

Impact of Sugar Industry on Regional Development in Lower Bhima Basin Special Reference to Pandharpur Tahsil

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Abstract:

Sugar industry is second largest agro-based industry. It is also helpful to solve the problem of unemployment. The Sugarcane based industries will help to absorb some of the unemployment and consequent rural-urban migration for seeking job. (The Sugar industry has enhanced agricultural productivity by providing various inputs like fertilizer, machinery techniques knows how financial assistance etc.) Finally Sugar industry is located within the Cane growing areas. Considering Sugarcane products and sugar industries sugarcane cultivation is helpful for trades and transports.

Sugar industry is one of the basic industries which is provided raw material to Paper industry, Winery industry, Ethanol production etc. These industries further helped to solve the problem of unemployment. 30000

Established of Co-operative sugar factory in a region has acted as a growth center for the development of region. Such development content like as Construction of roads, establishment nationalize and Co-operative banks, Co-operative marketing societies, educational institutions, medical centers etc. have brought all round development of the people of the region. It creates employment opportunities in the region and stop migration of youth from rural to urban area.

The Sugar industry is the one of the important industries for the sustainable development life of rural people in Pandharpur tahsil In Pandharpur Tahsil there are 4 sugar factories situated out of which 2 Co-operative basis and 2 in private sector. The Pandharpur Tahsil has occupied 9.91 % of total land of Solapur district out of them more than 6.05% land which covered by black cotton Soil.

The Sugarcane and Sugar industry growth has brought some good effect on the general economy, educational, Social, Cultural, and agricultural of the region as well as it has created some socio economic impact and regional development

Keyword: Sugar Industry, Irrigational Facility, Regional Development.

Introduction:

The Pandharpur tahsil is one of the most important tahsil of Solapur district. It lies entirely in the Bhima basin upto the border of Mangalwedha, Mohol, Sangola, Madha and Malshiras tahsil. The Pandharpur tahsil is located central part of Solapur district. Its geographical location of Pandharpur tahsil on the map is between 17° 30' North to 17° 55' latitude and 75° 05' East to 75° 34' longitudes. It covers an area of 1303 s.q. km. The minimum annual average rainfall in the tahsil is 650 m.m. and soil of this tahsil is various type but in Bhima river basin mostly fertile soil.

The Bhima River flows in the middle part of the study region. Bhima and Nira main canal provide more water facilities to this study region. Due to fertile soil, irrigation facilities, dry tropical type of climate, annual average rainfall 650 m.m. so sugarcane & other cash crop production is the very better in the study region

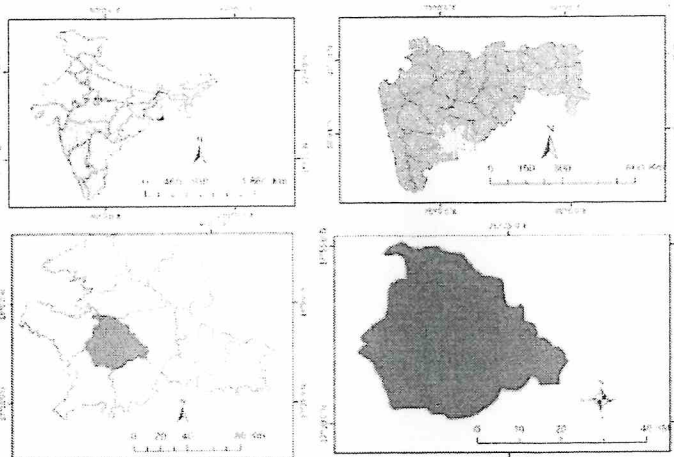
In Pandharpur tahsil irrigation facilities spreads through the all over region by Central part Bhima River, Ujjani Canals, Wells and other sources of irrigation. Its affects in sugarcane cultivation in last decades as well as to developed the sugar industries in tahsil. Pandharpur tahsil is the second in Solapur district for the Canal and lift irrigation facilities developed. Therefore the two sugar factories have established in very past year in 1985 to 1995 and then other two sugar factories established in 2011 to 2012. Now in Pandharpur tahsil up to 4 sugar factories at which 2 are in Co-operative sector and other two (2) are in private sector. Their locations were four different parts of tahsil

Zone wise output of sugarcane per hector is calculated in Western zone of tahsil average yield per hector is 85.5 M.T. tones and Central zone average yield per hector is 90.6 M.T. and Eastern zone average yield per hector is 82.2 M.T., because expenditure on inputs are less in eastern zone.

The soil of this tahsil is various and fertile land is at Bhima basin. The Ujjani dam is very close to Pandharpur tahsil and through this dam and Sub-Canals there are 34454 Hectors total area is under irrigated in district out of which averagely 6500 to 7000 hectors. Thus sugarcane area under irrigated increased and its benefits to 73 Villages in Pandharpur tahsil. Thus these irrigation facilities get the several developments in various fields of this tahsil.

