Resource Based Technology for Rural Development: Resource Mapping of Beed District

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Abstract

Resource abundance is not sufficient to rural development but rural development is possible only through the perfect resource management. The scarcity of natural resource, poor quality of Human resource and absence of its management are the causes of backwardness of region. After resource mapping of Beed district we can say the Beed has lots of potential in unused form. Working population mostly engaged in Agriculture Sector but skill based working sectors still backward. Excess supply of human capital in agriculture can be shift to industry and service sector. Facilities of skill based education and quality education may helps to shifting of human capital to required sector. Agriculture sector has also need to reform in cultivation methods and adoption of technology. So resource mapping is helps to rural development of region.

Introduction

Rural development is a process of improvement in livelihood and Economic wellbeing of people living in rural area. According to census of 2011 India's 69 percent population living in villages. Generally, income of rural people is at low level which is comes from agriculture sector. The backwardness of rural sector it be a major hindrance to the progress of rural economy. India is a predominantly an agriculture country and most of the population dependent on it. At the beginning of planning recorded highest share in India's GDP of Agriculture sector but it was declined continuously. At present agricultural share in country's GVA is lowest. It shows that most of the population Subsistence on lowest income. While proposing rural development strategy, socio-economic strength and weakness of the region should be known. The knowledge of resources can be reduce excess use of non renewable resources and can be reduce hidden unemployment as well as can be shift excess supply of labour in required sector. More than 98 per cent Beed district situated in rural area. So every step taken towards rural development will add to the overall development of the district.

Review of Literature

Simon Maxwell and Others (2001) pointed out in his paper 60 per cent of world's poor still be rural. They suggest the different strategy for rural development that the proximity and access to the cities, improvement in amount and quality of Natural Resources which is possible, improve the density of settlement, reduction of vulnerability of natural catastrophes these are the key factors of strategy for rural development.

Manish k. Tiwari &Vivek Katare (2017) The socio-economic development of region is based on Natural resources like water resources and land resources. Due to increase in population, these resources are over stretched often leading to resource depletion. To prudently manage these delicate resources, resource mapping through remote sensing and GIS techniques can be applied effective measure to generate data and information for resource management in sustainable manner.

Objectives of the study

1. To knows the strength of Beed District for rural development.
2. To knows the weakness of the Beed district for rural development.
3. To the mapping of resources of Beed district which is helps to rural development.
4. To suggest the rural development strategy based on resource.

Research Methodology

This study described the Economic Strength and Weakness of the region through the resource mapping. For this study, resources classified in three main types that is natural resources, Human resources and Institutional resources. While analyzing human resources, the status of literacy, life expectancy, employment opportunities, and availability of facilities were studied. The availability, distribution and use status of all types of natural resources are studied while mapping natural resources. While mapping the institutional resources, we studied the availability of

educational institutions, financial organizations, health organizations and industrial organizations in the district as well as quality of services provided by institutions, areas of benefit and the upgradation of people by the institutions. Secondary data is main base of this study. economic survey of Maharashtra, Economic-social review of Beed district, census of India etc are used to this paper. Descriptive research design was used in this Research.

Geographical Characteristics and Demographic Composition of Beed District.

Introduction

The Beed district was a part of Hyderabad State of Nizam. The district has become the part of State Mumbai in 1956, after that, United Maharashtra state was formed in 1960, Beed district included in it. Beed district is comes in Aurangabad region which is also called as Marathwada region. Beed district was divided in august 1982 and 43 villages and 11 small villages were included in Latur district which is newly formed. Marathwada is one of backward administrative region of Maharashtra state. Beed district is also proved backward by many studies. According to the 2011 census, 98.58 per cent district comes in rural by area. Beed district has been situated in black layers stony region in Balaghat hill range. The balaghat hill range divides the district into two parts. Northern part is popularly known as 'Gangthadi' and Southern part is known as 'Ghat'. Gangthadi region is more fertile than the ghat region. Balaghat is 2000 to2200 ft above sea level. Balaghat is 2000 to 2200 feet above sea level and Gangathadi is 1750 to 2000 feet above sea level.

Geographical Location

The Beed District is geographically situated between 18", 30' 19" 30' N latitude and 74" 60' 76" 60' E Longitude As well 515 meters above sea level. The district has on its boarders Ahemadnagar on the west, Parbhani and Latur on the west, Osmanabad and Latur on the south and Parbhani Jalana and Ahemadnagar on the south.

