

Socio – Economic Impact of Oil Industry: A Case Study of Dibrugarh District, Assam

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ARTICLE DETAILS

Article History

Published Online: 15April2019

Keywords

Oil Industry, Socio-economic, Gasoline.

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ABSTRACT

Crude oil is the most essential mineral that is being utilized by every nation. It is a combination of hundreds of varieties of chemicals rather than a single chemical. Currently, it has become an essential part of daily life of human civilization. The oil business or the oil patch, comprises the global procedures of investigation, extraction, refining, transporting (frequently by oil tankers and pipelines), and showcasing of oil based commodities. Fuel oil and Gasoline (petrol) are the enormous magnitude products of the industry. During the British rule in India, Lieutenant Wilcox incidentally found oil in Assam for the first time. In 1866 first oil well was mined near Jaypore. Later drilling started in Digboi, Naharkotiya and Moran regions. Oil India Private Limited (OIL) was consolidated to build up the newfound oil fields. As the consequence of consistent investigation activities, oil was later found in numerous others spots of Assam. Present study is based on the field survey of Dibrugarh district of Assam, which is rich in oil fields. This industry has considerable impact on the socio-economic life of the people in the area. The research focus was on the socio-economic impact of the oil industry in this region. A field survey through questionnaire with 75 samples was conducted on the regions of Duliajan, Naharkotiya and Moran. The oil industry in the area has proved to be a major advantage for the region, since it has improved the socio-economic conditions of the region.

1. Introduction

In year 1825, British Lieutenant Wilcox incidentally found oil in Assam and in 1866, first oil well was mined near Jaypore. In following years, few attempts were made to extricate oil. Yet substantial oil investigation and extraction began with Digboi Well No. 1 in 1889. By 1893, a few wells were drilled in Digboi territory. Together they produced around 757 liters every day. Digboi refinery was set up in 1901 to refine the unprocessed petroleum locally and it is still working. This is India's as well as Asia's first oil refinery (Assam.Info, 2018). The oil productivity in Assam enhanced with the recognition of more oil fields in Naharkotiya and Moran. After India's independence, in February, 1959, Oil India Private Limited (OIL) was consolidated to build up the newfound oil fields. As the consequence of consistent investigation activities, oil was later found in numerous others spots of Assam (Indian Oil, 2018).

At present there are more than 100 oil fields in Assam State, where some of the significant oil fields are: Digboi, Naharkotiya, Moran, Rudrasagar, Lakwa, Sonari, Amguri, Geleki, Dikom, Kathaloni, Baghjan, Charali, Laplingaon, Panidihing, Hugrijan, Tengakhata, Borhola and so forth.

Present study is based on the field survey of Dibrugarh district of Assam, which is located in the upper parts of the state, which is rich in oil resources. District of Dibrugarh, includes Naharkotiya field, Moran-Hugrijan field, Nampur refinery; Dikom field and also has the headquarters of Oil India

Ltd. in Duliajan. Oil industry has considerably impacted the socio-economic life of the people in this region. Present paper attempts to analyze the socio-economic impacts of the oil industry in this region.

2. Objectives

Present study has been undertaken to fulfill the following objectives:

- To understand the social impact of oil industry in the study area by analyzing the growth of education and health facilities.
- To analyze the economic impact of oil industry through the overall development of the study area.

3. Study Area: Dibrugarh District

Assam is a state in northeast India, located 24° N to 28° N latitudes and 90° E to 96° E longitudes. Assam covers an area of 78,438 km² (30,285 sq. mi). It is situated in the south of eastern Himalayas along the Brahmaputra and Barak river valleys (Government of Assam, 2018). Assam is known for its rich biodiversity, archeological spots, local tea and establishment of first oil refinery. Assam is a major gateway for the northeastern region of India. It shares international borders with countries like Bhutan and Bangladesh and North East region (fig 1). In the north-eastern corner of the state lies the state headquarter, that is Dispur.

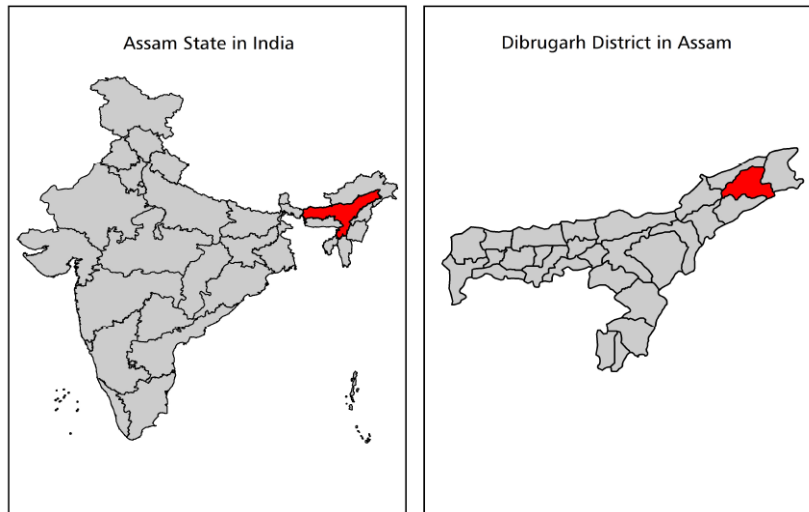


Fig 1: Location Map of Dibrugarh District

Source: Assam: District Factbook Dibrugarh District, Datanet India Pvt. Ltd., New Delhi, 2018.