Study Area:

The Tahsil of Pandharpur is one of the most important tahsil of the Solapur district both in terms of area and population. It lies entirely in the Bhima basin up to the border of Manglwedha, Mohol, Sangola and Madha and Malshiras tahasil. Pandharpur tahasil is situated in the south west of Solapur district. Its geographical place on the map is at Pandharpur tahsil in between $17^{\circ} 30'$ North to $17^{\circ} 55'$ latitude and $75^{\circ} 05'$ East to $75^{\circ} 34'$ longitudes. It covers an area of 1303 sq.km. Which is area lies mostly rural.

**Location Map****Objectives:**

1. To review the physical and socio economic setup of the study region
2. To study the Sugarcane cultivated area as basis for the Sugar industry
3. To examine the impact of sugar industry on regional development in the study region.
4. To study the socio economic impact of Sugar industries in Pandharpur Tahsil

Methodology:

The data collected and used for the period of 2001 to 2015. The study of impact of sugar industries on regional development and related change can be carried out by using various data source. The present study will be based on primary and secondary sources of data. The primary data is collected through field survey, questionnaires and personal interviews method and secondary data is collected through various government reports and available sources.

(I) Sampling:

In the study region there are seven circles were presently working namely; Karkamb, Patvardhan, Puluj, Kasegaon, Bhalwani, Tungat and Pandharpur. Out of these seven circles only four circles having sugar industries. For study purpose we have selected total 34 villages these seven circles.

(II) Data Collection:**A) Primary Data Sources:**

The primary data will be collected by conducting the intensive field work of the well planned and thoughtful questionnaires will be prepared so as to have the required data and information about various aspects i.e. working results of sugar factories, sugarcane production, sugarcane crushing, sugar production, factory workers, development of sugar industries, irrigation facilities, cropping pattern agriculture land use, crop combination etc. statistical information collected from various sources.

B) Secondary Data Sources:

The secondary data collected from various sources i.e. survey of India district census handbook, statistical abstract of Solapur district, socio economic views, library of Vasantdada sugar institute Manjari (Pune), Solapur District gazette, annual report of published by sugar factories, Indian sugar monthly bulletin published by Indian sugar mill association new Delhi above all these sources the researcher collected the data and visited different institute and collected data. All sugar factories in the Pandharpur Tahsil were visited and collect the information.

The Bhima, Man River and Ujjani Dam right and Left Canals as well as other irrigation sources have increased area under Sugarcane and Various Crops production in Pandharpur tahsil.

It is observed that studies of socio economics facility in Pandharpur tahsil in very importance in process of development the socio economic are complimentary to standard of living and quality of life. This is the best indicator of development. These Socio economic facility include such as accessibility to health and public health service, efficiency of transport accessibility to banks and post office, no. of educational institutional and accessibility to primary, secondary, higher secondary, Technical & higher educational other public utility services like electricity. Therefore in present study the following seven socio-economic facilities are considered to assess to the development in study region from 1991-2015. The most important socio economic facility as like post & telephone, educational facility, medical facility, electricity facility, bank facility, transport facility, weekly market facility. These facilities are available in Pandharpur tahsil.

**Circle Wise Crop Concentration Index Based on Bhatia's Method
(2001 to 2005, 2011to 2015)**

Sr. No.	Name of Village	Sugarcane	Wheat	Jowar	Maize	G.Nut	Fodder	Grapes	Pomegranate	Vegetables
1	Kasegaon	2.40	0.63	0.04	0.63	4.11	0.73	2.39	1.34	1.90
2	Bhalwani	1.49	0.51	0.27	1.06	3.35	2.52	0.85	2.72	1.44
3	Tungat	2.00	0.68	0.32	0.80	4.13	2.83	0.39	1.05	0.04
4	Pandharpur	1.55	0.70	0.40	1.02	0.0	0.27	0.89	0.37	6.52
5	Karkamb	1.36	1.73	0.25	1.59	0.06	1.25	1.75	0.70	0.32
6	Patvardhan	2.46	0.74	0.43	0.49	1.26	1.37	0.19	0.10	1.52
7	Puluj	1.76	1.73	0.15	1.59	0.00	0.50	0.07	0.70	0.02

Source: Compiled by the Socio-Economic Abstract.

Socio Economic Development In Pandharpur Tahsil

Sr. No.	Name of the Facilities in study area	Particulars	1991	2001	2011	2015
1	Post/ Telephone office	Number of post office	20	35	48	55
		Number of Post & Telegraph office	4	10	15	20
2	Educational Facilities	Primary School	85	180	320	385
		High School	7	30	60	74
		Junior College	3	5	15	22
		Senior College	1	2	4	6
3	Medical	Private Hospitals	25	45	210	255
		Government PHC R RHC	15	78	85	98
4	Electricity	Street Light	5	55	390	750
		Residential Parikshan	80	6985	35320	60185
		Public Water Supply Connection	5	22	250	340
		Commercial Connection	7	1652	3935	4930
		Industrial Connection	5	220	725	782
		Agricultural Connection	65	8220	23815	38385
5	Bank Facility	Nationalize Bank	5	7	17	24
		District Co-operative Bank	6	28	44	50
		Primary Agricultural Credit Society	45	85	120	132
6	Transport (Per 100 Sq. Km.)	Metal Road	11.20	20.13	60.8	112
		Un metal Road	8.30	12.4	75.9	135
7	Weekly Market Facility	No. of Villages	15	17	20	22

Source: Compiled by the Socio-Economic Abstract.