Administrative Structure

The Beed is one of important District of Marathwada region. The area of district is 10693 square kilometers, in which only 158.31 square kilometer area coved under urban area and remaining all 10534.69 square kilometers is rural area. The district is divided in to the eleven talukas namely, Ashti, Patoda, Shirur Kasar, Beed Georai, Majalgaon, Kille Dharur, kaij, Ambajogai and Parali Vaijnat. There are six Municipal Council and five Nagar Panchayats functioning for urban area and eleven panchayat samities for rural area

of eleven tehsils of the district. According to the 2011 census, there are 1031 Gram Panchayats are functioning for 1357 villages in the District.

Natural Resources

Beed district has scarcity of natural resources and no mineral reserves are available in the district. The forest area in the district is negligible and the available forest area is sparse. Available natural resources in details are fallows.

Forest: The forest area is important resource in the kind of natural resources. At least 33 per cent is required for maintain ecosystem well. According to the season and crop report 2011-12, only 29501 hectors forest area are available in the district and it is only 2.77 per cent of total area of Beed district. Due to the scarcity of forests, forest production is low in the district. There has lots of scope to improve situation on field. Wadwani taluka has the highest forest area in the district and Parli Vaijnath taluka has the lowest. The district has zero dense forest area, medium forest area is only 15 sq. Km, sparse forest area is 160 sq. Km and total barren forest area is 76.47 sq. Km. There are no trees in this area.

Table no.1. Taluka wise forest area in Beed district

Sr. no	Taluka	Forest Area %
1	Wadvani	10.11
2	Shirur Kasar	7.02
3	Dharur	4.65
4	Patoda	4.24
5	Beed	3.88
6	Ambajogai	2.89
7	Kaij	2.62
8	Aashti	1.95
9	Georai	1.14
10	Majalgaon	0.87
11	Parali Vaijnath	0.63
Total of Beed District		**2.77**

Source: District Socio-Economic Review 2021

Soil: Most of the land in the district is thin and rocky. The lands in Gevrai and Majalgaon talukas are fertile deep black. There are black earthen strips on the banks of rivers and nallas. Patoda taluka is hilly and fertile land is found on the banks of Sindhfana River in the north. Beed, Cage and Ambajogai talukas have sparse black land and most of the rest land is of inferior quality.

River system: Godavari is an important river in the district and flows through the northern boundary of the district through Gevrai and Majalgaon talukas. Other important rivers in the district are Manjara, Bidusara, Sindfana and Vaan. The rivers Manjra

and Sindfana originate from the hills of Patoda Tuluka. The Manjra River flows through the southern boundary of the district and the Sindhfana River flows through the northern part of the district and joins the Godavari River at Manjrath in Majalgaon taluka. Likewise, Bindusara river flows from hills of Beed taluka and vaan river originate from Dharur village south of Balaghat range. Kambali, Ruti, and Mehakari are the other river of the District. These all rivers are dries in the winter. Agro-Climatic Zone: Generally, three climatic zones are seen in the district. The scarcity zone is found in West and south of district. Moderate rainfall zone found in mid and north and assured rainfall part is north-east of district. Beed district is scarcity zone. The drought conditions are always prevailing in the district. The rain in the district generally starts from the second fortnight of June every year and it lasts till end of the September. Sometimes, it rains even in the month of October. The average rainfall in the district for year 2020-21was 833.57 mm. the average rainfall in Patoda , Georai, Majalgaon, Dharur, Parali and Ambajogai was an above the district average rainfall and Average rainfall in the tehsils of Aashti, Shirur Kasar, Beed Kaij and Wadvani are bellow the district average rainfall. Due to continuous drought in the district, ground water level is declining and there is no water for bore well up to 300 ft.

Human Resources

Population: According to census 2011, population of Beed district was 25.85 Lakhs. Population growth rate with compare to census 2001 is 196.2 per thousand persons. There are 80.10 per cent (20.70 Lakhs) population of district living in rural area while 19.90 per cent (5.14 Lakhs) population living in urban area. The Population density of Beed district is 242/sq. Km and of Maharashtra state is 365/sq.km. Population density in Rural is 195/sq. Km and population density in urban is 12788/sq. Km. Beed city (24516/sq. km) has the highest population density in urban while Aashti city (467/sq. km.) has lowest population density in urban and Parali tehsil has highest population density in rural areas while Patoda tehsil has the lowest population density.

