, Kolkata to recast their data in central layout. Some of the key fields such as value of consumption, status code and daily intensity were checked by DPD for conformity before taking up the pooling exercise. As each round of NSS deals with thousands of characteristics, it will be inaccurate to pool the two sets of data unless they follow identical layout and identical field attributes on processing point of view.

1.1:Parameters considered for pooling

Considering the smaller sample size at district level following broad parameters were considered for pooling.

a) MPCE of FOOD, Non-FOOD, and Total MPCE derived from detail item for URP, MRP and MMRP.
b) Household size, sex, age.
c) Activity status principal, subsidiary, weekly, daily and their intensity.

1.2: Testing the poolability of two sets of data

Following tests (district wise) were undertaken by DPD, NSSO, Kolkata for poolability of state and central sample of Odisha.

a) District wise Wald-Wolfowitz run test for MPCE (URP, MRP,MMRP) for central and state sample [non parametric Z-test]
b) District wise Chi-square distribution test over employed, unemployed and out of Labour force.

1.3: Methodology of pooling

The following methodology is used in pooling the central and state sample data.

Weighting by Matching ratio:

Building aggregate estimate of pooled sample in proportion **matching ratio, m: n of central and state sample aggregate estimate where m and n are the allotted sample** for State and Centre separately for rural and urban sector. Building ratio estimate of pooled sample is taken as ratio of aggregate estimates.

1.4: Poolability test results: Summary statements of results are placed below both for poolability test and pooled results for Odisha for 66th round survey.

Table1A (Sample size in State and Central sample)

ODISHA-RURAL						
	Central sample			State sample		
Schedule	**FSU surveyed**	**HH surveyed**	**Persons Surveyed**	**FSU surveyed**	**HH surveyed**	**Persons Surveyed**
1.0 Type-I	372	2975	13349	372	2976	14138
1.0 Type-II	372	2974	13439	372	2976	13986
10	372	2976	12997	372	2976	13868
ODISHA-URBAN						
	Central sample			**State sample**		
Schedule	**FSU surveyed**	**HH surveyed**	**Persons Surveyed**	**FSU surveyed**	**HH surveyed**	**Persons Surveyed**
1.0 Type-I	132	1055	4414	132	1056	4601
1.0 Type-II	132	1055	4354	132	1056	4610
10	132	1055	4260	132	1056	4469

Table 1B(R): (District wise result of run test of MPCE (URP, MRP, MMRP) for pooled sample) ($Z_{0.01}$ = - 2.33 [one sided test] reject if z-value < $Z_{0.01}$)

Dist. code	District Name	URP		MRP		MMRP	
		Z-value	Accept	Z-value	Accept	Z-value	Accept
1	Baragarh	-0.87672	Y	0.375737	Y	1.252458	Y
2	Jharsuguda	-1.41981	Y	-0.70991	Y	0	Y
3	Sambalpur	-1.77477	Y	-1.06486	Y	-2.83963	N
4	Debagarh	-1.77477	Y	-2.3072	Y	1.597291	Y
5	Sundargarh	0.626229	Y	1.127212	Y	1.127212	Y
6	Keonjhar	-1.87869	Y	-0.37574	Y	-0.68997	Y
7	Mayurbhanja	-1.3777	Y	-3.38164	N	-3.63213	N
8	Baleshwar	3.256391	Y	1.878687	Y	-0.25049	Y
9	Bhadrak	-1.75344	Y	-1.50295	Y	-3.95282	N
10	Kendrapara	-0.87672	Y	0.500983	Y	-1.25246	Y
11	Jagatsinghpur	-0.57887	Y	-0.57887	Y	-0.8683	Y
12	Cuttack	-2.32139	Y	-3.57633	N	-2.37967	N
13	Jajpur	0.250492	Y	-0.50098	Y	-0.62623	Y
14	Dhenkanal	-0.57887	Y	1.013018	Y	0.868301	Y
15	Angul	-1.44717	Y	-1.15774	Y	-0.72358	Y
16	Nayagarh	-1.30245	Y	1.157735	Y	1.88132	Y
17	Khurdha	-1.88132	Y	-0.72358	Y	-1.88132	Y
18	Puri	-1.25246	Y	-1.50295	Y	-3.38164	N
19	Ganjam	-1.23177	Y	-3.24739	N	-1.90364	Y
20	Gajapati	-4.08197	N	-5.85673	N	-6.21169	N
21	Kandhamal (Phulbani)	-1.41981	Y	-0.70991	Y	0	Y
22	Boudh	-2.12972	Y	-1.41981	Y	0.177477	Y
23	Sonepur	-0.17748	Y	-0.53243	Y	-2.3072	Y
24	Bolangiri	0	Y	0.578868	Y	-0.72358	Y
25	Nuapada	-0.17748	Y	-0.88738	Y	1.952245	Y
26	Kalahandi	0.500983	Y	1.252458	Y	-1.12721	Y
27	Rayagada	-1.24234	Y	-1.95224	Y	0	Y
28	Nabarangapur	0.144717	Y	-0.14472	Y	-0.72358	Y
29	Koraput	-5.06509	N	-0.43415	Y	0.868301	Y
30	Malkangiri	-3.01711	N	-3.72701	N	-2.48468	N

SOURCE: Pooling report of Govt of India.

Table 1B (U): (District wise run test of MPCE difference (URP, MRP, MMRP) for pooled sample $Z_{0.005} = 2.575$ [one sided test] reject if absolute z-value > $Z_{0.005}$)

Dist. code	District Name	URP		MRP		MMRP	
		Z-value	Accept	Z-value	Accept	Z-value	Accept
1	Bargarh	1.27354	Y	0.47069	Y	0.64131	Y
2	Jharsuguda	2.39320	Y	1.75752	Y	2.87595	N
3	Sambalpur	1.09614	Y	0.84930	Y	1.69728	Y
4	Debagarh	0.02229	Y	0.11366	Y	0.11133	Y
5	Sundargarh	6.41690	N	5.58795	N	3.21215	N
6	Keonjhar	0.16112	Y	0.37427	Y	0.01820	Y
7	Mayurbhanj	2.17817	Y	2.42654	Y	9.20850	N
8	Baleshwar	0.28459	Y	0.19129	Y	0.28720	Y
9	Bhadrak	1.07921	Y	1.20666	Y	0.20712	Y
10	Kendrapara	3.22877	N	3.28021	N	2.99035	N
11	Jagatsinghpur	0.70611	Y	0.89832	Y	1.10582	Y
12	Cuttack	1.25997	Y	2.51283	Y	3.02735	N
13	Jajpur	0.98564	Y	2.03310	Y	1.50606	Y
14	Dhenkanal	0.05178	Y	0.18377	Y	1.64268	Y
15	Angul	0.18251	Y	0.25965	Y	0.39848	Y
16	Nayagarh	1.76330	Y	2.61382	N	1.78017	Y
17	Khurdha	0.71741	Y	0.07752	Y	0.39529	Y
18	Puri	2.41534	Y	2.87585	N	0.12290	Y
19	Ganjam	1.42840	Y	0.26938	Y	3.46562	N
20	Gajapati	1.21955	Y	2.50179	Y	3.50435	N
21	Kandhamal (Phulbani)	1.54318	Y	0.77969	Y	0.78794	Y
22	Boudh	0.82799	Y	0.64229	Y	0.28034	Y
23	Sonepur	0.15498	Y	1.75720	Y	0.41169	Y
24	Bolangir	1.77850	Y	2.83983	N	1.29579	Y
25	Nuapada	1.32641	Y	1.53570	Y	0.19848	Y
26	Kalahandi	1.02681	Y	3.12049	N	2.38251	Y
27	Rayagada	1.21927	Y	0.81880	Y	0.79958	Y
28	Nabarangpur	0.56291	Y	0.90349	Y	1.37825	Y
29	Koraput	0.68632	Y	0.24024	Y	0.60625	Y
30	Malkangiri	2.03262	Y	4.22583	N	0.45957	Y
All	**Odisha**	**2.24047**	**Y**	**2.40460**	**Y**	**3.24717**	**N**

SOURCE: Pooling report of Govt of India.

Table 1C(R): [SCHEDULE 10] CHI-SQUARE TEST (RURAL ODISHA)

District wise chi-square value of distribution of persons over worker, unemployed and out of labour force for pooled sample. $\chi^2_{.01}$ = 9.21 df = 2 [one sided test] reject if χ^2-value > $\chi^2_{.01}$							
Dist. code	District Name	PS+SS		CWS		CDS	
		χ^2-value	Accept	χ^2-value	Accept	χ^2-value	Accept
1	Bargarh	9.813695	N	6.135381	Y	47.34916	N
2	Jharsuguda	0.478822	Y	1.361013	Y	8.550966	Y
3	Sambalpur	4.811925	Y	2.633247	Y	5.485032	Y
4	Debagarh	0.710917	Y	1.465609	Y	2.905799	Y
5	Sundargarh	3.242078	Y	5.588129	Y	16.32234	N
6	Keonjhar	2.131391	Y	2.482529	Y	50.64449	N
7	Mayurbhanj	77.63813	N	35.35464	N	31.83823	N
8	Baleshwar	0.833158	Y	4.695979	Y	6.300273	Y
9	Bhadrak	30.40147	N	31.47411	N	32.98387	N
10	Kendrapara	20.8152	N	20.29761	N	17.99342	N
11	Jagatsinghpur	0.653325	Y	0.702864	Y	0.402945	Y
12	Cuttack	4.870969	Y	4.025701	Y	1.315978	Y
13	Jajpur	16.77504	N	19.30716	N	28.55851	N
14	Dhenkanal	4.361134	Y	4.277127	Y	3.763498	Y
15	Angul	5.269097	Y	6.917721	Y	6.920945	Y
16	Nayagarh	9.267447	N	9.108206	Y	14.95576	N
17	Khurdha	10.83767	N	9.728152	N	1.805769	Y
18	Puri	2.774161	Y	4.117254	Y	17.19889	N
19	Ganjam	0.475786	Y	1.089268	Y	3.119083	Y
20	Gajapati	0.307012	Y	3.070573	Y	6.777912	Y
21	Kandhamal (Phulbani)	4.557141	Y	6.029236	Y	6.294616	Y
22	Boudh	21.37952	N	18.05154	N	16.86867	N
23	Sonepur	6.030545	Y	5.091079	Y	3.339064	Y
24	Bolangir	0.876873	Y	7.705356	Y	3.450451	Y
25	Nuapada	10.80041	N	10.80041	N	72.07422	N
26	Kalahandi	0.485662	Y	4.895477	Y	55.39734	N
27	Rayagada	17.34973	N	12.68713	N	11.48354	N
28	Nabarangpur	0.600464	Y	4.72893	Y	19.27935	N
29	Koraput	35.40735	N	31.54989	N	31.33466	N
30	Malkangiri	0.410994	Y	0.809743	Y	6.9467	Y

SOURCE: Pooling report of Govt of India.

Table 1C (U): [SCHEDULE 10] CHI-SQUARE TEST (URBAN ODISHA)

State: ORISSA Sector: URBAN [SCHEDULE 10] CHI-SQUARE TEST

Table-0.2 (U): District wise chi-square value of distribution of persons over worker, unemployed and out of labour force for pooled sample. $\chi^2_{.01}$ = 9.21 df = 2 [one sided test] reject if χ^2-value > $\chi^2_{.01}$

Dist code	District Name	PS+SS		CWS		CDS	
		χ^2-value	Accept	χ^2-value	Accept	χ^2-value	Accept
1	Bargarh	8.10E-02	Y	2.40E-02	Y	2.980201	Y
2	Jharsuguda	1.626134	Y	1.697705	Y	1.238958	Y
3	Sambalpur	4.735873	Y	6.213738	Y	6.480475	Y
4	Debagarh	5.685123	Y	3.848682	Y	4.028184	Y
5	Sundargarh	2.350384	Y	1.719871	Y	4.936549	Y
6	Keonjhar	4.059581	Y	1.654851	Y	4.025323	Y
7	Mayurbhanj	9.011697	Y	8.297578	Y	9.410228	N
8	Baleshwar	1.461271	Y	1.157574	Y	1.320224	Y
9	Bhadrak	2.323735	Y	2.848029	Y	4.482801	Y
10	Kendrapara	10.3486	N	10.3486	N	14.3842	N
11	Jagatsinghpur	3.618576	Y	3.644692	Y	0.97082	Y
12	Cuttack	0.598038	Y	0.598038	Y	2.020549	Y
13	Jajpur	5.121871	Y	8.902622	Y	10.99747	N
14	Dhenkanal	1.543729	Y	1.543729	Y	1.97293	Y
15	Angul	1.503353	Y	1.503353	Y	0.679174	Y
16	Nayagarh	3.942727	Y	5.148061	Y	5.158921	Y
17	Khurdha	10.15963	N	9.960485	N	10.35477	N
18	Puri	5.840783	Y	5.651593	Y	5.62838	Y
19	Ganjam	2.156739	Y	2.156739	Y	2.156739	Y
20	Gajapati	0.915318	Y	0.499501	Y	0.721409	Y
21	Kandhamal (Phulbani)	0.129794	Y	0.129794	Y	0.0468	Y
22	Boudh	4.949367	Y	4.137859	Y	6.617864	Y
23	Sonepur	2.225303	Y	1.18847	Y	1.295918	Y
24	Bolangir	13.50744	N	14.04005	N	11.60565	N
25	Nuapada	2.091912	Y	4.546531	Y	20.60127	N
26	Kalahandi	1.6736	Y	2.644613	Y	20.09077	N
27	Rayagada	0.109233	Y	3.25E-02	Y	0.737661	Y
28	Nabrangpur	0.803003	Y	1.0376	Y	1.145259	Y
29	Koraput	1.397366	Y	1.397366	Y	8.869771	Y
30	Malkangiri	0.130257	Y	8.77E-02	Y	0.192012	Y

SOURCE: Pooling report of Govt of India.

LIMITATION:

From the given two tables 1B(R) and 1B(U) it is observed that for rural Odisha, three districts in case of URP, five districts in case of MRP and seven districts in case of MMRP did not satisfy the poolability test. For urban Odisha all districts in case of URP, except one in case of MRP and seven in case of MMRP satisfied the poolability test.

ASSUMPTION:

Although the MPCE estimates does not satisfy poolability test for some districts, the MPCE estimates for central and state sample are closer to each other at State level. As such it is decided to pool the central and state sample for district level estimates with an assumption to yield acceptable results. The Pooled MPCE report of the State is based on MRP and URP consumption distribution of 66th round NSS.

Chapter-II

MAIN FEATURES OF 66TH ROUND NSS

Schedule of Enquiry

The household consumer expenditure schedule ("Schedule 1.0") used for the survey collected information on quantity2 and value of household consumption.

Sample Design

2.1 **Outline of sample design:** A stratified multi-stage design has been adopted for the 66th round survey. The first stage units (FSU) are the 2001 Census Villages in the rural sector and Urban Frame Survey (UFS) blocks in the urban sector treated as FSUs in the urban sector. The ultimate stage units (USU) are households in both the sectors. In case of large FSUs, one intermediate stage of sampling is the selection of two hamlet-groups (hgs)/ sub-blocks (sbs) from each rural/ urban FSU.

2.2 **Sampling Frame for First Stage Units:** *For the rural sector,* the list of 2001 census villages constitutes the sampling frame. *For the urban sector*, the list of latest available UFS blocks is considered as the sampling frame. For non-UFS towns, frame consists of the individual towns.

2.3 **Stratification:** Within each district of a State/ UT, generally speaking, two basic strata have been formed: i) rural stratum comprising of all rural areas of the district and (ii) urban stratum comprising of all the urban areas of the district. However, within the urban areas of a district, wherever there are one or more towns with population 10 lakhs or more as per population census 2001 in a district, each of them forms a separate basic stratum and the remaining urban areas of the district are considered as another basic stratum.

2.4 **Sub-stratification**: There is no sub-stratification in the urban sector. However, to net adequate number of child workers, for all rural strata, each stratum has been divided into 2 sub-strata as follows:

Sub-stratum 1: all villages with proportion of child workers (p) >2P (where P is the average proportion of child workers for the state as per Census 2001)

Sub-stratum 2: remaining villages

2.6 **Allocation of total sample to State:** The total number of sample FSUs is allocated to the States in proportion to population as per census 2001 subject to a minimum sample allocation to each State. While doing so, the resource availability in terms of number of field investigators has been kept in view.

2.7 **Allocation of State level sample to rural and urban sectors:** State level sample size is allocated between two sectors in proportion to population as per *census 2001*. A minimum of 16 FSUs (to the extent possible) is allocated to state separately for rural and urban areas. Further the State level allocations for both rural and urban have been adjusted marginally in a few cases to ensure that each stratum/ sub-stratum gets a minimum allocation of 4 FSUs.

2.8 **Allocation to strata/ sub-strata:** Within each sector of a State, the respective sample size is allocated to the different strata/ sub-strata in proportion to the population as per census 2001. Allocations at stratum/ sub-stratum level are adjusted to multiples of 4 with a minimum sample size of 4 and equal number of samples has been allocated among the four sub rounds.

2.9 **Selection of FSUs:** For the rural sector, from each stratum/ sub-stratum, required number of sample villages has been selected by probability proportional to size with replacement (PPSWR), size being the population of the village as per Census 2001. For urban sector, from each stratum FSUs have been selected by using Simple Random Sampling Without Replacement (SRSWOR). Both rural and urban samples have been drawn in the form of two independent sub-samples.

2.10: Formation and selection of hamlet-groups/ sub-blocks

Criterion for hamlet-group/ sub-block formation: Selected FSUs with approximate population 1200 or more are divided into a suitable number (say, D) of 'hamlet-groups' in the rural sector and 'sub-blocks' in the urban sector as stated below.

approximate present population of the sample FSU		no. of hgs/sbs to be formed
less than 1200	(no hamlet-groups/sub-blocks)	1
1200 to 1799		3
1800 to 2399		4
2400 to 2999		5
3000 to 3599		6
……..and so on		

2.11: **Selection of hamlet-groups/ sub-blocks:** Two hamlet-groups (hg)/ sub-blocks (sb) are selected from a large FSU wherever hamlet-groups/ sub-blocks are formed in the following manner – one hg/sb with maximum percentage share of population is always selected and termed as hg/ sb 1; one more hg/sb is selected from the remaining hg/ sb by simple random sampling (SRS) and termed as hg/ sb 2. Listing and selection of the households is done independently in the two selected hamlet-groups/ sub-blocks. The FSUs without hg/ sb formation are treated as sample hg/sb number 1.

2.12: **Listing of households:** Having determined the hamlet-groups/ sub-blocks, i.e. area(s) to be considered for listing, the next step is to list all the households (including those found to be temporarily locked after ascertaining the temporariness of locking of households through local enquiry). The hamlet-group/ sub-block with sample hg/ sb number 1 is considered for listing first, to be followed by the listing of households within the sample hg/ sb number 2.

2.13: Formation of second stage strata and allocation of households

Two cut-off points 'A' and 'B' (in Rs.) have been determined from NSS 61st round data for **each NSS region** for urban areas in such a way that top 10% of the population have MPCE more than 'B' and bottom 30% of the population have MPCE less than A.