Finding and Conclusion:

1. Agriculture is the main occupation of the people of the study region because of the high proportion activities. The geography studied all phenomenons of nature land, water, climate, soil, population, settlement economics activities which have lateral become distinguished sub branches of geography.
2. Industrial geography was able to benefit from the existing work in economic. Human investment, capital power, water supply, transport and communication are vital elements in the process of agricultural and industrial development. In the field of industrial geography a study in details is necessary particularly in relation to agriculture area.
3. Sugar industry is the largest agro-based industry in rural area. The agro-based industries leave a deep impact on the rural economy and bring about fundamental changes in rural area. A co-operation & private sugar factory in the rural area or for that matter any agro-based large scale industry is considered as a growth center. The skilled and semiskilled workers mostly from the rural areas of sugar industry have been a focal point for socio-economic development is the rise of socio economic development is the rural generating employment and higher income transport and communications facilities.
4. Further many sugar factories have established schools, colleges, medical centers and hospitals for the benefit of the rural population. Some of the sugar facilities have also diversified into by-product based industries baggers molasses paper and board facilities and co-generation plants.
5. The setting up of co-operative sugar factories in rural areas has imported implications for the process of industrialization. Sugarcane cash crop, being the main input for a sugar factory the establishment of sugar factories increases the economic importance of the sugarcane crop. The changing in the form of technology and cropping pattern generate additional jobs for agriculture labour. The increase in trade and commercial activities requires an increase in the number of commission agents and banking facilities.

6. The sugar factories may spend on the various social services such as education medical recreation. It may also incur expenditure on agricultural attention services like dairy development agricultural research as also provision of irrigation facilities and other agriculture inputs.
7. The transportation of sugarcane, sugar, by-products and increased propensity to travel results in the expansion of road transport facilities around the location of the factories. Thus from the input and output side, a sugar factories is expected to generate linkage effects in a rural area.
8. The object of the study was to measure the impact of sugar factories and its role on the economic development of the surrounding a rural area. The details of the objectives and methodology of this study are explained.
9. In the cropping pattern, it has been observed that there is a dominance of food grains vise cereals and pulses. Sugarcane is the major cash crop of the serine and it is increasing year by year. Jowar is the first ranking crop in tahsil. The Sunflower and Tur were second ranking crops in the tahsil of the region
10. In the study region due to irrigation facilities the lands under sugarcane and production of sugarcane have increased. The various schemes have been adopted by sugar factories for the surrounding rural area development.
11. Within last ten years the area under sugarcane is increased. In the study area impact of irrigation on agricultural development is more as compared to other influencing factors. The trend of service facilities are found very high in sample village.
12. It has been observed that by undertaking agricultural development activities like lift irrigation percolation, tanks dams, soil testing, supply of improved seeds technological guidance to the activities etc. and the factories helped in increasing agricultural productivity as well as in developing scientific attitude in the farmers.
13. Due to agricultural development income of farmers increased. The cultivation of sugarcane and the increased productivity of agricultural added to farmer's income from land.
14. It is observed that 48.28% of the sugar factories laborers come from traditional farming household where as 51.72% are landless labors.
15. We can say that established of the sugar factories generated additional employment opportunity for the people an attempt is made to find out the impact of sugar factories on the lives of agricultural labor. The most important point to note is that compared to the agriculturalist the economics conditions of the agricultural labors actually worsened.
16. Most of the irrigation facility are developed in the Bhima river basin middle part of the study region, along the river canal & lift irrigation source. In the study region due to irrigation facilities the lands under sugarcane and production of sugarcane have increased.
17. In the study region transport & communication system is well developed. The sugar factories have provided various type facilities to come grower farmers, so that they have produced and yield more sugarcane. Various schemes have been adopted by sugar factory for the surrounding rural area development. Which agricultural exhibition, supply of Molasses supply good quality sugarcane seeds, sugar factory school, accident insurance, labor welfare programmers etc.
18. Finally, we can say that the establishment of sugar factories in rural areas works as a growth center. It has accelerator the economic development of the rural area. Especially, it is evidence that this transformation of segment rural are into ecology active and socially awakened region. It is of expanding capital, power roll, better utilization of local resources and economic mobilization of monitory exchange urban contact and education generate by the establishment industrial enterprises such as a sugar factories.

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