Sex Ratio: According to the census 2011, sex ratio of district is 916 female for per thousand male while for Maharashtra is 929 female for per 1000 male. The urban and rural sex ratio of district is 933 and 912 female against per 1000 male respectively.

Workers: Accordingly, as per Census of India, all persons engaged in 'work' defined as participation in any economically productive activity with or without compensation, wages or profit are workers. The Census classifies Workers into two groups namely, Main workers and Marginal workers. Main Workers are those workers who had worked for the major part of the reference period i.e. 6 months or more. Marginal Workers are those workers who had not worked for the major part of the reference period i.e. less than 6 months. Self employed Farmers, Merchants etc. are included in main Workers. There is 48.57 per cent population working on different sector in Beed district. The biggest source of employment of the district is agriculture sector. 78.72 per cent of main workers and 70.32 per cent marginal workers are working in agriculture sector.

Table 2. Tehsil wise main workers and Marginal Workers and non-workers

Sr. no	Tehsil	Main Worker	Marginal Workers	% of Working population with total population	% of non-Working population with total population
1	Aashti	124848	7623	54.38	45.62
2	Patoda	64098	3304	53.89	46.11
3	Shirur Kasar	65445	5897	55.48	44.52
4	Georai	161920	17643	53.03	46.57
5	Majalgaon	113523	10300	48.52	51.48
6	Wadvani	40199	4737	51.25	48.75
7	Beed	193721	16676	43.72	56.28
8	Kaij	113315	9890	50.53	49.47
9	Dharur	54109	5764	49.03	50.97
10	Parali	115153	9152	43.28	56.72
11	Ambajogai	108377	9854	43.47	56.53
	Total	**1154708**	**100840**	**48.57**	**51.43**

Source: census 2011

Demographic Dividend: Accordingly, United Nations Population Fund (UNFPA), demographic dividend means, "the economic growth potential that can result from shifts in a population's age structure, mainly when the share of the working-age population (15 to 64) is larger than the non-

working-age share of the population (14 and younger, and 65 and older)".

There are 57.89 per cent (1496533) population is in the working age (14 to 59 years) in the district. It can be used on right way to rural development when Dividends will be diverted to the simultaneous investment in decent job creation, good governance, infrastructure and a functioning business climate.

Institutional Resources

Banking and Finance: The Beed District central co-operative are functioning for credit supply to the farmers while 735 branches are working in the district. The district co-operative bank mainly financed short and medium term debt to the farmers. Long-term loans to farmers for land improvement are provided through nationalized banks, co-operative banks and land development banks. In the year 2020-21 there are 3431 cooperative institutions are functioning in the district, in that 735 are Agriculture institutions, 476 are non- agriculture institutions, 58 are Marketing institutions, 1154 are Productive Institutions and 1008 social service or other Cooperative institutions. There are 31 classified banks functioning in the district. the 75 branches of these banks. These classified banks have Rs. 338815 Lakhs bank deposit and Rs. 338816 Lakhs loans allotted by these banks.

Educational Institutions: Education is another important factor of Human Resource Development. District has faces the problem of Quality education. Government schools are mostly working on inefficient level particularly from rural area. The literacy rate of district is76.99 per cent while rural literacy rate is 74.73 per cent. There are 2879 primary schools 488 secondary schools and 318 higher secondary schools are present in the district while 266460 students and 12558 teachers, in primary school, 146799 students and5113 teachers and in secondary School 171367 student and 5215 teachers in higher secondary school of District.

As per 2021s data, there are 101228 students educate from 118 colleges from 11 Talukas of the district. There is a government medical college and a teaching college located in Ambajogai. There are Ayurveda colleges at Beed and Ashti on private basis in the district, while there is a homeopathy and a law college at Beed. Private engineering According to my telephone survey, an almost college of Arts, science and commerce faces

irregularity in attendance of students in college even pre pandemic period. There has not happens day by day teaching-learning activities in colleges. There has full attendance happens only in examination period. This thing plays vital role in economic Backwardness of districts.

Technical and vocational Education: The district has 1 government and 10 private polytechnic colleges while 12 governments and 14 private ITIs. There has 2041 and 1208 admission capacity in ITIs collage respectively. The last few years have seen an increase in the importance of vocational education. Vocational degree education is available in 12 colleges and vocational degree education is available in 11 colleges.

