

Impact of Food Subsidy on Socio-Economic Status of Odisha

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Abstract - Odisha, being one of the top FDI destinations of India, is still regarded as one of the poorest states of the country. Odisha is far behind its country across many developmental aspects. The problem is basically from two aspects, i.e., Social and Economic. To check these problems for the sake of socio-economic upliftment, various types of subsidies are being provided in various sectors by the government from time to time. From the various types of subsidies, Food Subsidy has a major contribution, which accounts for 41.58 percent of total subsidy on average. The present paper is an attempt to highlight the socio-economic problems of the state and the contribution of Food Subsidies to minimize them. It also analyses the relationship between the Food Subsidy and socio-economic status of Odisha on the basis of certain parameters such as State Gross Domestic Product (SGDP), Per Capita Income (PCI), Human Development Index (HDI), and Unemployment Rate (UR). Various statistical tools like Multiple Correlation and Linear Regression have been applied to analyze the data collected from secondary sources. The paper concludes that there is no significant relationship as the well significant impact of FS with the socio-economic parameters, taken under the present study except HDI. The present attempt will be helpful for the government as well as the policymakers regarding the formulation of food subsidy policies.

Keywords - Socio-economic problems, SGDP, PCI, HDI, UR, Food Subsidy

I. INTRODUCTION

Odisha is an Eastern Indian state occupying 4.8% of India's area. The economy of Odisha is one of the growing states of economies in India. Odisha, being one of the top FDI destinations of India, is still regarded as one of the poorest states of the country. Odisha lags its country across many development aspects like Industrialisation, education, health, infrastructural growth, Human Development Index, etc., as in [18]. The problem is basically from two angles, i.e., Social problems like Poverty, Unemployment, Illiteracy Adams, as in [2]. And Economic problems such as Low Per Capita income, unstable inflation rate, low savings rate, etc. Socio-economic problems are the relationship between

social behavior and economics i.e., the relationship between social and economic factors within a society, state, or country, as in [1]. As per the recent data, the unemployment rate of the nation is 3.5% while that of Odisha is 6.7% the HDI of Odisha is 0.612 % and that of India is 0.624%, which is a clear indication that, the state of Odisha needs to do more in order to reach at least the national averages for the socio-economic factors. To curb these problems for the sake of socio-economic upliftment, various types of subsidies are being provided in various sectors by the government from time to time. A subsidy is a form of financial support extended by the government for helping the poor with the aim of providing economic and social policies. Subsidies can come in various forms including direct subsidies such as cash grants, interest-free loans, and indirect subsidies such as tax breaks, insurance, low-interest loans, accelerated depreciation, rent rebates, etc. The four major types of subsidies that are provided by the government include Food subsidies, Medical subsidies, Education subsidies, and Agricultural subsidies. Among those, food subsidy is the most important type of subsidy, as in [9]. It is a major contributor to the total subsidy as it contributes 41.58% to the total subsidy on an average, as in [26]. It is provided to meet the difference between the economic cost of food grains and their sales realization at central issue prices for targeted public distribution systems and other welfare schemes. Thus, considering the socio-economic problems or issues and Food Subsidy as an attempt to fill the gap in Odisha, this paper is an attempt to investigate the impact of food subsidy on the socio-economic status of Odisha on the basis of certain parameters like SGDP, Per-Capita Income, Human Development Index and Unemployment rate.

II. MATERIALS AND METHODS

The study is based on a descriptive research design. From descriptive, it is conclusive in nature. The period of study is taken from 2012-to 2019 in the state of Odisha. The purposive sampling technique is used to collect the data. Data relating to Food Subsidy, SGDP, PCI, HDI, and UR is collected from secondary sources such as Odisha economic survey, District statistical report, various official websites like www.desorissa.com, www.dfpd.gov.in, www.mospi.com, etc. In order to achieve the set



objectives of the study, statistical tools like Multiple Correlation and Linear Regression Analysis are used

to confirm the relationship between Food Subsidy and other parameters.

A. Preparation of tables

Table 1. Food Subsidy, SGDP, PCI, HDI, and UR of Odisha from 2012-19.

Year	Food Subsidy (INR in Crs.)	GDP (In %)	PCI (In %)	HDI (In %)	UR (In %)
2012-13	2731.5	5.36	4.85	0.572	5.1
2013-14	3041.11	9.26	6.69	0.576	4.3
2014-15	3785	1.8	0.19	0.58	3.5
2015-16	3331.39	8.17	7.3	0.597	3.8
2016-17	3847.72	10.39	9.47	0.597	4.5
2017-18	5133.57	7.14	6.04	0.612	6
2018-19	4519.01	8.35	7.06	0.612	6.7

(Source: www.dfpd.gov.in, www.desorissa.com, www.mospi.com)

Table 2. Correlation between Food Subsidy and SGDP, PCI, HDI, UR in Odisha from 2012-19.