For both Schedule 1.0 and Schedule 10, households listed in the selected FSU/ hamlet-group/ sub-block are stratified into three second stage strata (SSS). Composition of the SSS and number of households to be surveyed from different SSS for each of the three schedules of enquiry namely, Schedule 1.0 (Type 1), Schedule 1.0 (Type 2) and Schedule 10 are as follows:

SSS	composition of SSS	number of households to be surveyed	
		FSU without hg/sb formation	FSU with hg/sb formation (for each hg/sb)
Rural			
SSS 1:	Relatively affluent households	2	1
SSS 2:	of the remaining, households having principal earning from non- agricultural activity	4	2
SSS 3:	other households	2	1
Urban			
SSS 1:	households having MPCE of top 10% of urban population (MPCE > B)	2	1
SSS 2:	households having MPCE of middle 60% of urban population (A ≤ MPCE ≤ B)	4	2
SSS 3:	households having MPCE of bottom 30% of urban population (MPCE < A)	2	1

2.14: Selection of households: From each SSS the sample households for each of the schedules are selected by SRSWOR. If a household is selected for more than one schedule, only one schedule is canvassed in that household in the priority order of Schedule 1.0 (Type 1), Schedule 1.0 (Type 2) and Schedule 10 and in that case the household would be replaced for the other schedule. If a household is selected for Schedule 1.0 (Type 1) it is not selected for Schedule 1.0 (Type 2) or Schedule 10. Similarly, if a household is not selected for Schedule 1.0 (Type 1) but selected for Schedule 1.0 (Type 2) it is not selected for Schedule 10.

However, at least one household is to be surveyed from each SSS for each of the three schedules of enquiry. To adhere to this restriction, the condition of not canvassing more than one schedule in the same household is waived in the extreme cases where there may be insufficient number of households in the frame of a particular second stage stratum.

2.15: **Estimation Procedure**

Notations:

s = subscript for s-th stratum

t = subscript for t-th sub-stratum (only for rural sector)

m = subscript for sub-sample (m =1, 2)

i = subscript for i-th FSU [village (panchayat ward)/ block/ non-UFS town]

d = subscript for a hamlet-group/ sub-block (d = 1, 2)

j = subscript for j-th second stage stratum in an FSU/ hg/sb [j = 1, 2 or 3]

k = subscript for k-th sample household under a particular second stage stratum within an FSU/ hg/sb

D = total number of hg's/ sb's formed in the sample FSU

D* = 0 if D = 1

= (D – 1) for FSUs with D > 1

N = total number of FSUs in any urban stratum

Z = total size of a rural stratum/sub-stratum (= sum of sizes for all the FSUs of a stratum/sub-stratum)

z = size of sample village used for selection.

n = number of sample FSUs surveyed including 'zero cases' but excluding casualty for a particular sub-sample and stratum/sub-stratum.

H = total number of households listed in a second-stage stratum of an FSU / hamlet-group or sub-block of sample FSU

h = number of households surveyed in a second-stage stratum of an FSU / hamlet-group or sub-block of sample FSU

x, y = observed value of characteristics *x*, *y* under estimation

$\hat{X}$, $\hat{Y}$ = estimate of population total X, Y for the characteristics *x*, *y*

Under the above symbols,

$y_{stmidjk}$ = observed value of the characteristic y for the k-th household in the j-th second stage stratum of the d-th hg/ sb (d = 1, 2) of the i-th FSU belonging to the m-th sub-sample for the t-th sub-stratum of s-th stratum.

However, for ease of understanding, a few symbols have been suppressed in following paragraphs where they are obvious.

Formulae for Estimation of Aggregates for a particular sub-sample and stratum (for urban) / sub-stratum (for rural):

Schedule 0.0:

Rural:

(i) For estimating the number of households in a stratum/sub-stratum possessing a characteristic:

$$\hat{Y} = \frac{Z}{n}\sum_{i=1}^{n}\frac{1}{z_i}\left[y_{i1} + D_i^{*} \times y_{i2}\right]$$

Where y_{i1} , y_{i2} are the total number of households possessing the characteristic *y* in hg's 1 & 2 of the i-th FSU respectively.

(ii) For estimating the number of villages in a stratum possessing a characteristic:

$$\hat{Y} = \frac{Z}{n}\sum_{i=1}^{n}\frac{1}{z_i}y_i$$

Where y_i is taken as 1 for sample villages possessing the characteristic and 0 otherwise.

Urban:

(i) For estimating the number of households in a stratum possessing a characteristic:

$$\hat{Y} = \frac{N}{n}\sum_{i=1}^{n}\left[y_{i1} + D_i^{*} \times y_{i2}\right]$$

Where y_{i1} and y_{i2} are the total number of households possessing the characteristic *y* belonging to sub-blocks 1 and 2 respectively, of the i-th FSU.

Schedules 1.0 (Type 1) / 1.0 (Type 2) / 10:

Rural:

(i) For j-th second stage stratum of a sub-stratum:

$$\hat{Y}_j = \frac{Z}{n_j}\sum_{i=1}^{n_j}\frac{1}{z_i}\left[\frac{H_{i1j}}{h_{i1j}}\sum_{k=1}^{h_{i1j}} y_{i1jk} + D_i^* \times \frac{H_{i2j}}{h_{i2j}}\sum_{k=1}^{h_{i2j}} y_{i2jk}\right]$$

(ii) For all second-stage strata combined:

$$\hat{Y} = \sum_j \hat{Y}_j$$

(iii) Estimate for a stratum ($\hat{Y}_s$) will be obtained by adding sub-stratum level estimates ($\hat{Y}_{st}$).

Urban:

(i) For j-th second stage stratum of a stratum:

$$\hat{Y}_j = \frac{N}{n_j}\sum_{i=1}^{n_j}\left[\frac{H_{i1j}}{h_{i1j}}\sum_{k=1}^{h_{i1j}} y_{i1jk} + D_i^* \times \frac{H_{i2j}}{h_{i2j}}\sum_{k=1}^{h_{i2j}} y_{i2jk}\right]$$

(ii) For all second-stage strata combined:

$$\hat{Y} = \sum_j \hat{Y}_j$$

Overall Estimate for Aggregates:

Overall estimate for aggregates for a stratum ($\hat{Y}_s$) based on two sub-samples is obtained as:

$$\hat{Y}_s = \frac{1}{2}\sum_{m=1}^{2}\hat{Y}_{sm}$$

Overall Estimate of Aggregates at State Odisha:

The overall estimate $\hat{Y}$ at the State level is obtained by summing the stratum estimates $\hat{Y}_s$ over all strata belonging to the State.

8. Multipliers:

The formulae for multipliers at stratum/sub-stratum/second-stage stratum level for a sub-sample and schedule type are given below:

Sch type	sector	formula for multipliers	
		hg / sb 1	hg / sb 2
0.0	rural	$\frac{Z_{st}}{n_{stm}} \times \frac{1}{z_{stmi}}$	$\frac{Z_{st}}{n_{stm}} \times \frac{1}{z_{stmi}} \times D^{*}_{stmi}$
	Urban	$\frac{N_s}{n_{sm}}$	$\frac{N_s}{n_{sm}} D^{*}_{smi}$
1.0 (Type 1)/ 1.0 (Type 2)/ 10	rural	$\frac{Z_{st}}{n_{stmj}} \times \frac{1}{z_{stmi}} \times \frac{H_{stmi1j}}{h_{stmi1j}}$	$\frac{Z_{st}}{n_{stmj}} \times \frac{1}{z_{stmi}} \times D^{*}_{stmi} \times \frac{H_{stmi2j}}{h_{stmi2j}}$
	Urban	$\frac{N_s}{n_{smj}} \times \frac{H_{smi1j}}{h_{smi1j}}$,	$\frac{N_s}{n_{smj}} \times D^{*}_{smi} \times \frac{H_{smi2j}}{h_{smi2j}}$,
	(j = 1, 2, 3)		

Note: (i) For estimating any characteristic for any domain not specifically considered in sample design, indicator variable may be used.

(ii) Multipliers have to be computed on the basis of information available in the listing schedule irrespective of any misclassification observed between the listing schedule and detailed enquiry schedule.

(iii) For estimating number of villages possessing a characteristic, D^{*}_{stmi} = 0 in the relevant multipliers and there will be only one multiplier for the village

Mathematical tools used:

Composite index (Ii) =1/n$\sum(Xi - Xmin)/(Xmax - Xmin)$

To construct the Gini Index, the cumulative percentage of Xi (distribution of population low to high) has been taken on the horizontal axis and the cumulative percentage of Yi (distribution of consumption expenditure) has been taken on the vertical axis. Then GINI INDEX OR GINI COEFFICIENT has been calculated using the following formula.

$$Gini\ Index = \frac{\sum[\boldsymbol{X_i}*(\boldsymbol{Y_{i+1}})] - \sum[\boldsymbol{Y_i}*(\boldsymbol{X_{i+1}})]}{N^2}$$

Where N= cumulative percentage total =100

Basic concepts:

- **Household consumer expenditure:** The expenditure incurred by a household on domestic consumption during the reference period is the household's consumer expenditure
- **MPCE (monthly per capita consumer expenditure):** Household consumer expenditure is the sum total of monetary values of all the items (i.e. Goods and services) consumed by the household on domestic account during the reference period. MPCE is understood as household consumer expenditure over a period of 30 days divided by household size.

  Three different methods of measurement of monthly per capita expenditure (MPCE) at household level namely URP, MRP and MMRP were used in 66th round of survey based on the reference period of data collection.
- **URP (uniform recall period)**: In this method all the food and nonfood items are collected over uniform reference period 30 days.
- **MRP (Mixed recall period)**: In this method all the food items and some nonfood items are collected over reference period 30 days but some durable items like furniture, clothing items and medical institutional expenditure are collected over the reference period 365 days.

Chapter-III

3.1: State Analysis on Pooled data

The following table gives the average monthly Percapita consumer expenditure of rural and urban Odisha based on two different reference periods i.e. mrp (mixed recall period) and urp (uniform recall period).

Table 3.1.1(Monthly Percapita Consumer Expenditure in Odisha)

State	MRP based (in Rs)				URP based (in Rs)			
	Rural	**Urban**	Urban-Rural Gap (in Rs)	% Gap	**Rural**	**Urban**	Urban-Rural Gap (in Rs)	% Gap
Odisha	693.16	1374.84	681.68	98.3	655.81	1326.34	670.53	102.2

It is clear for the table that there is nearly 100% rural urban gap in Odisha in monthly per-capita expenditure in both the methods.

The following tables 3.1.2 and 3.1.3 gives information on decile class wise average MPCE (MRP) of both rural and urban Odisha.

Table 3.1.2: Decile Class wise Average MPCE (MRP) of Rural Odisha

Decile classes(in Rs)	Estimated Population	Average_MPCE (in Rs)
<= 379.63	3236778	317.68
379.64 - 449.00	3249021	416.04
449.01 - 506.00	3255675	478.44
506.01 - 561.00	3236283	533.60
561.01 - 616.00	3216975	589.10
616.01 - 681.95	3206143	647.97
681.96 - 759.35	3255317	722.33
759.36 - 864.90	3236693	808.09
864.91 - 1049.05	3245201	941.00
1049.06+	3224403	1480.80
All Odisha	32362487	693.16

Table 3.1.3: Decile Class wise Average MPCE (MRP) of Urban Odisha

Decile classes(in Rs)	Estimated Population	Average_MPCE (in Rs)
<= 456.89	561556	403.94
456.90 - 580.12	551533	506.97
580.13 - 729.22	568370	656.17
729.23 - 843.00	551214	778.60
843.01 - 1028.00	548516	934.55
1028.01 - 1268.04	565716	1138.65
1268.05 - 1569.00	548404	1430.13
1569.01 - 1869.32	552535	1725.06
1869.33 - 2596.36	559383	2186.40
2596.37+	554743	4003.54
All Odisha	5561971	1374.83

As this report is based on pooled data and objective is to obtain sub-state level analysis the detail analysis has been made in Region and district level as follows.

3.2: Regional Level Analysis

According to list of NSS regions, there are three regions in the State namely Coastal, Southern and Northern. The composition of the regions are as follows:

Table: 3.2.1 Composition of Regions in Odisha

Sl.No	Regions	No of Districts	Name of the District
1	Coastal	09	Jagatsinghpur , Puri, Baleshwar, Jajpur, Cuttack, Bhadrak Nayagarh, Kendrapara, Khurdha
2	Southern	12	Ganjam, Gajapati, Nuapada, Kalahandi, Kandhamal, Rayagada Nabarangpur, Boudh Koraput, Sonepur, Bolangir, Malkangiri
3	Northern	09	Bargarh, Keonjhar, Jharsuguda, Mayurbhanj, Sambalpur, Dhenkanal Debagarh, Angul, Sundargarh

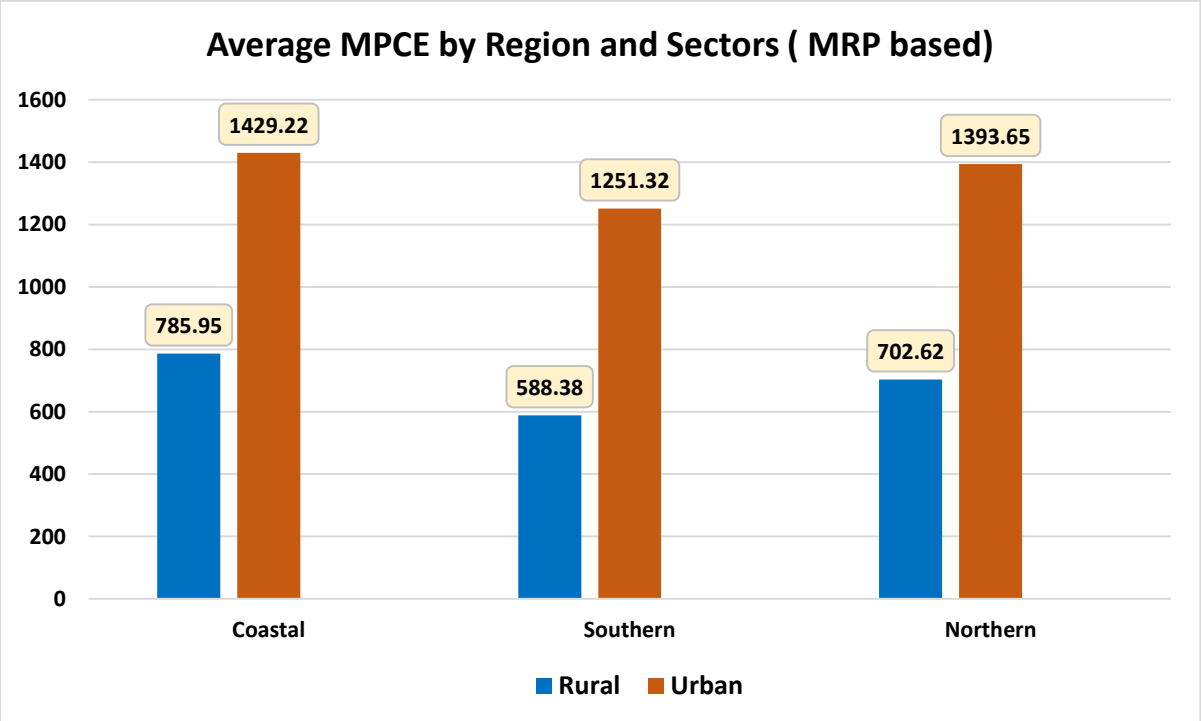
3.2.1: Average MPCE by regions

The regional level average MPCE (mrp based) by sectors is given in table: 3.2.2 It is observed that rural coastal Odisha recorded highest per-capita expenditure with Rs 786/- followed by rural Northern regions with Rs 703/- and Southern regions with Rs 588/-. Further, the per-capita expenditure of both rural Coastal and Northern regions were above the State average of Rs 693/-, whereas rural Southern region experienced less in per capita expenditure than the State average.

Table:-3.2.2: Region wise Average MPCE by Sectors, MRP based (in Rs)

Region wise Average MPCE (URP) Rural		Region wise Average MPCE (URP)Urban		Urban-Rural Gap (Rs)	Gap in percentage
NSS region	Average mpce	NSS region	Average mpce		
Coastal	785.95	Coastal	1429.22	643.27	81.8
Southern	588.38	Southern	1251.32	662.94	112.6
Northern	702.62	Northern	1393.65	691.03	98.4
Odisha	693.16	Odisha	1374.84	681.68	98.3

Figure:-1



Similarly in urban Odisha, The corresponding per-capita expenditure in coastal region was highest with Rs 1429/- followed by Northern and Southern regions with Rs 1393 and Rs 1251 as against State average of Rs 1375/-. Thus it depicted a rural-urban divergence of 81.8% in Coastal, 112.67% in Southern and 98.3 % in Northern regions.

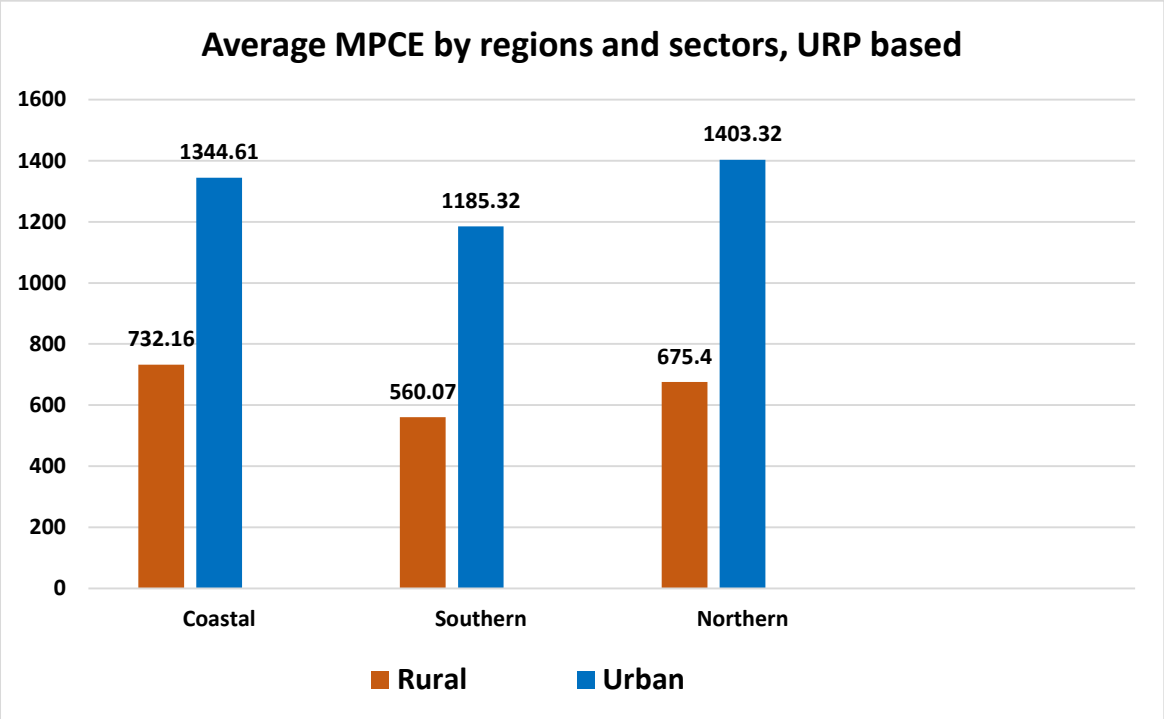
In terms of URP estimates, the per-capita expenditure in rural coastal Odisha was estimated as Rs 732/- and that of urban coastal Odisha was Rs 1345/-, which were highest compared to other two regions and above the State average of Rs 656 and Rs 1326 respectively. But the per-capita expenditure of southern region for rural and urban sectors stood at Rs 560 and Rs 1185 respectively, which were below the State average.

Table:-3.2.3: Region-wise average MPCE by Sectors, URP based (Amount in Rs)

Region wise Average MPCE (URP) Rural		Region wise Average MPCE (URP)Urban		Urban-Rural Gap (Rs)	Gap in percentage
NSS region	Average mpce	NSS region	Average mpce		
Coastal	732.16	Coastal	1344.61	612.45	83.6
Southern	560.07	Southern	1185.32	625.25	111.6
Northern	675.40	Northern	1403.32	727.92	107.7
Odisha	655.81	Odisha	1326.34	670.53	102.2

In case of rural-urban gap in MPCE (URP), it is seen that there was wide rural-urban divergence in Southern and Northern regions with 111.6 % and 107.7 % respectively. Thus in rural and urban Odisha, Southern region may be regarded as poor region in terms of per-capita expenditure based on mrp as well as urp estimates.