Health: Health services in the district are provided by government agencies, charitable organizations and local organizations and Private organizations. Government Medical College is at Ambajogai and Government District General Hospital and Tuberculosis diagnostic center is at Beed. A total of 1444 government beds are available in the district. Besides, there are 54 primary health centers, 297 health sub-centers 18 government and 129 private hospitals in the district.
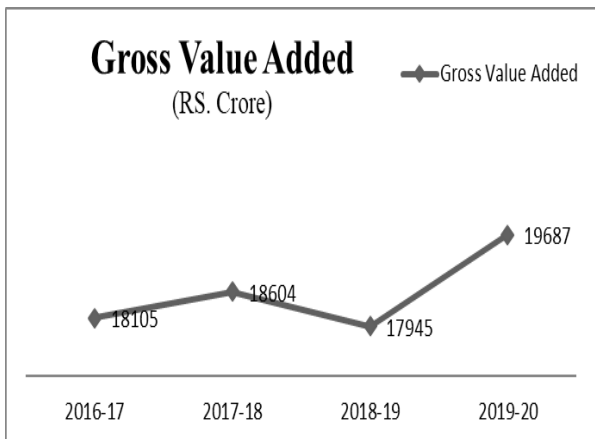
Tourism

The kankaleshwar temple build during the yadav period at Beed is main tourist attraction and another historical 'Khajina Bavadi' located 5 km from Beed city. Kapildhar is a pilgrimage site located at a distance of 19 km from Beed, this place situated in balaghat hills. Tourist visited kapildhar mainly in rainy days. The waterfall of Sautada village in Patoda taluka is also attracts tourists during July to September. If Sautada is further developed and promoted, it will become an important tourist destination in the state. The Kille Dharur Fort is important but ignored heritage destination situated in Dharur.

District Income

Gross value added (GVA) measures the size of economy and its growth rate is one of important indicators of economic development & progress. GVA is Useful to the government in framing policies. Gross value added of Beed district for year 2019-20 is Rs. 19686 crores. It is 1.22 per cent of State GVA of Maharashtra for year 2019-20. Figure 1 shows the Trend of GVA of The district from year 2016-17 to 2019-20.

Figure 1. Gross Value Added Of Beed District

Gross Value Added
(RS. Crore) ◆ Gross Value Added

18105 18604 17945 19687
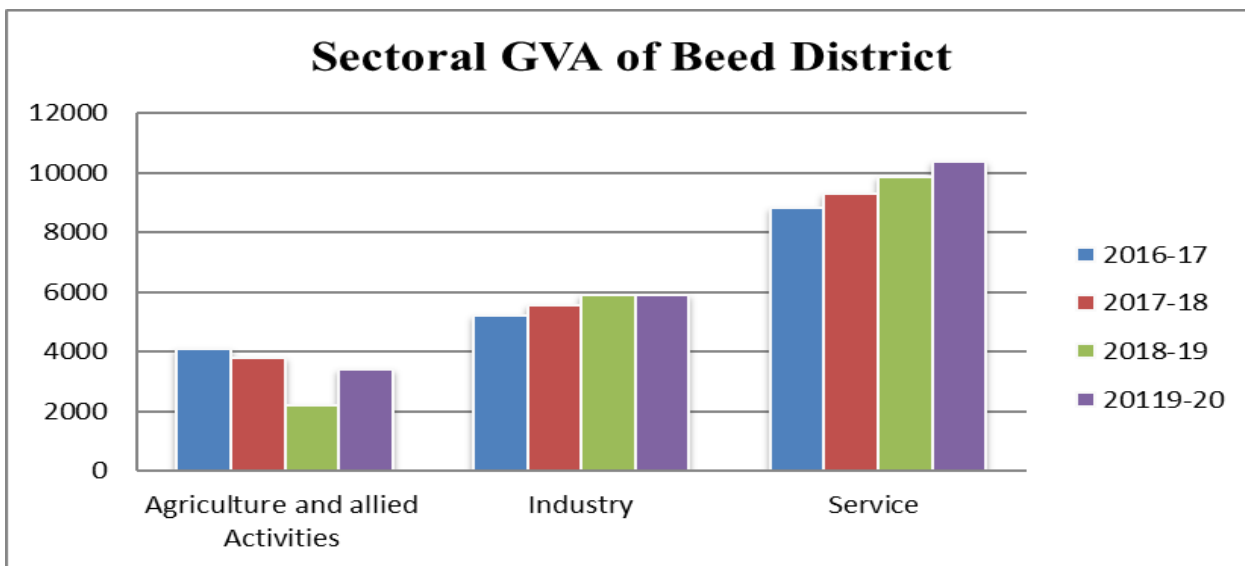
2016-17 2017-18 2018-19 2019-20

Source: District social-economic Review 2020-21

As per the advance estimates of 2020-21, the real Gross State value Added is expected to grow at (-) 7.8 per cent over 2019-20. According to Advance Estimates of 2020-21 The Real Gross District Value Added over 2019-20 will be Rs 1,535.586 crores.