		FS	SGDP	PCI	HDI	UR
FS	Pearson Correlation	1	.064	.079	.870	.597
	Sig. (2-tailed)		.891	.866	.011	.157
	N	7	7	7	7	7
SGDP	Pearson Correlation	.064	1	.973	.390	.280
	Sig. (2-tailed)	.891		.000	.387	.542
	N	7	7	7	7	7
PCI	Pearson Correlation	.079	.973	1	.443	.326
	Sig. (2-tailed)	.866	.000		.320	.476
	N	7	7	7	7	7
HDI	Pearson Correlation	.870	.390	.443	1	.629
	Sig. (2-tailed)	.011	.387	.320		.130
	N	7	7	7	7	7
UR	Pearson Correlation	.597	.280	.326	.629	1
	Sig. (2-tailed)	.157	.542	.476	.130	
	N	7	7	7	7	7

(Source: IBM SPSS Statistics 23)

Table 3. Chart of Correlation

RESULTS	DEGREE OF CORRELATION
± 1	PERFECT CORRELATION
± 0.90 or more	VERY HIGH DEGREE OF CORRELATION
$\geq \pm 0.75$ and $< \pm 0.90$	FAIRLY HIGH DEGREE OF CORRELATION
$\geq \pm 0.50$ and $< \pm 0.75$	MODERATE DEGREE OF CORRELATION
$\geq \pm 0.25$ and $< \pm 0.50$	LOW DEGREE OF CORRELATION
$< \pm 0.25$	VERY LOW DEGREE OF CORRELATION
0	NO CORRELATION

(Source: BUSINESS STATISTICS BOOK by Digambar Patri, Kalyani Publishers)

Table 4. Regression between Food Subsidy and SGDP, PCI, HDI, UR in Odisha from 2012-19.

Parameters	t-value	p-value	R Square
SGDP	0.144481	0.890764	0.004158
PCI	0.177043	0.866423	0.00623
HDI	3.954589	0.010801	0.757738

UR	1.665347	0.156724	0.356779
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(Source: Author's Calculation)

III. RESULTS AND DISCUSSION

As the concerned objective is to know the impact of food subsidy on various socio-economic parameters, statistical tools like correlation and regression are used. Data in table no. 1 depicts that, the Food Subsidy of Odisha shows a fluctuating trend from 2012-19. It was the lowest in 2012-13 amounting to Rs.2731.5 Crs. and was the highest in the year 2017-18 i.e., Rs.5133.57 Crs. The SGDP of Odisha was highest in 2016-17 and presently it is 8.35%. The PCI fluctuates in the same trend as that of GSDP and currently stands at 7.06%. The HDI shows a continuously increasing trend at a minimal rate and is 0.612% as of 2018-19. The UR of Odisha is correlation between them. Food Subsidies and Unemployment Rates are also positively correlated with 0.59731 and are related to a moderate degree. The table further depicts that the GDP and PCI are positively correlated with 0.973 indicating a very high degree of correlation between them. The p-value of HDI is 0.11 which is less than 0.05. Hence, the null hypothesis is rejected, meaning that, there is a positive significant relationship between FS and HDI. SGDP is having a positive significant relationship with PCI but, there is no significant relationship between the variables in other cases. From table no.

fluctuating as has reached a percentage of 6.7 as of 2018-19 which is the highest between 2012-19. From table no. 2 and table no. 3, by using Correlation Statistics, it can be observed that Food Subsidy and State Gross Domestic Product (SGDP) are positively correlated with 0.064479, which indicates a very low degree of correlation. Food Subsidy and Per Capita Income (PCI) are positively correlated with 0.078929 meaning that it has a very low degree of correlation with PCI as well. Food Subsidy and Human Development Index (HDI) are positively correlated with 0.870481 i.e., there is a fairly high degree of

4, by using Regression Statistics, it is found that FS has no significant impact on the socio-economic parameters taken under the present study except HDI. The p-value of HDI is 0.010801 which is less than 0.05. Hence, the null hypothesis is rejected, meaning that, there is a significant impact of FS on HDI with 75.77% of Goodness of Fit. In the case of other factors such as SGDP, PCI, and UR, the p-value being more than 0.05, the null hypotheses are rejected, meaning that, there is no significant impact of FS on SGDP, PCI, and UR.

IV. CONCLUSION

This paper intends to analyze the relationship between the Food Subsidy and socio-economic parameters of Odisha. From the correlation statistics, it is found that Food Subsidy has a positive significant relationship with HDI considered under the present study. To know the impact of Food Subsidy on all these factors, the regression analysis is applied. The statistical analysis implied that there is a significant impact of Food Subsidy on Income, Health and Education through HDI with 75.77% of Goodness of Fit. Thus, it can be concluded that FS is having a significant relationship as well impact only on HDI. Therefore policymakers should use other ways such as linking the socio-economic status of the

state with Industrial growth or employment generation or various entrepreneurial development schemes for the upliftment of the socio-economic status of the people of Odisha. There is a further scope of research in this area by considering other socio-economic parameters apart from the four factors (SGDP, PCI, HDI, and UR) taken under the present study such as Mortality rate, Body Mass Index (BMI), etc. to judge the socio-economic status. The study has focused only on the impact of FS, which is a limiting factor of the present research. Apart from FS, other types of subsidies such as Agricultural subsidies, Medical subsidies, Educational subsidies can also be taken into account.

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