Figure:-2



3.2.2: Rural-Urban Disparity in Per-capita expenditure

Table-3.2.4 below shows the rural-urban disparity in per-capita expenditure by different regions. An increasing ratio (towards 100) indicates a reduction in rural-urban disparity whereas a declining ratio indicates an increase in rural-urban disparity.

Table:-3.2.4: Rural-Urban disparity in MPCE (in Rs)

Region	MRP based (Rs)			URP based (Rs)		
	Rural	Urban	Disparity %	Rural	Urban	Disparity %
Coastal	786	1429	55.0	732	1345	54.4
Southern	588	1393	42.2	560	1185	47.3
Northern	703	1251	56.2	675	1403	48.1
Odisha	693	1375	50.4	656	1326	49.5

In terms of MRP estimates, the ratio of rural to urban MPCE in Southern region was less compared to Northern and Coastal region. It is therefore concluded that the rural – urban disparity in Southern region was more than Northern and Coastal regions. Northern region had the higher ratio with 56.2 % followed by Coastal with 55.0 %

In terms of URP based, the ratio of rural to urban MPCE in Southern region was 47.3 % and that of Northern regions it was 48.1 %, which were less compared to Coastal region with 54.4%e. Thus it is seen that in URP based, the rural-urban disparity in MPCE was more than that of MRP based estimates.

3.2.3: Average MPCE by Social Groups and Regions

Table:-3.2.5 Region & Social Group wise Average MPCE (MRP) for Rural Odisha

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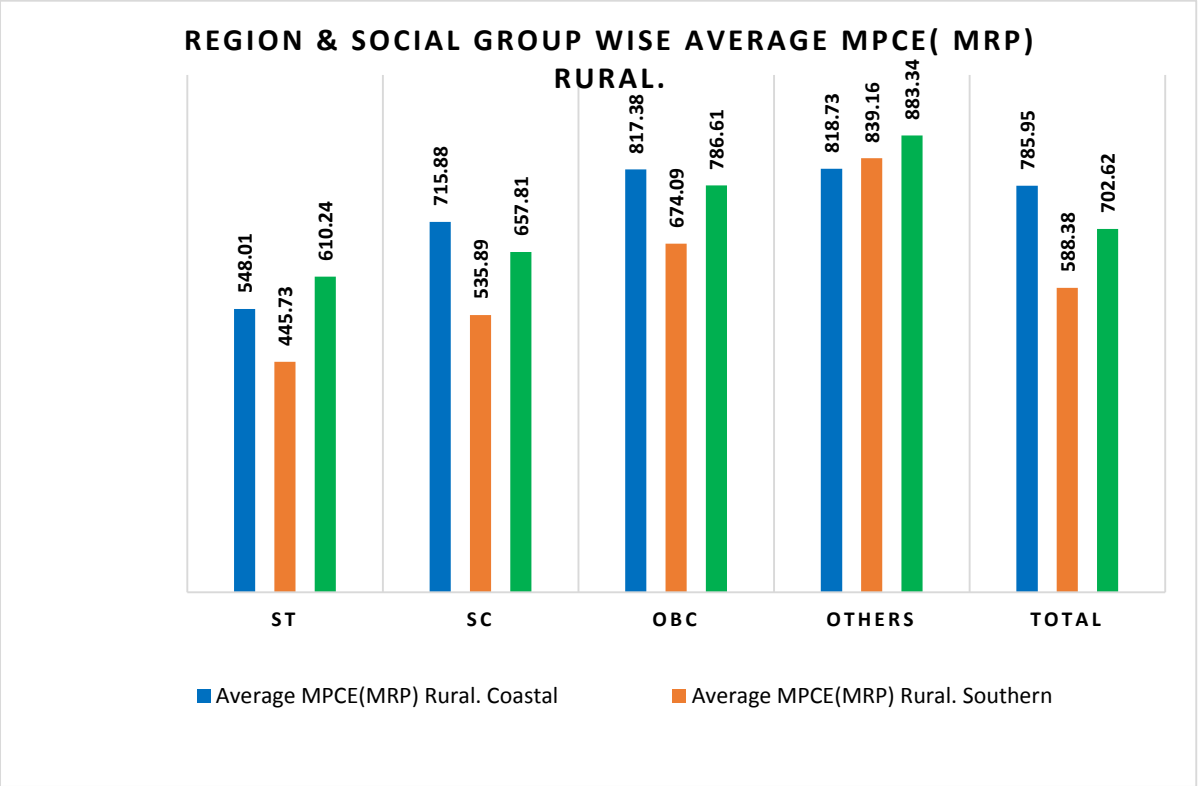
Social Group	Average MPCE (MRP) Rural.				Difference from State Average	Difference in percentage
	Coastal	Southern	Northern	Odisha		
ST	548.01	445.73	610.24	527.70	-165.46	-31.35
SC	715.88	535.89	657.81	631.96	-61.20	-9.68
OBC	817.38	674.09	786.61	759.96	66.80	8.78
Others	818.73	839.16	883.34	831.80	138.64	16.66
Total	785.95	588.38	702.62	693.16		

The table-3.2.5 above shows the social group and region wise distribution of MPCE in rural Odisha. The average MPCE of ST and SC families were below State average of Rs 693/-, although the level of livings of SC families was better off compared to ST families. In all the regions, the MPCE of ST families continued to be lowest compared to other categories. Thus it may be mentioned that the ST families had the lowest level of living as against SC and OBC categories. But the ST families in Coastal and Northern region were appeared to be well off with that of in Southern area. The Other category families had the highest level of MPCE with above Rs 800/- in all the three regions. The lowest MPCE was recorded by ST families in Southern region with Rs. 445/-.

Figure:-3(A)

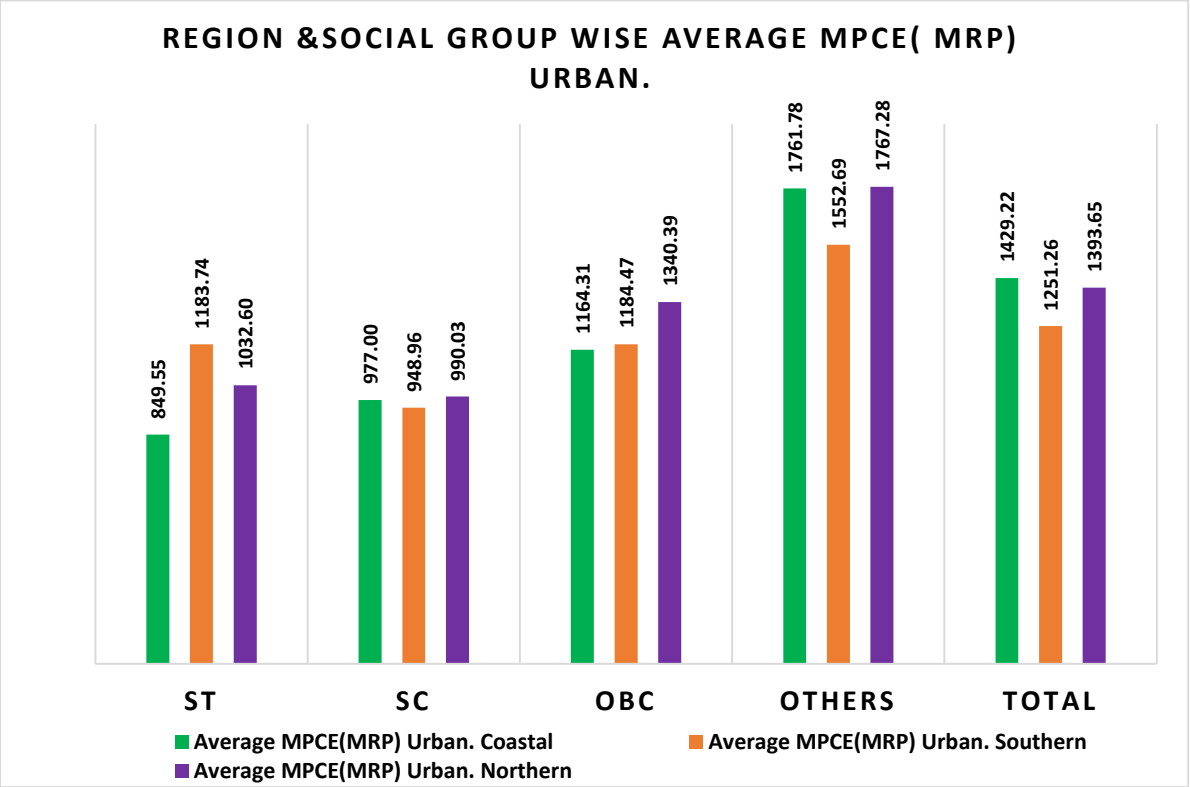


The average MPCE level of different social groups in Urban Odisha was ranging from Rs 972/-to Rs 1728/-. It is interesting to note that the ST families in urban Odisha were better off compared to SC categories. The MPCE level of other categories stood at Rs 1767/- in Northern region, which was highest among the regions and was closely followed by Coastal region with Rs 1761/-.

Table:-3.2.6 Region & Social Group wise Average MPCE (MRP) for Urban Odisha.

Social Group	Average MPCE (MRP) Urban.				Difference from State Average	Difference in percentage
	Coastal	Southern	Northern	Odisha		
ST	849.55	1183.74	1032.60	1014.89	-359.94	-35.4
SC	977.00	948.96	990.03	972.97	-401.86	-41.3
OBC	1164.31	1184.47	1340.39	1219.43	-155.4	-12.7
Others	1761.78	1552.69	1767.28	1728.28	353.45	20.4
Total	1429.22	1251.26	1393.65	1374.83		

Figure:-3(B)



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3.2.5: Rural- Urban Disparity by Social Groups in MPCE (MRP based)

The table-3.2.7 below shows that the rural-urban disparity in MPCE for Others category population were more compared to ST, SC and OBC categories. The ratio of rural to urban MPCE for SC was highest with 65.0% followed by OBC with 62.3 % and SC with 52%.

Table: 3.2.7 Rural-Urban Disparity in MPCE by Social Groups

Social Group	MPCE (Rural)	MPCE(Urban)	Disparity (%)
ST	527.70	1014.89	52.0
SC	631.96	972.97	65.0
OBC	759.96	1219.43	62.3
Others	831.80	1728.28	48.1
Total	693.16	1374.83	50.4

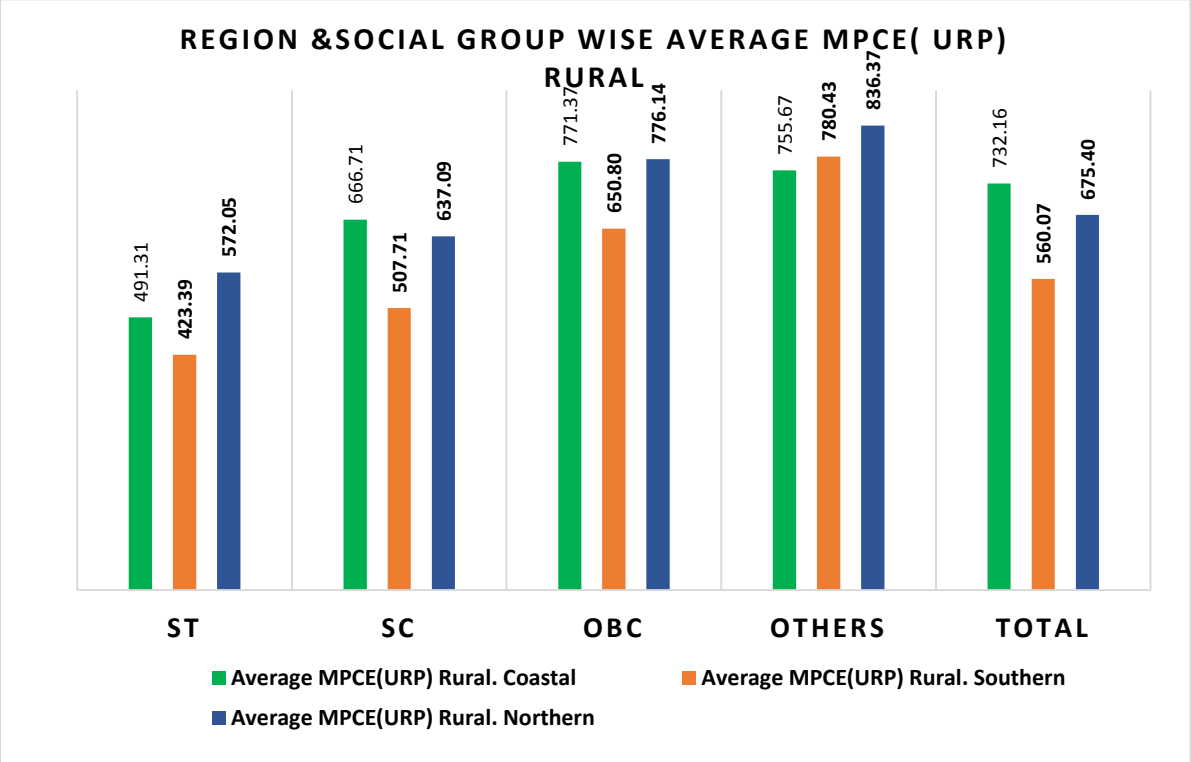
In terms of URP based estimates in table-3.2.8 the average MPCE level across different social groups in rural area was ranging from Rs 495 to Rs 772 /-. Both ST and SC families had lowest MPCE with Rs 495/- and Rs 598 /- respectively, which were below State average. In case of regions, the ST families had the lowest MPCE

with RS 423/- in Southern area as against Rs 445/- in MRP based estimate. The Other category recorded highest MPCE with Rs 836/- in Northern region followed by Rs 780 /- in Southern region.

Table:-3.2.8 Region & Social Group wise Average MPCE (URP) in Rural.

Social Group	Average MPCE (URP) Rural.				Difference from State Average	Difference in percentage
	Coastal	Southern	Northern	Odisha		
ST	491.31	423.39	572.05	495.84	-159.97	-32.26
SC	666.71	507.71	637.09	598.53	-57.28	-9.57
OBC	771.37	650.80	776.14	730.82	75.01	10.26
Others	755.67	780.43	836.37	771.86	116.05	15.03
Total	732.16	560.07	675.40	655.81		

Figure:-4(A)



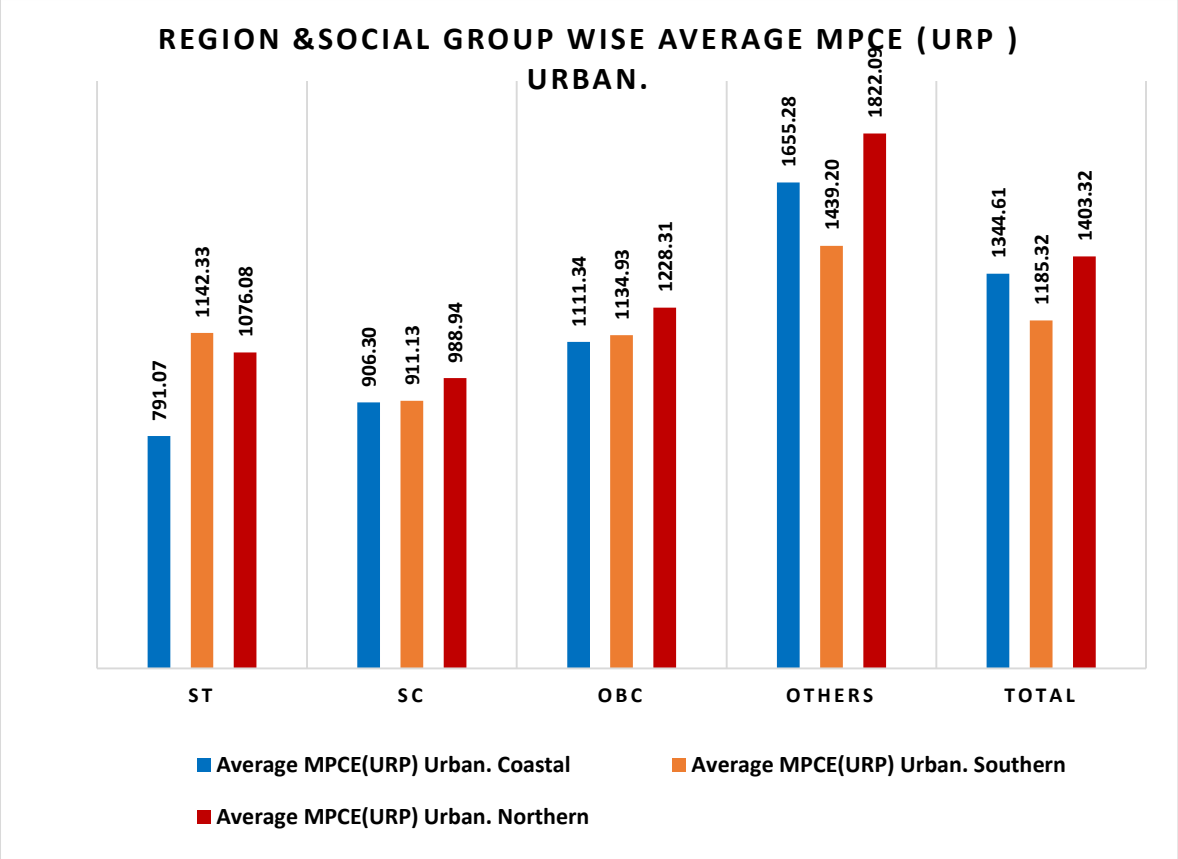
As regards urban sector, average MPCE of ST families was higher compared to SC families. But the level of livings of ST, SC and OBC families were lower than State average of Rs 1326/-.In coastal region , the MPCE of ST families was lowest with Rs 791/-. It was also observed that the ST families were well off compared to SC families

in Southern and Northern areas. Highest MPCE was recorded in other categories with Rs 1822/-.in Northern area, compared to Coastal and Southern region.

Table 3.2.9: Region & Social Group wise Average MPCE (URP) in Urban

Social Group	Average MPCE (URP) Urban.				Difference from State Average	Difference in percentage
	Coastal	Southern	Northern	Odisha		
ST	791.07	1142.33	1076.08	1007.99	-318.35	-31.5
SC	906.30	911.13	988.94	937.29	-389.05	-41.5
OBC	1111.34	1134.93	1228.31	1151.22	-175.12	-15.21
Others	1655.28	1439.20	1822.09	1671.52	345.18	20.65
Total	1344.61	1185.32	1403.32	1326.34		

Figure: - 4(B).



3.2.6: Expenditure Pattern by Household type

As per NSSO concepts, rural households are classified into five economic categories or household types (in the NSS terminology) and urban households into four types on the basis of the occupations pursued by the household members. The five types of rural households are self-employed in non-agriculture, agricultural labour, other labour, self-employed in agriculture, and other households. The four types of urban household are: self-employed, regular wage / salary earner, casual labour, and other households. The 'type' of a household was determined as follows.

Rural: A household was classified as 'agricultural labour', if its income from that source was 50% or more of its total income. The same criterion was followed to classify a household as 'self-employed in agriculture'. A household was classified as 'self-employed in non-agriculture' if its income from that source was greater than that from rural labour as well as that from all other gainful sources put together. If a household was not one of these three types but its income from total rural labour was greater than that from all self-employment and from other gainful sources, it was classified as 'other labour'. The remaining households were classified as 'other households'.

Urban: A household was classified as 'self-employed', 'regular wage or salary earning', or 'casual labour', according to the major sources of its income from 'gainful employment' during the 365 days preceding the date of survey. A household not having any income from gainful employment was classified under 'others'.