Sectoral District GVA: The Nominal District GVA for Agriculture and allied Activities for 2019-20 is Rs. 3396 crores which is 54.64 per cent higher than previous year. The nominal District GVA of Industry Sector for year 2019-20 is Rs. 5899 crores and its 0.34 per cent higher than previous year. The District GVA of service sector for year 2019-20 is Rs. 10391 crores and its 5.28 per cent than previous year.
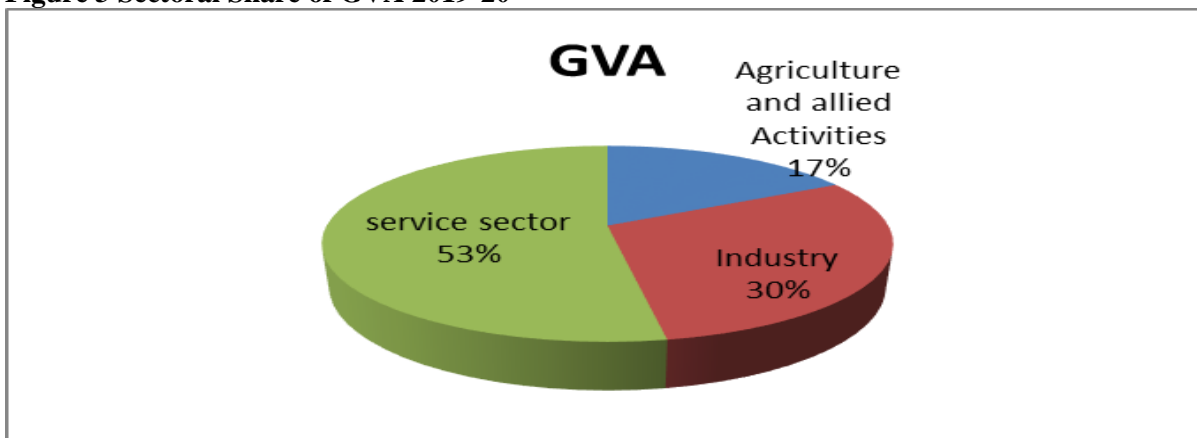
Figure 2. Sectoral GVA of Beed District

Sectoral GVA of Beed District

2016-17
2017-18
2018-19
20119-20

Agriculture and allied Activities Industry Service

Source: District social-economic Review 2020-21

Sector wise share in District GVA: The district GVA for year 2019-20 is Rs 19687 crores.

Figure 3 Sectoral Share of GVA 2019-20

GVA

Agriculture and allied Activities 17%

service sector 53%

Industry 30%

Source: District social-economic Review 2020-21

Service sector of collect 53 per cent share in district GVA but worried situation is 78.72 per cent of main workers and 70.32 per cent marginal workers are working in agriculture sector which sector contribute only 17 per cent in District GVA. Contribution of industry sector is 30 per cent which shows another weakness of District.

Decreasing dependence on agriculture is considered as the criterion of region is developing.

District Per capita Income: the Per capita income of Beed district for year 2019-20 is Rs. 82968 which is 8.86 per cent higher than previous year. District per capita income recorded annual growth as 2.6 %, (-) 3.6%, and 8.86 % for year 2017-18, 2018-19 and 2019-20 respectively. The district per capita income of Beed is always less than State Per Capita income (Rs.152566).

Strengths of Beed District

With proper resource management, the policies required for development can be successfully and sustainably implemented. There are 57% of the population of the district is in working age. These demographic dividends can managed with sustainable manner will helps improve per capita income and allover district income. As well the forest area in the district is very sparse and if it is made dense, it will help to improve the environment. The number of educational institutions in the district is plentiful and most of the institutions are unable to provide quality education. If the quality of education in the district improves, the students here will be ready for higher wages employment. Agriculture in the district is mainly dependent on rainfall and the region being a low rainfall region has a negative impact on agricultural income. For this purpose, if storage ponds are constructed at various places in the district, it will be easier to cope with the drought situation.

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