In the table below-3.2.10, average MPCE by regions & household type wise have been presented. The average rural MPCE as per MRP based was highest for others category household with Rs 1017 /- followed by Self_emp_non_Agril households with Rs 801/-. But it was much less in case of Agril –Labourer households with Rs 553/-, although the level of living of Self emp_agril and other laborer was below State average of Rs 693/-.. The percentage difference between MPCE of Others category households with that of Self_emp_non_Agril and Agril_labourer households was 21% and 46% respectively.

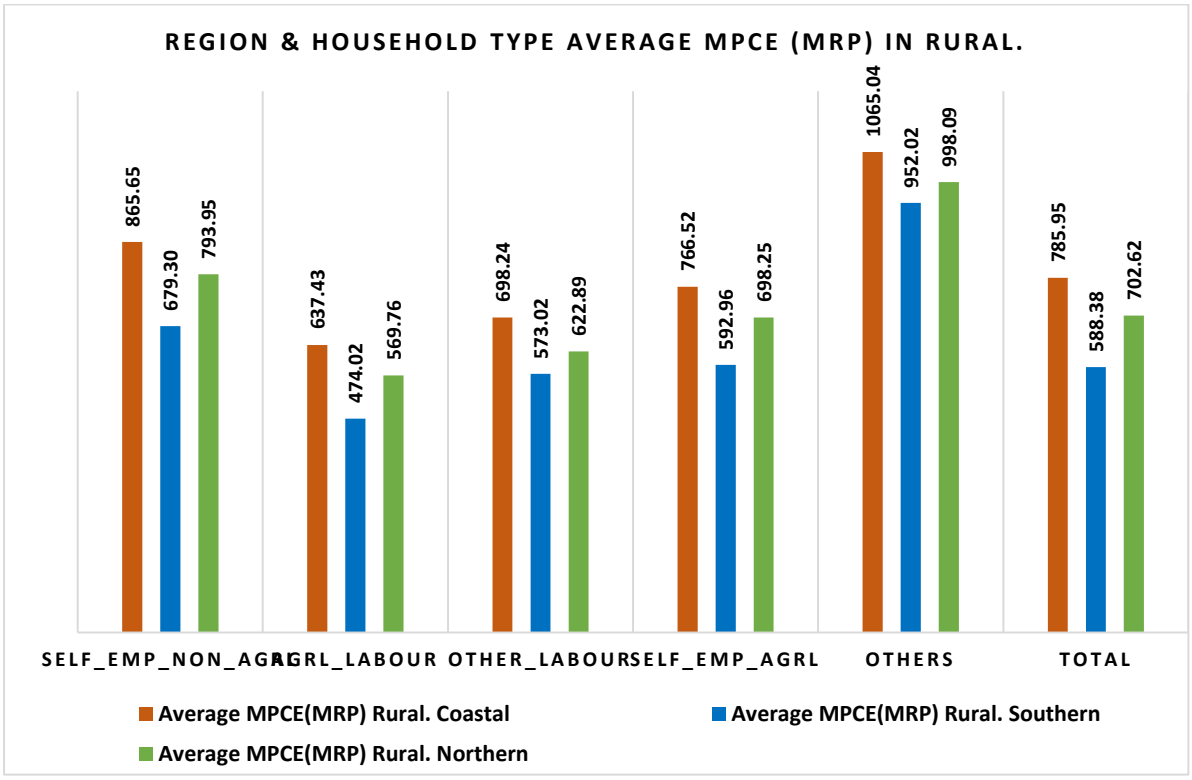
Table: - 3.2.10:

Region & Household Type wise Average MPCE (MRP) in Rural Odisha

Household Type	Average MPCE (MRP) Rural.				Difference from State Average	Difference in percentage
	Coastal	**Southern**	**Northern**	**Odisha**		
self_emp_ non_Agrl	865.65	679.30	793.95	800.68	107.52	13.42
Agrl_labour	637.43	474.02	569.76	553.25	-139.91	-25.78
Other_labour	698.24	573.02	622.89	620.14	-73.02	-11.77
Self_emp_ Agrl	766.52	592.96	698.25	684.39	-8.77	-1.28
Others	1065.04	952.02	998.09	1016.82	323.66	31.83
Total	785.95	588.38	702.62	693.16		

While comparing the per capita expenditure among household type across regions, it was observed that Coastal regions had the highest per capita expenditure among the household ranging from Rs 637/- to Rs 1065/-, where as it was Rs 569/- to Rs 998/- in Northern region and Rs 474/- to Rs 952 in Southern regions. Thus the level of living among the household types in Coastal regions was better compared to Northern and Southern region.

Figure:-5(A).



In table-3.2.11 in Urban sector, the per capita expenditure of regular wage/salaried household was seen to be highest with Rs 1815/- followed by Other category household with Rs 1579/-. The per capita expenditure in casual labour household and Self-employed household was below State average of Rs 1375/-.

Table:-3.2.11: Household type wise and Region average MPCE (Urban)

Household Type	Region / MPCE (Rs).				Difference from State Average	Difference in percentage
	Coastal	**Southern**	**Northern**	**Odisha**		
self-employed	1243.47	1137.93	1324.17	1248.11	-126.72	-10.15
regular wage/salary earning	1836.72	1630.78	1903.40	1814.80	439.97	24.24
casual labour	715.32	611.08	655.34	667.91	-706.92	-105.84
others	1811.50	1326.50	1643.99	1579.07	204.24	12.93
Total	1429.22	1251.26	1393.65	1374.83		

The average MPCE across regions by household type indicates that it was highest in other category household with Rs 1812/- in Coastal, Self-employed household with Rs 1324/- and regular wage / salaried with Rs 1903/- in Northern regions. Thus regular wage / salaried household and Self-employed household of Northern region appeared to be better in level of living compared to other regions. It was also observed that the percentage difference between per capita expenditure of regular wage / salaried household with other category household and casual labourer household was 13% and 63% respectively.

Figure:-5 (B).

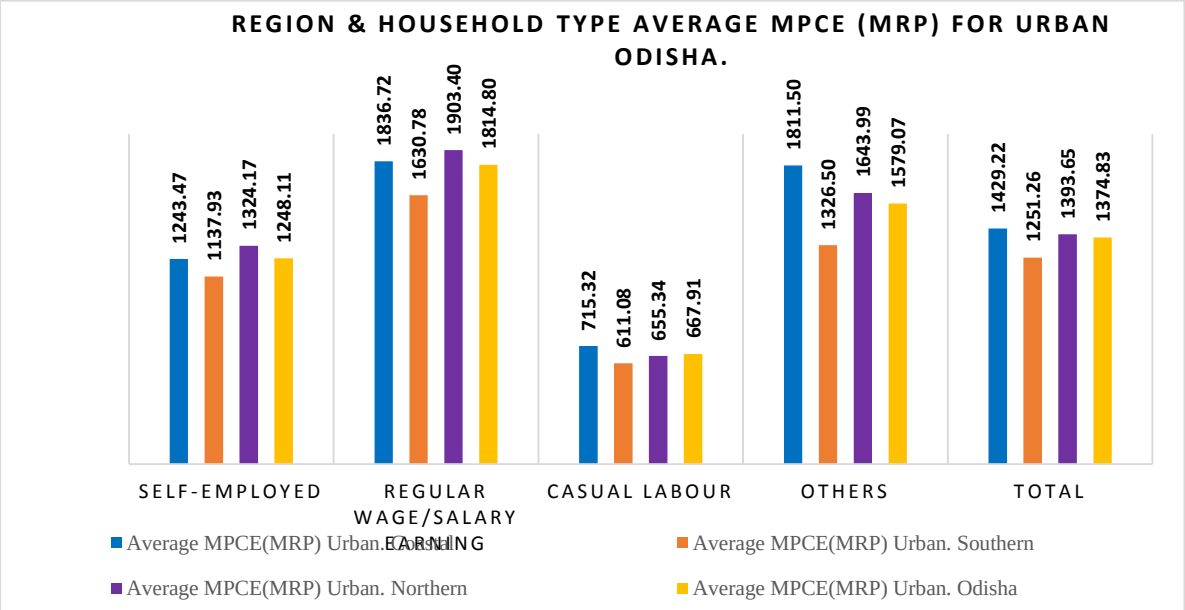


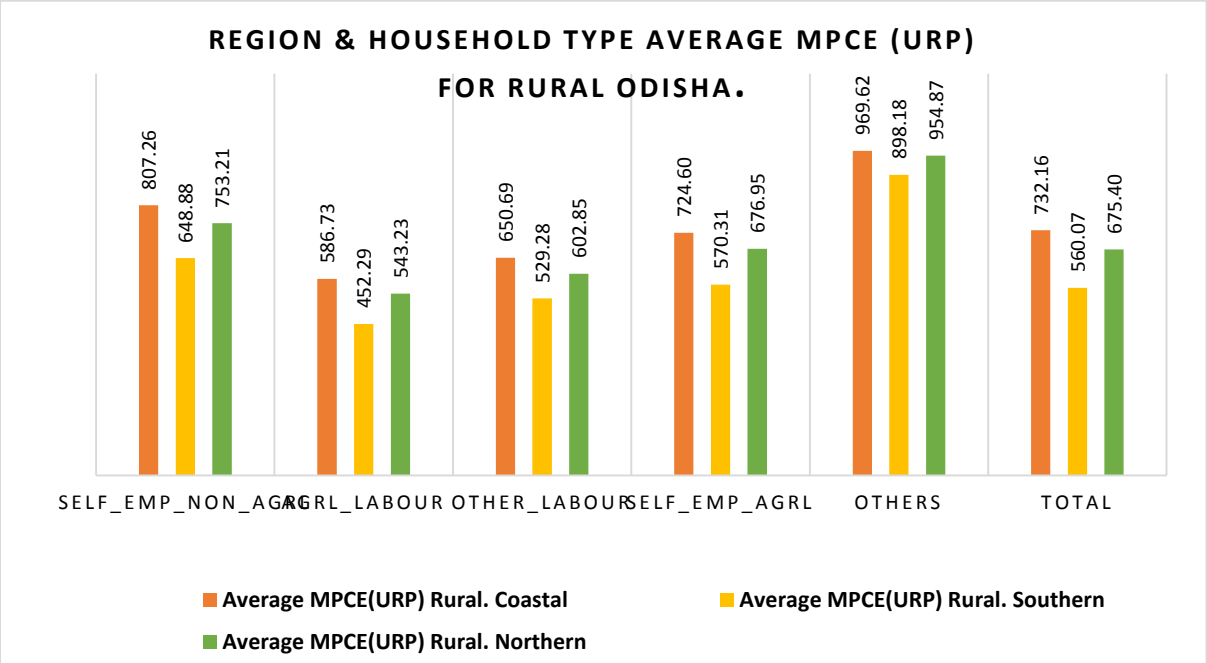
Table-3.2.12 shows in terms of URP based, the per capita expenditure among household type was ranging between Rs 520/- to Rs 947/-.The level of expenditure of Agril_labourer household was the lowest like that of MRP based among all household types and it was below State average, although the level of expenditure of Other_labourer household and Self_Emp_Agril household were also below the State average.

Table:-3.2.12: Household type and Region wise MPCE (URP based): Rural

Household Type	Average MPCE (URP) Rural.				Difference from State Average	Difference in percentage
	Coastal	Southern	Northern	Odisha		
self_emp_non_ Agrl	807.26	648.88	753.21	753.82	98.01	13.00
Agrl_labour	586.73	452.29	543.23	520.37	-135.44	-26.02
Other_labour	650.69	529.28	602.85	583.35	-72.46	-12.42
Self_emp_Agrl	724.60	570.31	676.95	655.54	-0.27	-0.04
Others	969.62	898.18	954.87	947.18	291.37	30.76
Total	732.16	560.07	675.40	655.81		

The per capita expenditure across regions showed that the MPCE level of household of Coastal regions were higher compared to other regions. The level of expenditure for other category household was highest in all the three regions followed by Self_emp_non_agril households. Thus the level of living of both other category and self_emp_non_agril household was better compared to other categories. The per capita expenditure of above two categories were also above the State average across regions.

Figure:-6 (A).



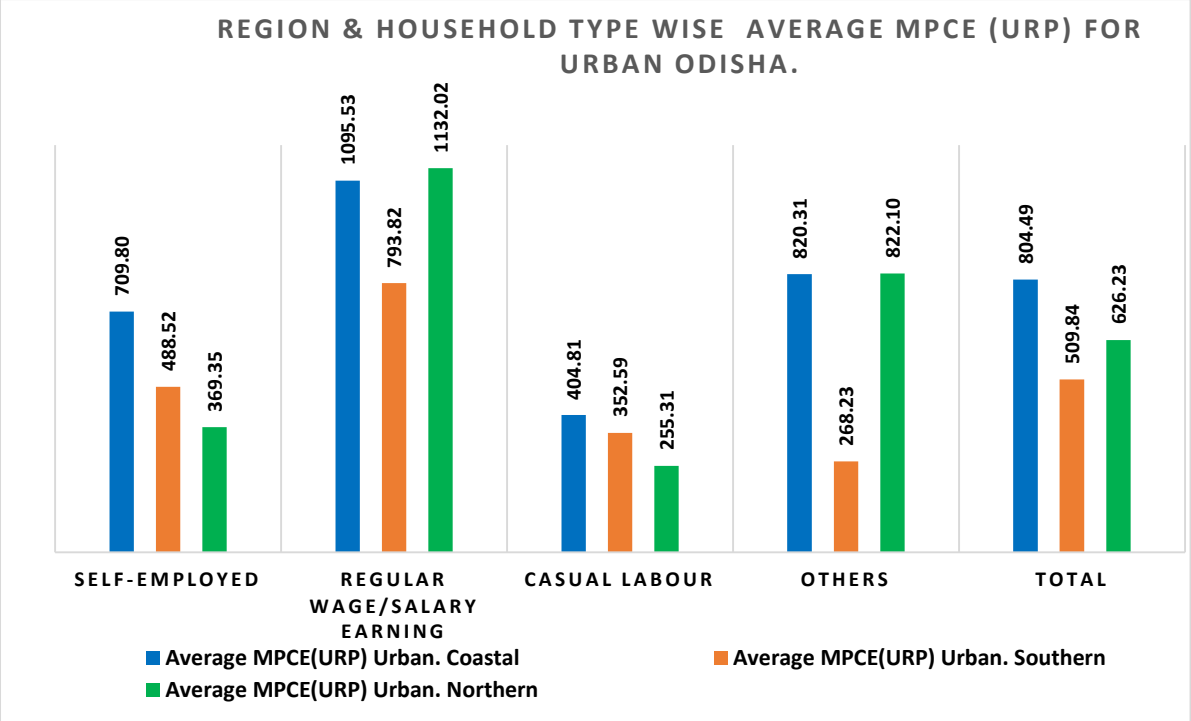
.Table: - 3.2.13: HH type and Region wise MPCE (URP based) Urban

Household Type (Urban)	Average MPCE (URP) in Rs0.00				Difference from State Average	Difference in percentage
	Coastal	Southern	Northern	Odisha		
self-employed	709.80	488.52	369.35	549.78	-124.56	-22.65
regular wage/salary	1095.53	793.82	1132.02	1041.97	367.63	35.28
casual labour	404.81	352.59	255.31	328.43	-345.91	-105.32
others	820.31	268.23	822.10	589.12	-85.22	-14.46
Total	804.49	509.84	626.23	674.34		

In case of Urban sector, table-3.2.13 shows regular wage / salaried households topped the expenditure with Rs 1041/- followed by Other category households with Rs 589/- and self_emp households with Rs 549/-.It was noticed that the percapita expenditure of only regular wage / salaried household was above the state average of Rs 674/-, where as it was below State average for all other category of household. While comparing MPCE across regions, it was seen that households in coastal regions had a better level of living. The MPCE of casual labour household was higher in Coastal region with Rs 405/- followed by Southern Region with Rs 353/-.While MPCE

of regular wage/salaried household in Northern region (Rs 1132/-) was more than Coastal (Rs1095/-) and Southern region (Rs 794/-) .

Figure:-6(B).



3.3: Comparison of MPCE on KBK over Non KBK Region

The districts of Southern and Western Odisha are regarded as the most backward region by the planning commission, which re-designated some of these districts as KBK (Kalahandi-Bolangir-Koraput). During 1992-93, the three larger districts were re-organized into eight districts- viz. Malkangiri, Koraput, Nabrangpur, Kalahandi, Raygada,Nuapada, Bolangir and Sonepur. These eight districts comprise 14 Subdivisions, 37 Tehsils, 80 CD Blocks, 1,437 Gram Panchayats and 12,293 villages. The eight districts which form the KBK region account for 19.72% of the population.

The average MPCE of KBK regions and non-KBK regions by sectors as per MRP and URP based has been compared below.

In case of sector wise average mpce (mrp & urp) of KBK and Non KBK regions of Odisha, Non KBK regions are at the better position than the KBK regions in both rural and urban sector.

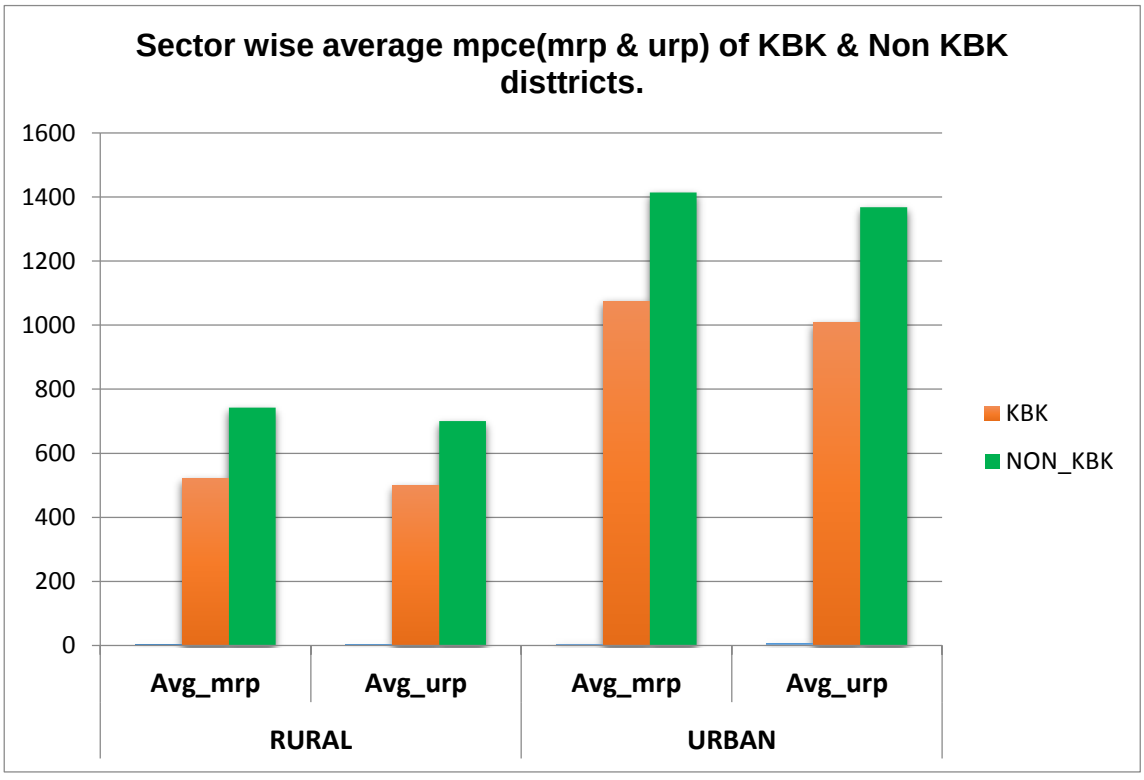
Table 3.3.1

Average MPCE of KBK & Non KBK Region both MRP & URP Method

(amount in Rs.)

Region	RURAL		URBAN		Rural Urban Disparity (%) MRP	Rural Urban Disparity (%) URP
	Average MPCE (mrp)	Average MPCE (urp)	Average MPCE (mrp)	Average MPCE (urp)		
1	**2**	**3**	**4**	**5**	**6**	**7**
KBK	520.88	499.09	1075.51	1007.14	48.4	49.5
NON_KBK	742.38	700.57	1414.13	1368.23	52.5	51.2
Absolute Diff in MPCE(Non_ KBK-KBK)	221.50	201.48	338.62	361.09		
% Diff in MPCE (Non_KBK-KBK)	42.52	40.37	31.48	35.85		

Figure: 7



In case of rural sector, average MPCE of KBK region as per MRP was Rs 520.88 and it was Rs 742.38 for Non KBK region. The difference of expenditure between NON-KBK and KBK was 42.52%. Similarly for urban sector, average MPCE for KBK was Rs 1075 and that of Non-KBK, it was Rs 1414/-. The difference of expenditure between NON-KBK and KBK was 31.48%. The gap in MPCE between KBK and Non-KBK in urban sector was lower compared rural sector. As far as avg MPCE in terms of URP based for rural sector is concerned, it was Rs 499.09 for KBK region and it stood at Rs 700.57 in case of Non KBK regions. Similarly .average MPCE in case of KBK district of urban sector as per urp is Rs 1007.14 and it was Rs 1368.23 in case of Non KBK districts. It may be concluded that the level of living in KBK regions were still lower compared to Non-KBK both in terms of mrp and urp based methodology. The divergence in MPCE was more in rural sector than urban. As regards rural-urban disparity in MPCE by KBK-non-KBK regions, it is seen that there was higher disparity in KBK region than non KBK region both in terms of MPR and URP methods.

From the analysis above, it is observed that the MRP consumption method shows relatively better estimates compared to URP method. The average MPCE by regions, sectors, social groups and household type appeared to be higher as per MRP method than URP method.

3.4: Consumption Inequality in NSS Regions

The inequality in consumption pattern and the share of population in bottom 10% and top 10% of MPCE by different regions of rural and urban Odisha as per MRP base is presented in table -3.4.1 below.

Table 3.4.1

Region wise inequality in consumption pattern of both Rural and Urban Odisha

NSS Regions	RURAL			URBAN		
	Ginni-Coefficient	Expenditure proportion in bottom 10% population	Expenditure proportion in top 10% population	Ginni - Coefficient	Expenditure proportion in bottom 10% population	Expenditure proportion in top 10% population
Coastal	0.2246	5.07%	21.50%	0.4095	3.00%	32.10%
Southern	0.2353	4.70%	20.80%	0.3209	3.03%	22.98%
Northern	0.2229	4.80%	20.70%	0.3632	2.90%	26.70%

The regional level inequality by rural sector in consumption pattern shows that the inequality in Northern region was 0.2229 which is marginally lower compared to Coastal region with 0.2246. But the inequality in Southern region was higher with 0.2353. As regard urban sector, there was large inequality in consumption level in coastal region with 0.4095 followed by Northern region with 0.3632. The inequality in Southern region was lower with 0.3209.

If we categorize bottom 10% (having expenditure less than Rs 462.63) of the rural population in the coastal region are “poorest of the poor”, their share of expenditure is 5.07% which is varied from region to region. While in poor region like Southern, it is about 4.07% and have an MPCE less than Rs 329.66, whereas it is 4.8% in Northern region and have an MPCE less than Rs 396.00. Hence in Southern region the bottom people have minimum share of expenditure comparing to the same of other regions. On the other hand in coastal region, top 10 percentile rural population having MPCE > Rs 1162 may be regarded as rural rich. The cutoff value is Rs1031 for Southern and Rs 909 for Northern. The proportion expenditure of rich class in Southern region was only 20.8%, where as it is 21.5% and 20.7 % for Coastal and Northern region respectively. The share of expenditure of rich classes is more in coastal than other region.

In urban Odisha if we categorize bottom 10% (having expenditure less than Rs 462.63) of the population in the coastal region are “poorest of the poor”, their share of expenditure is 3% which is varied from region to region. While in poor region like Southern, it is about 3.03% and have an MPCE less than Rs 329.66, whereas it is 2.9% in Northern region and have an MPCE less than Rs 396.00. On the other hand in coastal region, top 10 percentile rural population having MPCE > Rs 2729 may be regarded as rural rich. The cutoff value is Rs 2088 for Southern and Rs 2841 for Northern. The cutoff point is high in Northern region may be due to the industrial town Angul, Rourkela and Barbil etc. The proportion expenditure of rich class in Southern region was only 22.98%, where as it is 32.1% and 26.7 % for Coastal and Northern region respectively. The proportion of expenditure in rich classes is highest in coastal region.

Chapter - IV

4: District Level Analysis

4.1: MPCE as per MRP and URP

In the following tables, district wise result for household consumer expenditure has been presented for both rural and urban sector as per MRP and URP methodology to indicate spatial disparity among the Districts.

Among all the 30 rural Districts, in terms of MRP based methodology , the average MPCE of 04 Districts (13.3 %) namely Rayagada, Nabrangpur, Koraput and Malkangiri were estimated below Rs 500/- (Rs 16.66 per capita per day) , while 04 districts (13.3 %)i.e., Khurdha, Purl , Jagatsinghpur and Jajpur had the highest MPCE ranging between Rs 800-969. The average MPCE of Jagatsinghpur was highest with Rs 969/-, which was around 03 times higher than Koraput district with Rs 369/-. There were 22 districts (73% of 30 districts), which had the per capita expenditure ranging between Rs 500-800.

A summary of top and bottom three rural districts in terms of average MPCE is given below.

Table 4.1.1: Rural MPCE (MRP)

Top three MPCE Dist		Bottom three MPCE Dist	
Jagatsinghpur	969.64	**Koraput**	369.24
Jajpur	872.2	**Malkangiri**	462.4
Khurdha	857.84	**Nabrangpur**	473.36

From table-4.1.1 it is observed that the top three districts were Coastal districts and the bottom three districts belong to Southern region. The average MPCE of top three

districts were almost double than that of bottom three districts. Besides above, 50% of the total districts had the MPCE above state average and the rest 50 % districts had below state average.

In case of Urban Sector, there were three districts namely Sonepur, Nuapada and Malkangiri, which had lowest MPCE varied between Rs 0-1000. The top MPCE districts in the range of Rs 1500-1800 were Sundergarh, Angul, Keonjhar, Khurdha and Jajpur (05 districts). Out of rest 22 Districts, 11 districts had MPCE in the range Rs 1000-1200 and another 11 districts had MPCE within Rs 1200-1500.Out of 30 districts, Angul had the highest level of living with Rs 1797 (Rs 60/- per capita per day) and Nuapada had the lowest with Rs 786 (Rs 26 Per capita per day).

The top three districts and bottom three districts in terms of MPCE is given below.

Table 4.1.2: Urban MPCE (MRP)

Top Three MPCE Dist		Bottom three MPCE Dist	
Angul	1797.29	Nuapada	786.96
Khurdha	1624.44	Malkangiri	944.99
Sundargarh	1595.63	Sonepur	976.21

The MPCE of top district Angul was 1.3 times higher than bottom district Nuapada and it was almost two times higher than Malkangiri and Sonepur. Further it is observed that majority of the districts (22) had the MPCE below the State average and only a few districts with high MPCE were responsible in pulling State average.

Figure-8

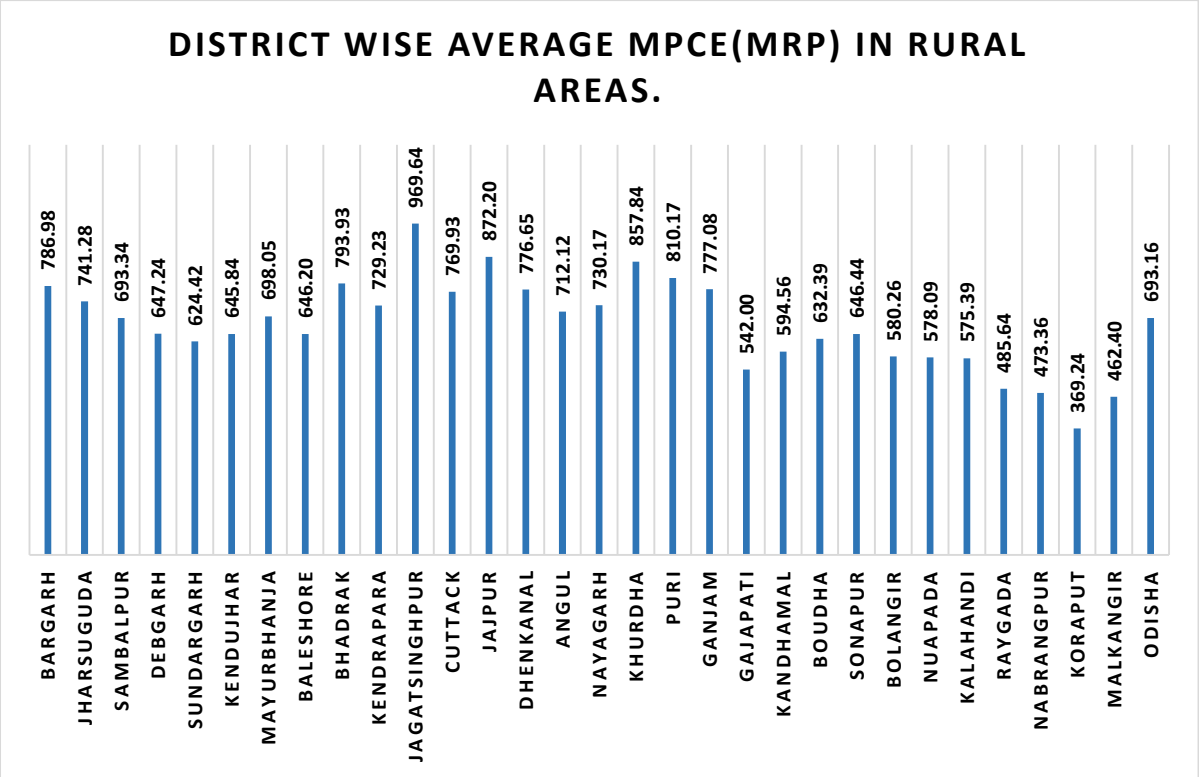
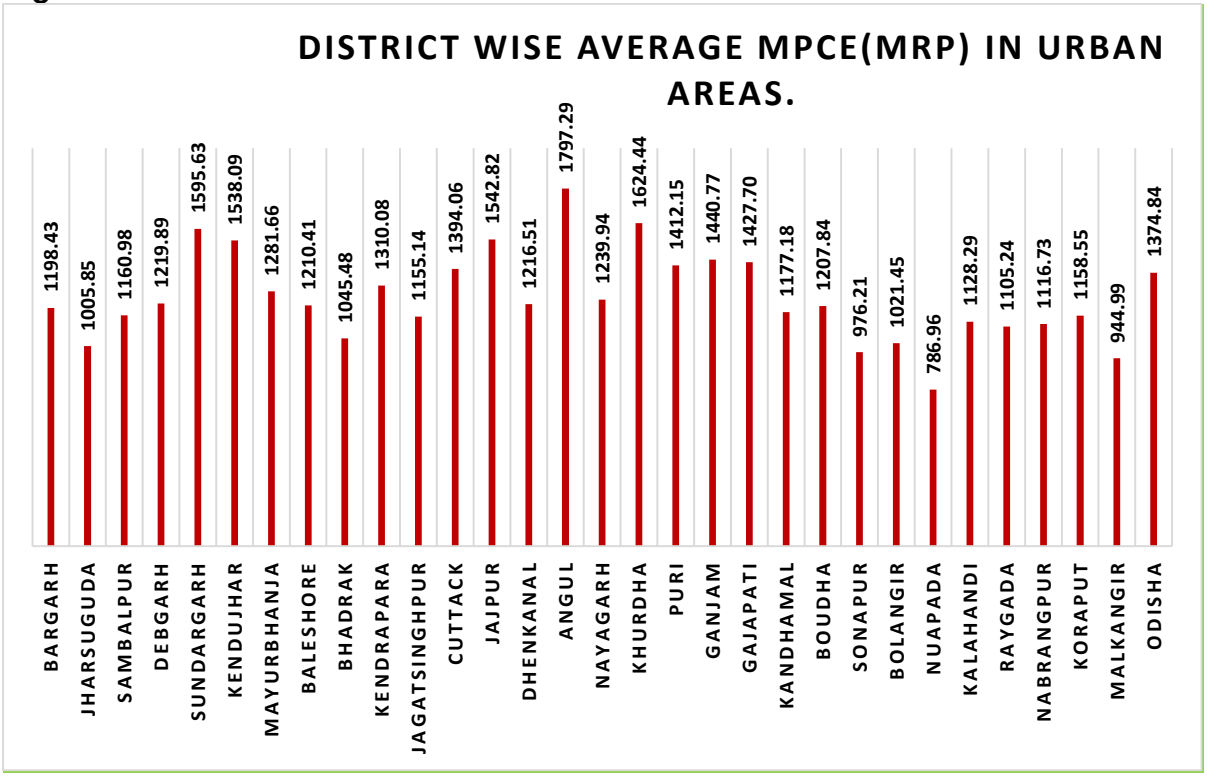


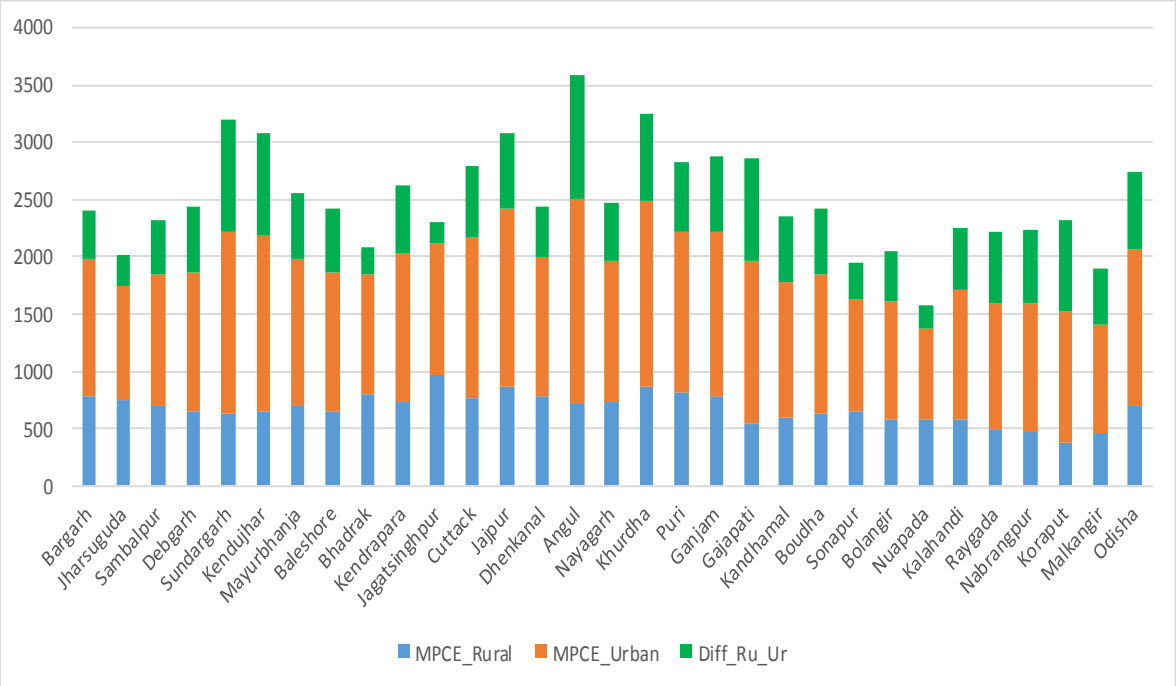
Figure-9



4.1.2: Rural -Urban gap in MPCE

The difference in MPCE between rural urban is treated as gap and presented in fig-10. It is observed that there was a high gap in level of living in Angul (Rs 1085) followed by Sundargarh (Rs 971) , Keonjhar (Rs 872) and Gajapati (Rs 886). The three districts Angul, Sundargarh, Keonjhar are industrially advanced districts and Gajapati is a tribal district. But Jagatsinghpur had the lowest gap in consumption expenditure with Rs 185 followed by Nuapada (Rs 209) and Bhadrak (Rs 252). It is also interesting to note that there were three tribal districts namely Koraput, Raygada and Nabrangpur, which had higher rural urban disparity in consumption level with Rs 789, Rs 619 and Rs 643 respectively. Even the disparity of Koraput was higher than State average of Rs 681. But the Malkangiri, another tribal district had the difference level with Rs 483 only.

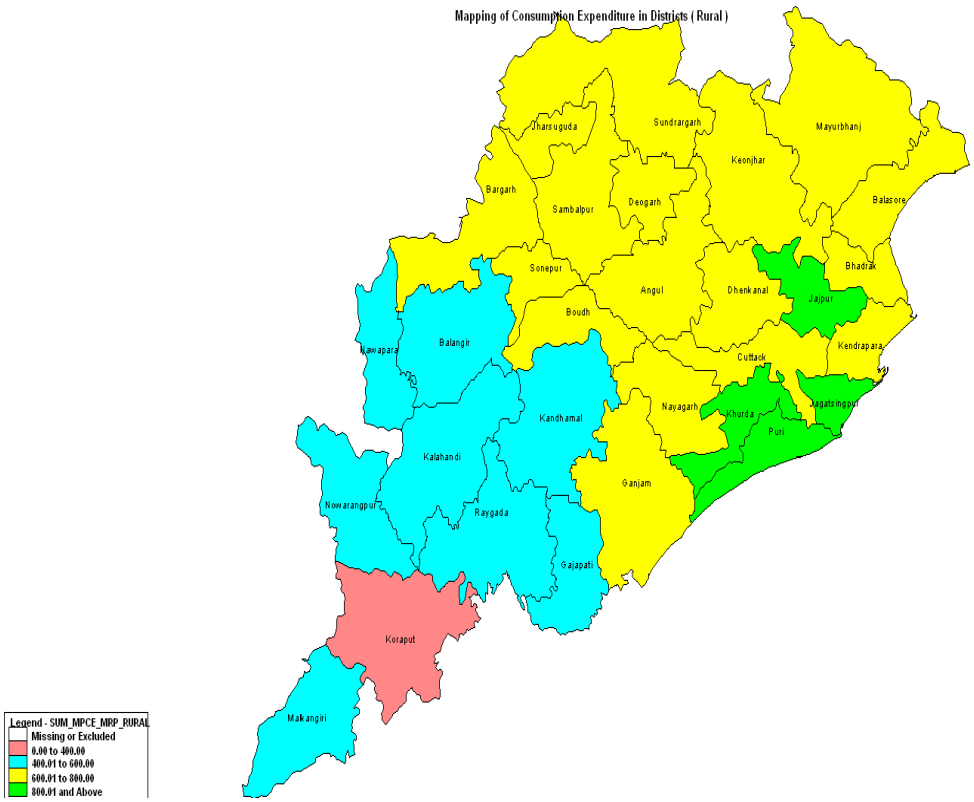
Fig 10: Rural-Urban disparity in MPCE (MRP) among the Districts

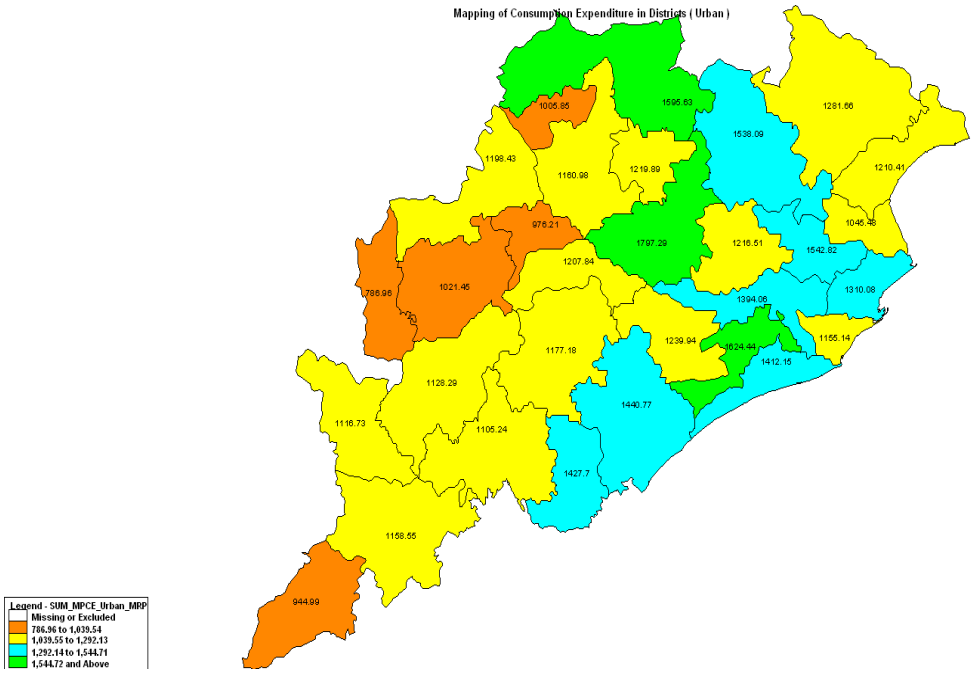


4.1.3: Mapping of MPCE in Districts

The district level MPCE (MRP) by sectors has been portrayed graphically to summarize the performances of the districts and could easily identify the poor districts.

Fig 11---Mapping of consumption expenditure in districts

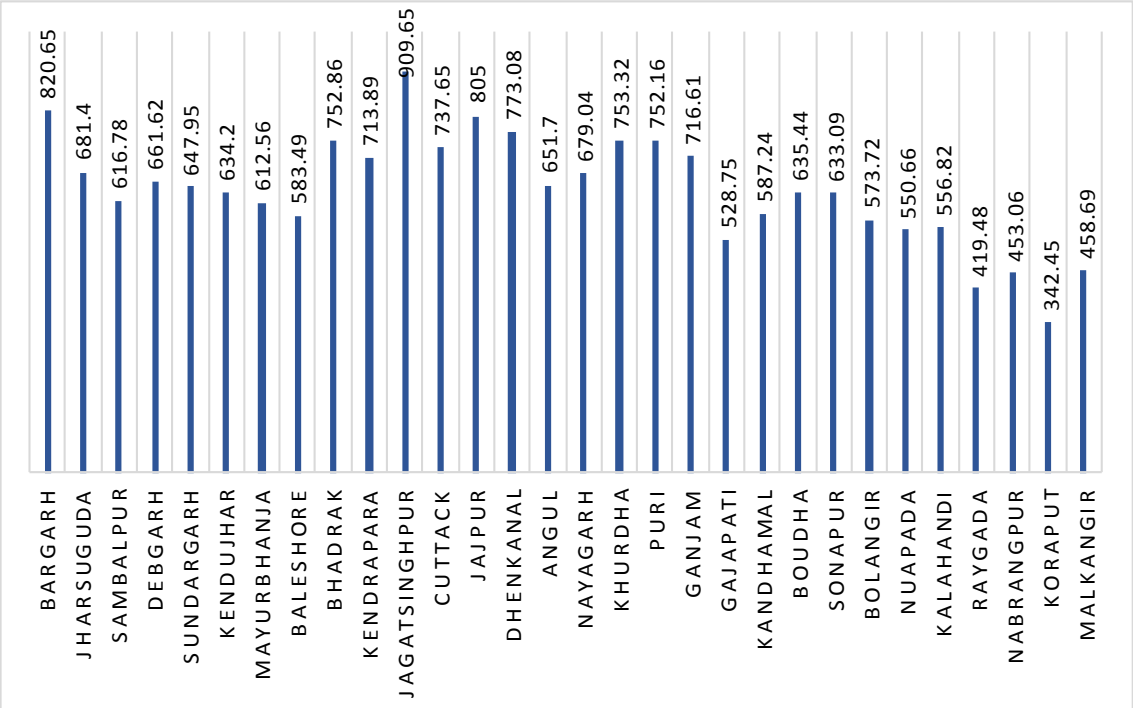




4.2.1: MPCE for rural (based on URP method)

The district wise per capita consumption expenditure by rural sector based on URP has been presented in fig: 12. It is observed that Jagatsinghpur district had the highest MPCE with Rs 910 followed by Bargarh (Rs 820) Jajpur (Rs 805) and Dhenkanal (Rs 773). The lowest MPCE districts were Koraput (Rs 342), Raygada (Rs 419) and Nabrangpur (Rs 453).

Fig12: Rural MPCE District (URP)



Thus the top three and bottom three rural districts according to MPCE were in table below.

Table 4.2.1: Rural MPCE (URP)

Top three MPCE Districts		Bottom three MPCE Districts	
Jagatsinghpur	909.65	Koraput	342.45
Bargarh	820.65	Raygada	419.48
Jajpur	805.00	Nabrangpur	453.06

It is also seen that both in terms of MRP and URP methods, the MPCE for Koraput was the lowest and almost three times less than Jagatsinghpur, which had the highest MPCE with Rs 909 (URP) and Rs 969 (MRP). Of course, in terms of URP, MPCE of

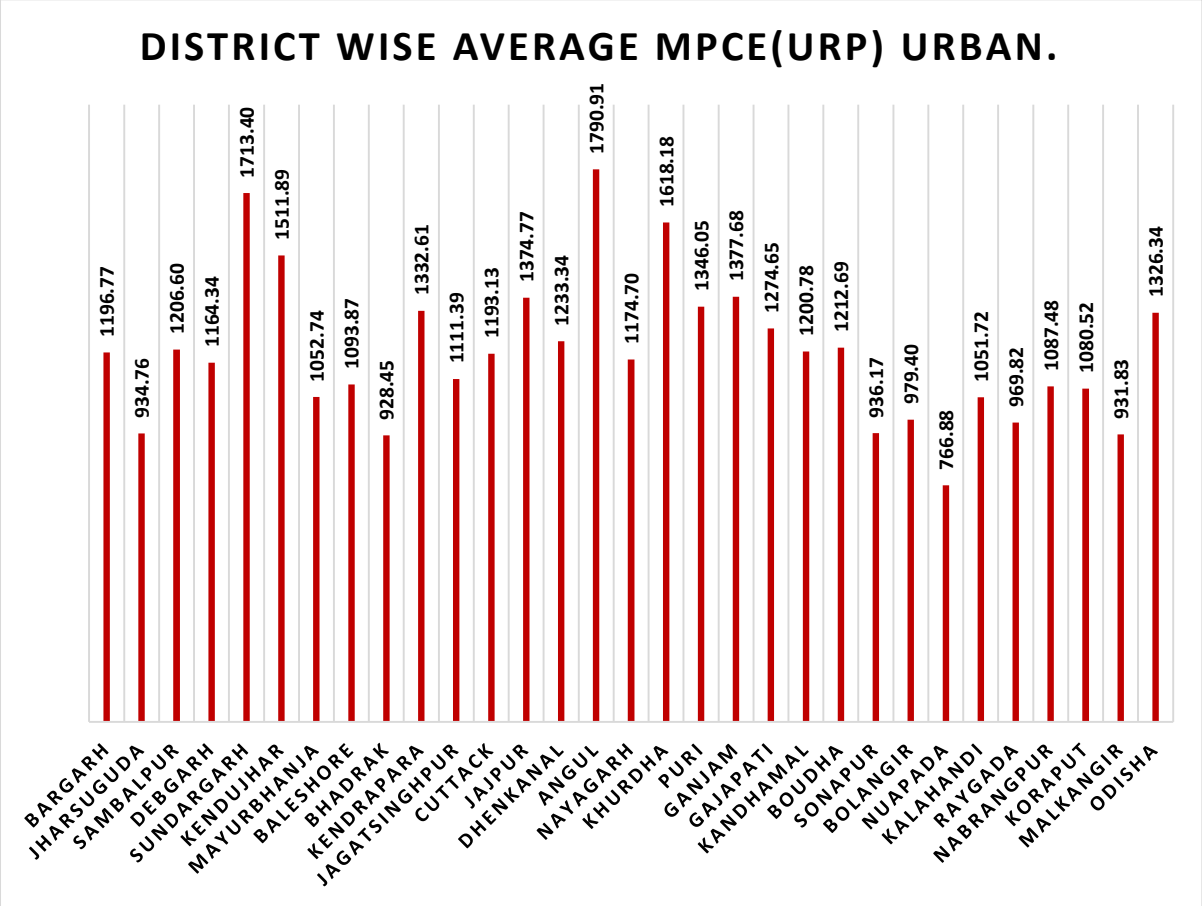
Bargarh district came under top three districts in addition to Jagatsinghpur and Jajpur, where as in terms of MRP, Khurdha district was among top three districts in addition to Jagatsinghpur and Jajpur.

Similarly, among bottom three districts, it was Raygada which had lower MPCE as per URP in addition to Koraput and Nabrangpur, where as in terms of MRP, Malkangiri had the lower MPCE in addition to Koraput and Nabrangpur.

4.2.2: MPCE on urban sector based on URP

In urban sector, the highest MPCE district was Angul with Rs 1791 and the lowest MPCE district was Nuapada with Rs 767. In fact, both in terms of MRP and URP, Angul had the highest MPCE and Nuapada had the lowest MPCE. The fig13 presents the district wise divergence in MPCE (URP).

Fig13



The top three and bottom three MPCE districts are presented in table.4.2.2 below.

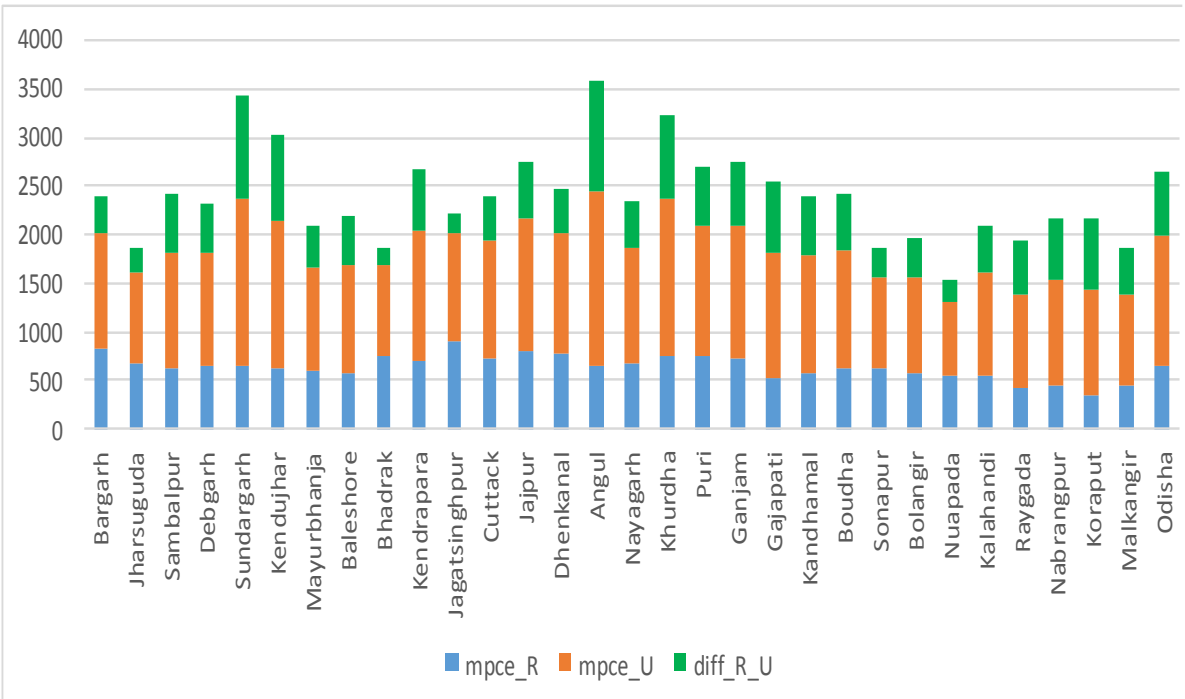
Table 4.2.2: Urban MPCE (URP)

Top three Districts by MPCE.		Bottom three districts by MPCE	
Angul	1790.91	Nuapada	766.88
Sundargarh	1713.4	Bhadrak	928.45
Khurdha	1618.18	Malkangiri	931.83

It is observed that both in terms of URP and MRP, the top three MPCE districts were Angul, Sundargarh and Khurdha, whereas Nuapada, Bhadrak and Malkangiri were the bottom three districts as per URP and Nuapada, Bhadrak and Sonepur were the bottom three MPCE districts as per MRP.

In case of Rural-Urban difference in consumption pattern among the districts, it is observed that the high gap districts were Angul, Sundargarh and Keonjhar like that of MRP based districts. Similarly the low difference in MPCE districts were Bhadrak, Jagatsinghpur and Nuapada. The district wise rural-Urban difference in MPCE is presented in figure-14.

Fig-14: (District wise Rural – Urban difference in MPCE)



4.3: District wise MPCE by household type (Rural and Urban) MRP

The district wise average MPCE (MRP) of rural areas by household type indicates that Jagatsinghpur had the highest MPCE with Rs 1114/- by **Self_Emp_Non_Agril** household, while the lowest MPCE district was Koraput with Rs 407/- in this category. In case of **Agriculture_labourer** household, it was again Jagatsinghpur with highest MPCE of Rs 757/-. It is interesting to see that Koraput had the lowest MPCE for all the three category household type like self emp_non_agril, Agriclture_labourer (Rs 319/-) and Self_Emp_Agril household with Rs 358/-. Khudha had highest MPCE with Rs 904/- for **Self_Emp_Agril_** household. The top three and bottom three districts by household type is given in table 4.3.1**.** The district wise distribution of households in agriculture sector by household type is given in figure-15.

Table 4.3.1: Top and bottom districts (MPCE) by household type (RURAL)

Top three Districts by MPCE (Rs)		Bottom three districts by MPCE (Rs)	
Self Emp in Non_Agril		**Self Emp in Non_Agril**	
Jagatsinghpur	1114.83	Koraput	406.96
Jajpur	1008.45	Nabarangapur	565.88
Baragarh	946.58	Bolangiri	595.62
Agricul_Labourer		**Agricul_Labourer**	
Jagatsinghpur	757.07	Koraput	318.97
Ganjam	710.19	Malkangiri	328.94
Sundargarh	706.72	Rayagada	382.5
Self Emp _ Agril		**Self Emp _ Agril**	
Khurdha	904.32	Koraput	358.68
Nayagarh	858.98	Gajapati	397.06
Jagatsinghpur	855.4	Raygada	439.97

Fig-15

(District wise distribution of households in agriculture sector by household type)

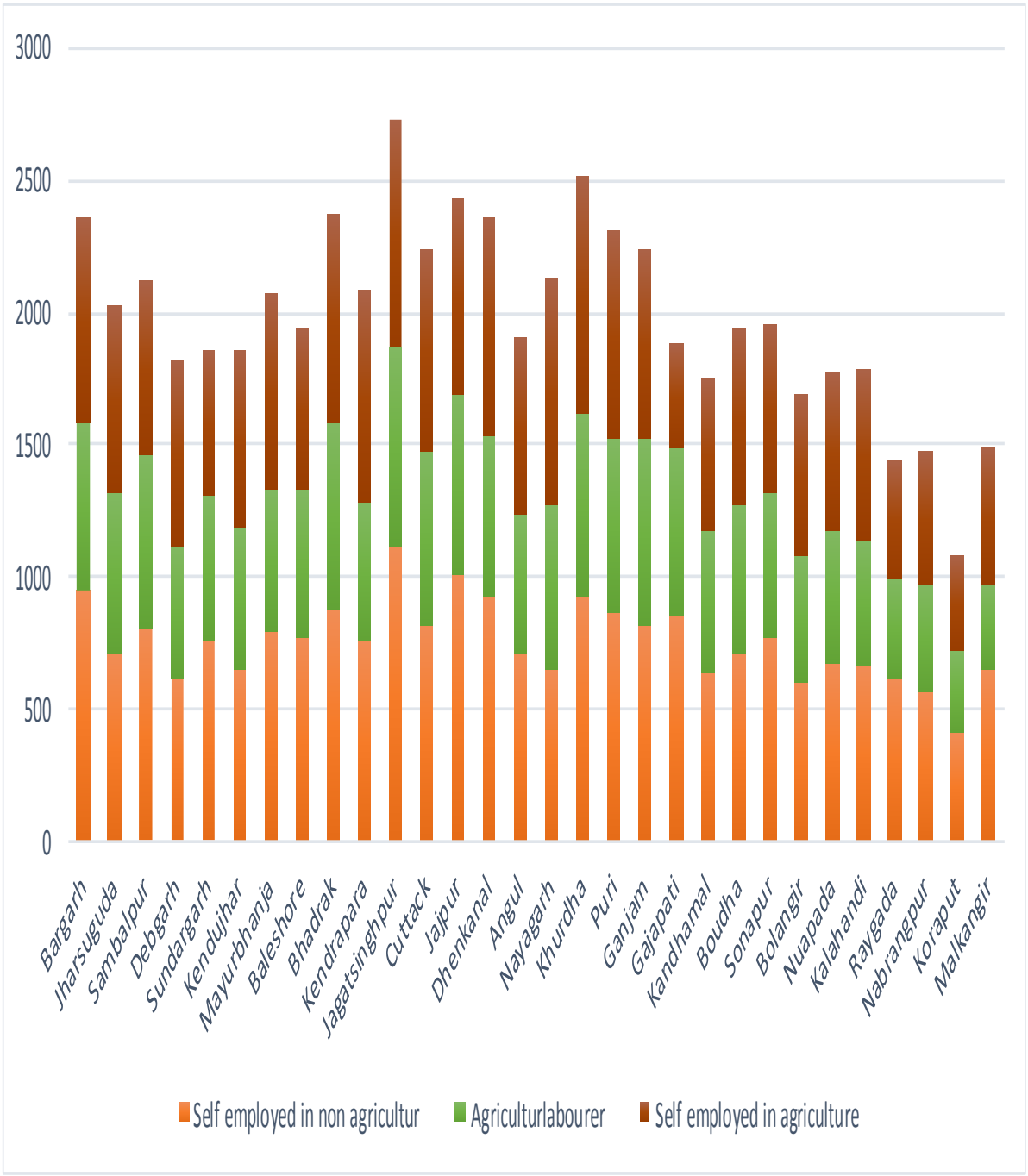


Table 4.3.2: Rank of Districts using Composite Index by Household Type and Average MPCE (MRP) in Rural.

District	Household Type						
	Self_emp_non_Agrl	Agrl_labour	Other_labour	Self_emp_Agrl	Others	Avg.MPCE_District	Composite Index(Household Type)
1	2	3	4	5	6	7	8
Baragarh	946.58	631.89	655.66	787.97	1362.75	786.98	0.737
Jharsuguda	703.89	614.10	600.45	710.78	1327.22	741.28	0.608
Sambalpur	807.31	653.55	603.04	659.19	1165.79	693.34	0.597
Deogarh	611.63	503.73	537.25	708.86	1107.19	647.24	0.459
Sundargarh	759.83	544.24	585.54	552.98	991.76	624.42	0.447
Kendujhar	651.00	542.25	617.81	664.65	907.10	645.84	0.444
Mayurbhanja	792.79	541.68	554.75	744.48	687.71	698.05	0.442
Balesore	766.28	560.34	573.71	614.59	1018.10	646.21	0.482
Bhadrak	872.35	706.72	776.26	793.51	875.68	793.93	0.665
Kendrapara	756.88	527.97	839.80	806.13	802.89	729.23	0.555
Jagatsinghpur	1114.83	757.07	1076.47	855.40	1270.06	969.64	0.959
Cuttack	812.16	664.87	542.10	763.75	1066.01	769.93	0.601
Jajpur	1008.45	685.77	787.59	738.55	1146.12	872.20	0.744
Dhenkanal	924.13	607.80	657.58	824.74	959.08	776.65	0.634
Angul	706.13	527.28	650.15	670.01	1173.83	712.12	0.53
Nayagarh	653.59	620.71	648.62	858.98	1261.09	730.17	0.648
Khurdha	929.88	683.17	645.37	904.32	1298.50	857.84	0.78
Puri	869.14	658.02	822.20	791.04	1060.55	810.17	0.699
Ganjam	812.97	710.19	730.20	719.73	1034.68	777.08	0.649
Gajapati	857.63	630.05	465.45	397.06	1295.33	542.00	0.499
Kandhamal	639.51	530.60	701.86	584.38	1120.40	594.56	0.482
Boudha	703.68	564.90	558.16	673.73	988.83	632.39	0.477
Sonepur	773.63	549.25	579.36	635.15	1002.07	646.44	0.484
Bolangiri	595.63	486.34	640.48	603.52	781.21	580.26	0.356
Nuapada	676.08	500.41	489.40	596.98	1036.37	578.09	0.404
Kalahandi	657.71	488.05	506.37	643.95	664.79	575.39	0.323
Rayagada	616.37	382.51	437.59	439.97	829.55	485.64	0.211
Nabarangapur	565.88	412.10	458.45	493.15	886.77	473.36	0.249
Koraput	406.96	318.97	490.79	358.68	938.61	369.24	0.134
Malkangiri	645.69	328.94	346.40	516.74	556.49	462.40	0.13

[**Formula used for the calculation of composite index: $Ii = 1/n\sum(Xi - Xmin)/(Xmax - Xmin)$**]

From the composite index column of above table-4.3.2 we find that in rural sector of Odisha Jagatsinghpur district is at the top position and Khurdha district is at the second position. From the lower end Malkangiri district is at the lowest position and Koraput position is above Malkangiri district.

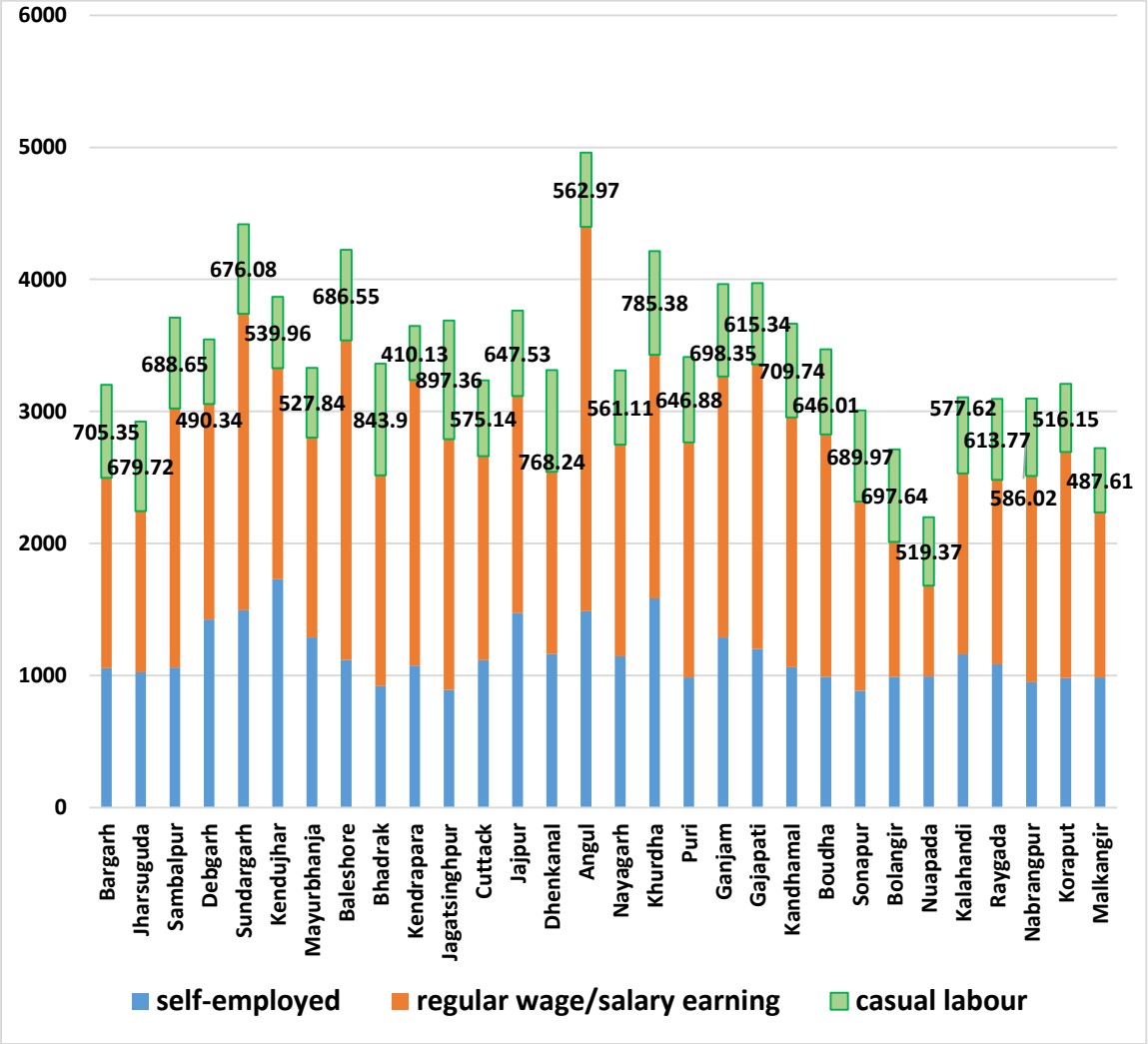
In Urban sector, the highest MPCE district by **Self Employed households** was Keonjhar with Rs 1728/- , which was double the lowest MPCE district i.e., Sonepur with Rs 883/- in this category. Similarly, in case of **Regular wage and salary households** it was Angul having highest MPCE of Rs 2910/-, which was around four times higher than Nuapada having lowest MPCE with Rs 686/-. As regards **Casual labour households type**, Jagatsinghpur had the highest MPCE with Rs 897/- and Kendrapada had the lowest MPCE with Rs 410/-. The top three and bottom three MPCE districts in terms of household type are given in table-4.3.3.

Table 4.3.3: (Top and bottom districts by household type) URBAN.

Top three districts by MPCE		Bottom three districts by MPCE	
Self Emp HH		**Self Emp HH**	
Keonjhar	1728.9	Sonepur	883.54
Khurdha	1583.6	Jagatsinghpur	890.76
Sundargarh	1494.2	Bhadrak	921.09
regular wage/salary earning HH		**regular wage/salary earning HH**	
Angul	2910.1	Nuapada	686.2
Baleshore	2417.8	Bolangir	1023.05
Sundargarh	2246.5	Jharsuguda	1220.95
Casual Labour HH		**Casual Labour HH**	
Jagatsinghpur	897.36	Kendrapara	410.9
Bhadrak	843.9	Malkangiri	487.61
Khurdha	785.8	Debgarh	490.34

Fig-16

District wise distribution of households by household type (Urban)



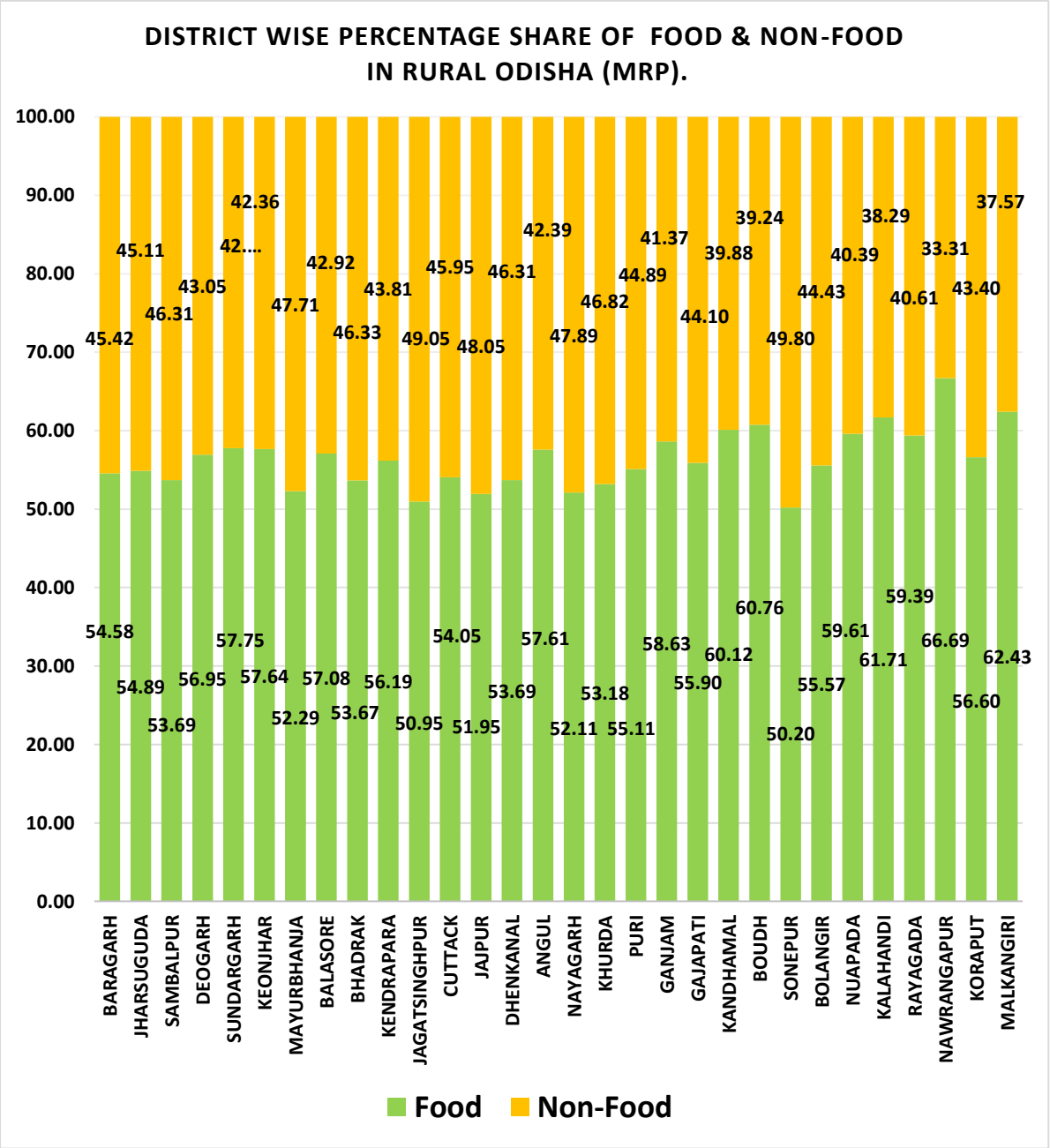
4.4: DISTRICT WISE PERCENTAGE SHARE OF FOOD AND NON_FOOD ITEMS IN HOUSEHOLD CONSUMER EXPENDITURE FOR RURAL AND URBAN ODISHA.

The District-wise proportion of expenditure on food and non-food items by rural and urban sector based on MRP method has been presented in figure-17 and 18. The expenditure on food remained higher in rural areas as compared to urban areas. In rural areas of Nabrangpur and Malkangiri districts, the share of expenditure on food items constituted 67 % and 62 % respectively followed by Kalahandi with 61 %, Boudh with 60.7% and Kandhamal with 60.1%. All the above five districts are southern districts and poor districts. It is also seen that the rural areas of Sonepur districts had

lower share of expenditure on food items with 50.2 % among all districts followed by Jagatsinghpur with 50.9% and Jajpur with 51.9%. From the above three districts, Sonepur district is southern district and Jagatsinghpur and Jajpur are the coastal districts.

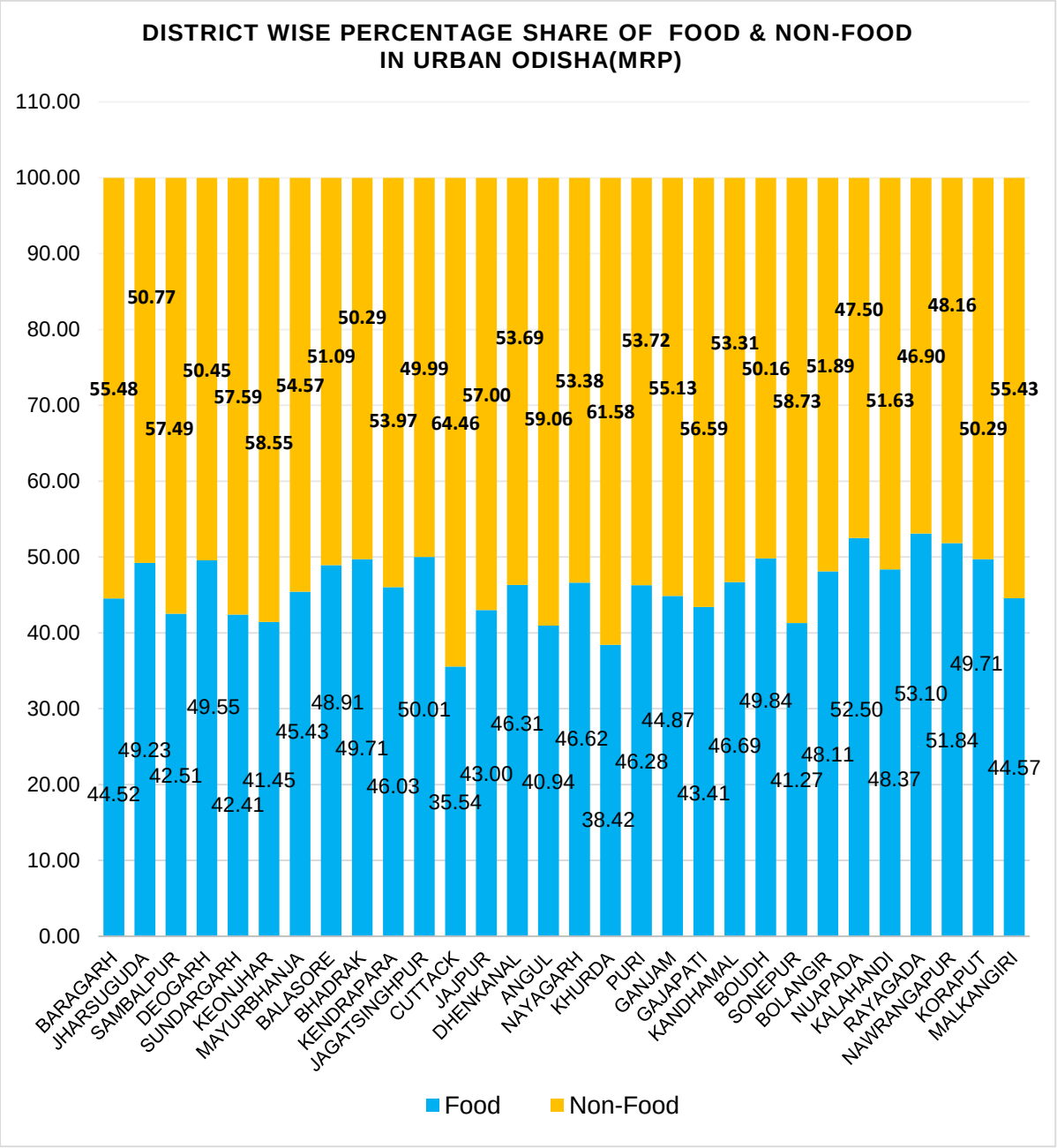
Obviously, the rural areas of districts having low share in food expenditure will have high share in non food expenditure.These districts were Sonepur, Jagatsinghpur and Jajpur.

Fig17-



As regards urban sector, the share of expenditure on food items was higher in Raygada (53.1%) followed by Nuapada (52.5 %) and Nabrangpur (50.8%). These districts are southern districts. But the low share districts were Cuttack (35.5%), Khurda (38.5 %) and Angul (40.5 %), which are all coastal districts and having less poverty. Thus in urban areas, households have been spending more on non-food items, where as in rural areas of the Districts, households had more share on food items.

Fig18



CHAPTER V

CONCLUSION AND SUGGESTION

An attempt has been made to cater to the felt need for generation of regional and district level estimates for MPCE by sectors both in terms of MRP and URP methods. It may give complete understanding of level of living prevailing across the Regions and Districts of Odisha.

Household consumer expenditure is an important indicator of standard of living for any nation, state, district and sub district etc. As sample size of NSS determined by NSSO, MOSPI, and Government of India is adequate only for state level, sub state level analysis is not possible using NSS data. This report is just an attempt to obtain district level analysis for rural and urban sector of Odisha by pooling NSS central and state sample data of NSS 66th round. Poolability test for these two independent samples of Odisha has been made by NSSO, Govt of India. Some districts did not satisfy the test. But considering the more number of districts satisfying the test, it is decided to obtain the district level estimates for all the districts of Odisha under the assumption that all districts satisfied the test.

According the result of household consumer expenditure, the coastal districts like Jagatsinghpur, Jajpur, Khurdha and Puri etc. are in top rank and the districts of undivided Koraput are in lower rank with respect to standard of living of rural Odisha. Similarly for urban Odisha, the more industrialized and developed districts like Angul, Khurdha, Sundargarh and Jajpur etc. are in top rank and the districts like Nuapada, Malkangiri and Sonepur are in lower rank .

Another technical point of statistical feasibility is that more number of districts are not satisfying the poolability test in case of employment status than the case of consumer expenditure. Hence in this report only the sub state level analysis has been made over the pooled data of 66th round nss.

Also it is suggested that Government may take essential step like enhancement of manpower to increase the sample size to overcome the deficiency of inadequacy of sample size for which the district level result will be more acceptable.

Annexure

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Annexure: 1

District & Household Type wise Average MPCE (MRP) in Rural.

District	Household Type					Avg.MPCE _District	Composite Index(Household Type)
	Self_emp_ non_Agrl	Agrl_labour	Other_labour	Self_emp _Agrl	Others		
1	2	3	4	5	6	7	8
BARAGARH	946.584	631.891	655.656	787.972	1362.749	786.978	0.737
JHARSUGUDA	703.889	614.097	600.448	710.783	1327.223	741.282	0.608
SAMBALPUR	807.305	653.548	603.043	659.188	1165.787	693.344	0.597
DEOGARH	611.625	503.734	537.246	708.863	1107.191	647.236	0.459
SUNDARGARH	759.832	544.240	585.535	552.978	991.759	624.418	0.447
KENDUJHAR	650.999	542.249	617.812	664.651	907.101	645.837	0.444
MAYURBHANJA	792.787	541.683	554.748	744.477	687.712	698.048	0.442
BALESHORE	766.275	560.341	573.706	614.589	1018.101	646.205	0.482
BHADRAK	872.347	706.724	776.257	793.507	875.683	793.927	0.665
KENDRAPARA	756.882	527.969	839.799	806.134	802.891	729.233	0.555
JAGATSINGHPUR	1114.830	757.074	1076.468	855.403	1270.058	969.635	0.959
CUTTACK	812.157	664.865	542.095	763.749	1066.010	769.934	0.601
JAJPUR	1008.446	685.772	787.588	738.551	1146.124	872.204	0.744
DHENKANAL	924.126	607.801	657.576	824.741	959.080	776.646	0.634
ANGUL	706.128	527.282	650.150	670.011	1173.825	712.117	0.530
NAYAGARH	653.588	620.710	648.624	858.975	1261.088	730.168	0.648
KHURDHA	929.880	683.166	645.373	904.320	1298.497	857.842	0.780
PURI	869.144	658.022	822.195	791.043	1060.553	810.172	0.699
GANJAM	812.973	710.192	730.204	719.727	1034.684	777.083	0.649
GAJAPATI	857.625	630.054	465.449	397.062	1295.329	542.004	0.499
KANDHAMAL	639.509	530.597	701.856	584.380	1120.403	594.561	0.482
BOUDHA	703.679	564.901	558.158	673.734	988.834	632.390	0.477
SONAPUR	773.634	549.254	579.359	635.153	1002.066	646.442	0.484
BOLANGIR	595.625	486.344	640.484	603.519	781.208	580.264	0.356
NUAPADA	676.080	500.412	489.395	596.976	1036.372	578.086	0.404
KALAHANDI	657.706	488.050	506.367	643.952	664.794	575.392	0.323
RAYGADA	616.374	382.505	437.594	439.973	829.546	485.642	0.211
NABARANGPUR	565.878	412.095	458.450	493.149	886.772	473.356	0.249
KORAPUT	406.960	318.966	490.793	358.679	938.605	369.236	0.134
MALKANGIRI	645.691	328.940	346.396	516.739	556.486	462.395	0.130

Annexure: 2

District wise food and nonfood share of rural and urban Odisha as per URP method

Name of the District	% share(Rural)		Name of the District	% share (Urban)	
	Food	Non-Food		Food	Non-Food
BARAGARH	52.33	47.67	BARAGARH	44.58	55.42
JHARSUGUDA	59.70	40.30	JHARSUGUDA	52.97	47.03
SAMBALPUR	60.34	39.65	SAMBALPUR	40.90	59.10
DEOGARH	55.70	44.30	DEOGARH	51.91	48.09
SUNDARGARH	55.65	44.35	SUNDARGARH	39.49	60.51
KEONJHAR	58.70	41.31	KEONJHAR	42.17	57.83
MAYURBHANJA	59.59	40.41	MAYURBHANJA	55.30	44.70
BALASORE	63.22	36.78	BALASORE	54.12	45.88
BHADRAK	56.60	43.40	BHADRAK	55.97	44.03
KENDRAPARA	57.39	42.61	KENDRAPARA	45.25	54.75
JAGATSINGHPUR	54.31	45.69	JAGATSINGHPUR	51.98	48.02
CUTTACK	56.41	43.59	CUTTACK	41.53	58.47
JAJPUR	56.28	43.72	JAJPUR	48.26	51.74
DHENKANAL	53.93	46.07	DHENKANAL	45.67	54.33
ANGUL	62.94	37.06	ANGUL	41.08	58.92
NAYAGARH	56.03	43.97	NAYAGARH	49.20	50.80
KHURDA	60.56	39.44	KHURDA	38.57	61.43
PURI	59.36	40.64	PURI	48.55	51.45
GANJAM	63.58	36.42	GANJAM	46.92	53.08
GAJAPATI	57.30	42.70	GAJAPATI	48.62	51.38
KANDHAMAL	60.87	39.13	KANDHAMAL	45.77	54.23
BOUDH	60.46	39.54	BOUDH	49.63	50.37
SONEPUR	51.26	48.74	SONEPUR	43.04	56.96
BOLANGIR	56.20	43.80	BOLANGIR	50.17	49.83
NUAPADA	62.58	37.42	NUAPADA	53.87	46.13
KALAHANDI	63.76	36.24	KALAHANDI	51.89	48.11
RAYAGADA	68.76	31.24	RAYAGADA	60.51	39.49
NABARANGAPUR	69.68	30.32	NABARANGAPUR	53.24	46.76
KORAPUT	61.01	38.99	KORAPUT	53.30	46.70
MALKANGIRI	62.92	37.08	MALKANGIRI	45.20	54.80

Annexure: 3

District wise Rural_MPCE .

Sl.No.	District	MPCE	MPCE_Class	Rank	Sample persons	Estimated persons
1	BARAGARH	786.98	500-800	6	1087	1298190
2	JHARSUGUDA	741.28	500-800	10	551	359182
3	SAMBALPUR	693.34	500-800	15	537	660946
4	DEOGARH	647.24	500-800	16	526	271526
5	SUNDARGARH	624.42	500-800	21	1120	1228487
6	KENDUJHAR	645.84	500-800	19	1150	1351422
7	MAYURBHANJA	698.05	500-800	14	1200	2134107
8	BALESHORE	646.2	500-800	18	1284	1951150
9	BHADRAK	793.93	500-800	5	1333	1225548
10	KENDRAPARA	729.23	500-800	12	1297	1186629
11	JAGATSINGHPUR	969.64	800-1000	1	918	935225
12	CUTTACK	769.93	500-800	9	1249	1745858
13	JAJPUR	872.2	800-1000	2	1294	1521086
14	DHENKANAL	776.65	500-800	8	855	975926
15	ANGUL	712.12	500-800	13	802	847164
16	NAYAGARH	730.17	500-800	11	859	924559
17	KHURDHA	857.84	800-1000	3	964	1020363
18	PURI	810.17	800-1000	4	1453	1376767
19	GANJAM	777.08	500-800	7	1493	2557203
20	GAJAPATI	542	500-800	26	569	443826
21	KANDHAMAL	594.56	500-800	22	580	729400
22	BOUDHA	632.39	500-800	20	574	427719
23	SONAPUR	646.44	500-800	17	577	563158
24	BOLANGIR	580.26	500-800	23	821	1461049
25	NUAPADA	578.09	500-800	24	584	529952
26	KALAHANDI	575.39	500-800	25	1051	1300729
27	RAYGADA	485.64	0-500	27	546	772494
28	NABARANGAPUR	473.36	0-500	28	886	1038949
29	KORAPUT	369.24	0-500	30	746	998244
30	MALKANGIR	462.4	0-500	29	581	525630
	ODISHA	693.16	All		27487	32362487

Annexure: 4

District wise Urban_MPCE

SL.No.	District	MPCE	MPCE_Class	Rank	Sample persons	Estimated persons
1	BARAGARH	1198.43	1000-1200	17	254	111259
2	JHARSUGUDA	1005.85	1000-1200	27	274	163335
3	SAMBALPUR	1160.98	1000-1200	19	276	298242
4	DEOGARH	1219.89	1200-1500	13	225	20689
5	SUNDARGARH	1595.63	1500-1800	3	502	635763
6	KENDUJHAR	1538.09	1500-1800	5	283	164034
7	MAYURBHANJA	1281.66	1200-1500	11	294	236780
8	BALESHORE	1210.41	1200-1500	15	293	370823
9	BHADRAK	1045.48	1000-1200	25	318	109120
10	KENDRAPARA	1310.08	1200-1500	10	296	82205
11	JAGATSINGHPUR	1155.14	1000-1200	21	261	76684
12	CUTTACK	1394.06	1200-1500	9	542	512909
13	JAJPUR	1542.82	1500-1800	4	286	110804
14	DHENKANAL	1216.51	1200-1500	14	244	109512
15	ANGUL	1797.29	1500-1800	1	296	128509
16	NAYAGARH	1239.94	1200-1500	12	240	34064
17	KHURDHA	1624.44	1500-1800	2	557	866714
18	PURI	1412.15	1200-1500	8	276	203912
19	GANJAM	1440.77	1200-1500	6	288	565026
20	GAJAPATI	1427.7	1200-1500	7	286	57763
21	KANDHAMAL	1177.18	1000-1200	18	263	40691
22	BOUDHA	1207.84	1200-1500	16	271	17817
23	SONAPUR	976.21	0-1000	28	300	49531
24	BOLANGIR	1021.45	1000-1200	26	283	136518
25	NUAPADA	786.96	0-1000	30	302	27994
26	KALAHANDI	1128.29	1000-1200	22	266	94449
27	RAYGADA	1105.24	1000-1200	24	264	104922
28	NABARANGAPUR	1116.73	1000-1200	23	257	43883
29	KORAPUT	1158.55	1000-1200	20	247	163834
30	MALKANGIR	944.99	0-1000	29	271	24187
	ODISHA	1374.84			9015	5561971

Annexure: 5

District wise Average MPCE (URP) in Rural

District	Average MPCE	Rank.	Sample persons	Estimated persons
1	2	3	4	5
BARAGARH	820.65	2	1087	1298190
JHARSUGUDA	681.40	11	551	359182
SAMBALPUR	616.78	19	537	660946
DEBGARH	661.62	13	526	271526
SUNDARGARH	647.95	15	1120	1228487
KENDUJHAR	634.20	17	1150	1351422
MAYURBHANJA	612.56	20	1200	2134107
BALESHORE	583.49	22	1284	1951150
BHADRAK	752.86	6	1333	1225548
KENDRAPARA	713.89	10	1297	1186629
JAGATSINGHPUR	909.65	1	918	935225
CUTTACK	737.65	8	1249	1745858
JAJPUR	805.00	3	1294	1521086
DHENKANAL	773.08	4	855	975926
ANGUL	651.70	14	802	847164
NAYAGARH	679.04	12	859	924559
KHURDHA	753.32	5	964	1020363
PURI	752.16	7	1453	1376767
GANJAM	716.61	9	1493	2557203
GAJAPATI	528.75	26	569	443826
KANDHAMAL	587.24	21	580	729400
BOUDHA	635.44	16	574	427719
SONAPUR	633.09	18	577	563158
BOLANGIR	573.72	23	821	1461049
NUAPADA	550.66	25	584	529952
KALAHANDI	556.82	24	1051	1300729
RAYGADA	419.48	29	546	772494
NABARANGAPUR	453.06	28	886	1038949
KORAPUT	342.45	30	746	998244
MALKANGIR	458.69	27	581	525630
ODISHA	655.81		27487	32362487

Annexure: 6

District wise Average MPCE (URP) in Urban

District	Average MPCE	Rank	Sample persons	Estimated persons
1	2	3	4	5
BARAGARH	1196.77	14	254	111259
JHARSUGUDA	934.76	27	274	163335
SAMBALPUR	1206.60	12	276	298242
DEBGARH	1164.34	17	225	20689
SUNDARGARH	1713.40	2	502	635763
KENDUJHAR	1511.89	4	283	164034
MAYURBHANJA	1052.74	22	294	236780
BALESHORE	1093.87	19	293	370823
BHADRAK	928.45	29	318	109120
KENDRAPARA	1332.61	8	296	82205
JAGATSINGHPUR	1111.39	18	261	76684
CUTTACK	1193.13	15	542	512909
JAJPUR	1374.77	6	286	110804
DHENKANAL	1233.34	10	244	109512
ANGUL	1790.91	1	296	128509
NAYAGARH	1174.70	16	240	34064
KHURDHA	1618.18	3	557	866714
PURI	1346.05	7	276	203912
GANJAM	1377.68	5	288	565026
GAJAPATI	1274.65	9	286	57763
KANDHAMAL	1200.78	13	263	40691
BOUDHA	1212.69	11	271	17817
SONAPUR	936.17	26	300	49531
BOLANGIR	979.40	24	283	136518
NUAPADA	766.88	30	302	27994
KALAHANDI	1051.72	23	266	94449
RAYGADA	969.82	25	264	104922
NABRANGAPUR	1087.48	20	257	43883
KORAPUT	1080.52	21	247	163834
MALKANGIR	931.83	28	271	24187
ODISHA	1326.34		9015	5561971

Annexure: 7

District & Household Type wise Average MPCE (MRP) in Rural

District	Household Type					
	Self-employed in non-agriculture	Agriculturl abourer	Other labour	Self-employed in agriculture	Others	Average MPCE
1	2	3	4	5	6	7
BARAGARH	946.58	631.89	655.66	787.97	1362.75	786.98
JHARSUGUDA	703.89	614.10	600.45	710.78	1327.22	741.28
SAMBALPUR	807.31	653.55	603.04	659.19	1165.79	693.34
DEBGARH	611.63	503.73	537.25	708.86	1107.19	647.24
SUNDARGARH	759.83	544.24	585.53	552.98	991.76	624.42
KENDUJHAR	651.00	542.25	617.81	664.65	907.10	645.84
MAYURBHANJA	792.79	541.68	554.75	744.48	687.71	698.05
BALESHORE	766.28	560.34	573.71	614.59	1018.10	646.20
BHADRAK	872.35	706.72	776.26	793.51	875.68	793.93
KENDRAPARA	756.88	527.97	839.80	806.13	802.89	729.23
JAGATSINGHPUR	1114.83	757.07	1076.47	855.40	1270.06	969.64
CUTTACK	812.16	664.86	542.10	763.75	1066.01	769.93
JAJPUR	1008.45	685.77	787.59	738.55	1146.12	872.20
DHENKANAL	924.13	607.80	657.58	824.74	959.08	776.65
ANGUL	706.13	527.28	650.15	670.01	1173.82	712.12
NAYAGARH	653.59	620.71	648.62	858.98	1261.09	730.17
KHURDHA	929.88	683.17	645.37	904.32	1298.50	857.84
PURI	869.14	658.02	822.19	791.04	1060.55	810.17
GANJAM	812.97	710.19	730.20	719.73	1034.68	777.08
GAJAPATI	857.62	630.05	465.45	397.06	1295.33	542.00
KANDHAMAL	639.51	530.60	701.86	584.38	1120.40	594.56
BOUDHA	703.68	564.90	558.16	673.73	988.83	632.39
SONAPUR	773.63	549.25	579.36	635.15	1002.07	646.44
BOLANGIR	595.62	486.34	640.48	603.52	781.21	580.26
NUAPADA	676.08	500.41	489.39	596.98	1036.37	578.09
KALAHANDI	657.71	488.05	506.37	643.95	664.79	575.39
RAYGADA	616.37	382.50	437.59	439.97	829.55	485.64
NABARANGAPUR	565.88	412.09	458.45	493.15	886.77	473.36
KORAPUT	406.96	318.97	490.79	358.68	938.60	369.24
MALKANGIR	645.69	328.94	346.40	516.74	556.49	462.40
ODISHA	800.68	553.25	620.14	684.39	1016.82	693.16

Annexure: 8

District & Household Type wise Average MPCE (MRP) in Urban

District	Household Type				
	self-employed	regular wage/salary earning	casual labour	others	Average MPCE
1	2	3	4	5	6
BARAGARH	1055.69	1441.06	705.35	2060.54	1198.43
JHARSUGUDA	1023.85	1220.95	679.72	1955.94	1005.85
SAMBALPUR	1060.77	1960.86	688.65	839.37	1160.98
DEBGARH	1424.89	1631.70	490.34	1423.15	1219.89
SUNDARGARH	1494.17	2246.48	676.08	2485.08	1595.63
KENDUJHAR	1728.91	1599.63	539.96	1910.45	1538.09
MAYURBHANJ	1289.28	1512.89	527.84	1281.45	1281.66
BALESHORE	1120.35	2417.78	686.55	751.06	1210.41
BHADRAK	921.09	1596.40	843.90	573.97	1045.48
KENDRAPARA	1074.90	2162.66	410.13	1054.44	1310.08
JAGATSINGHPUR	890.76	1900.21	897.36	1053.02	1155.14
CUTTACK	1117.65	1543.41	575.14	3866.22	1394.06
JAJPUR	1472.85	1643.25	647.53	2991.48	1542.82
DHENKANAL	1163.72	1380.45	768.24	1210.39	1216.51
ANGUL	1487.69	2910.08	562.97	1455.09	1797.29
NAYAGARH	1145.90	1603.75	561.11	1164.72	1239.94
KHURDHA	1583.62	1844.84	785.38	2611.77	1624.44
PURI	987.17	1777.96	646.88	1464.03	1412.15
GANJAM	1289.61	1975.79	698.35	1454.97	1440.77
GAJAPATI	1201.32	2155.42	615.34	1719.56	1427.70
KANDHAMAL	1062.88	1891.88	709.74	1954.42	1177.18
BOUDHA	990.33	1835.64	646.01	1537.58	1207.84
SONEPUR	883.54	1435.38	689.97	626.91	976.21
BOLANGIR	990.93	1023.05	697.64	1333.73	1021.45
NUAPADA	994.13	686.20	519.37	652.31	786.96
KALAHANDI	1160.55	1370.05	577.62	1203.92	1128.29
RAYGADA	1085.13	1396.81	613.77	737.48	1105.24
NABARANGAPUR	949.51	1562.79	586.02	1139.34	1116.73
KORAPUT	981.95	1710.68	516.15	632.31	1158.55
MALKANGIR	985.50	1249.22	487.61	507.31	942.76
ODISHA	1248.11	1814.80	667.91	1579.07	1374.83

Annexure: 9

District wise food and nonfood share of rural and urban Odisha as per MRP method

Name of the District	% share (Rural)		Name of the District	% share (Urban)	
	Food	Non-Food		Food	Non-Food
BARAGARH	54.58	45.42	BARAGARH	44.52	55.48
JHARSUGUDA	54.89	45.11	JHARSUGUDA	49.23	50.77
SAMBALPUR	53.69	46.31	SAMBALPUR	42.51	57.49
DEOGARH	56.95	43.05	DEOGARH	49.55	50.45
SUNDARGARH	57.75	42.25	SUNDARGARH	42.41	57.59
KEONJHAR	57.64	42.36	KEONJHAR	41.45	58.55
MAYURBHANJA	52.29	47.71	MAYURBHANJA	45.43	54.57
BALASORE	57.08	42.92	BALASORE	48.91	51.09
BHADRAK	53.67	46.33	BHADRAK	49.71	50.29
KENDRAPARA	56.19	43.81	KENDRAPARA	46.03	53.97
JAGATSINGHPUR	50.95	49.05	JAGATSINGHPUR	50.01	49.99
CUTTACK	54.05	45.95	CUTTACK	35.54	64.46
JAJPUR	51.95	48.05	JAJPUR	43.00	57.00
DHENKANAL	53.69	46.31	DHENKANAL	46.31	53.69
ANGUL	57.61	42.39	ANGUL	40.94	59.06
NAYAGARH	52.11	47.89	NAYAGARH	46.62	53.38
KHURDA	53.18	46.82	KHURDA	38.42	61.58
PURI	55.11	44.89	PURI	46.28	53.72
GANJAM	58.63	41.37	GANJAM	44.87	55.13
GAJAPATI	55.90	44.10	GAJAPATI	43.41	56.59
KANDHAMAL	60.12	39.88	KANDHAMAL	46.69	53.31
BOUDH	60.76	39.24	BOUDH	49.84	50.16
SONEPUR	50.20	49.80	SONEPUR	41.27	58.73
BOLANGIR	55.57	44.43	BOLANGIR	48.11	51.89
NUAPADA	59.61	40.39	NUAPADA	52.50	47.50
KALAHANDI	61.71	38.29	KALAHANDI	48.37	51.63
RAYAGADA	59.39	40.61	RAYAGADA	53.10	46.90
NABARANGAPUR	66.69	33.31	NAWRANGAPUR	51.84	48.16
KORAPUT	56.60	43.40	KORAPUT	49.71	50.29
MALKANGIRI	62.43	37.57	MALKANGIRI	44.57	55.43

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“Beauty of Statistics lies in its capability of handling a large mass of data, scientific analysis backed by sound reasoning and logic skills and a little common sense to figure out problems”

Statistics is the grammar of science.

Karl Pearson

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