Dibrugarh is an administrative district of Assam in NE India. The district headquarter is located at Dibrugarh city. About 3381 km² of area is occupied and its extensions are from 27° 5' 38" N to 27° 42' 30" N latitude and 94°33'46" E to 95°29'8" E longitude (Datanet India, 2018). The river Brahmaputra flows through Dibrugarh for a length of 95 kms along the northern margin of the district. A major tributary of Brahmaputra is BurhiDihing, which has different tributaries and wetlands that flow throughout the district from east to west.

4. Methodology

The field study was carried out in three towns of the district, which are part of Oil Township and Oil fields; they are Duliajan, Naharkatiya and Moran (Fig. 2). *Duliajan* is an industrial town, which is located in Dibrugarh district towards the upper north-east corner. Duliajan is about 45 kms towards

east of Dibrugarh city. Duliajan is the headquarters of Oil India Limited, a PSU undertaking of oil industry and crude petroleum. Oil India Limited is one of the country's largest oil and gas companies, which have one of its regional, headquarter in Duliajan. The second field of study is *Naharkatiya*, a town area committee in Dibrugarh district. This place is well known for petroleum and gas reserves. It is situated at the left bank of BurhiDihing River, which is 32 kms southwest of Digboi. In 1953 oil was first discovered here and in 1954 it started production. The third field of the survey taken is *Moran*. It is a census town of Dibrugarh district, which is an important industrial town of India. It is located about 40 km south-west to Naharkatiya. It has a major oil field and tea production area. In 1953 oil was discovered in Moran-Hugrijan region whereas only in 1956, it started its production (Datanet India, 2018).

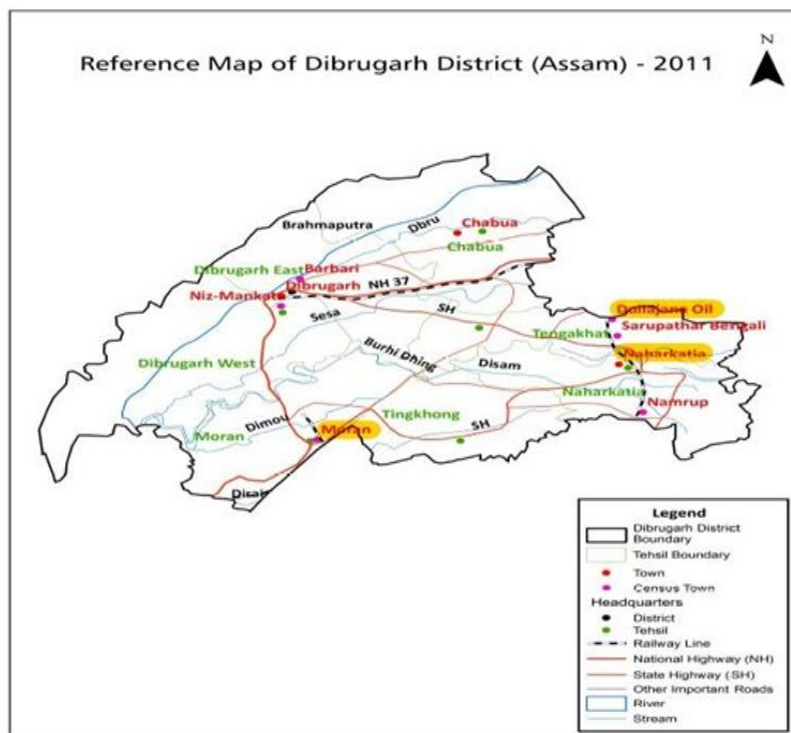


Fig 2: Location of Surveyed Towns, District Dibrugarh

Source: Assam: District Factbook Dibrugarh District, Datanet India Pvt. Ltd., New Delhi, 2018.

The study is primarily based on primary survey. For this purpose, questionnaires were taken and got filled by 75 local respondents including 25 each from Duliajan, Naharkatiya and Moran towns, selected on the basis of convenience sampling technique. The data, hence, collected has been processed, analyzed and interpreted.

Limitations of the study include: generalization of the findings of the study is restricted because the study was done on the basis of convenience sampling. The findings can be further improvised by using random sampling technique by employing people to collect data from different sources. Secondly, the study was restricted to only people's perception due to shortage of time.

5. Results and Discussion

The data is obtained from 75 questionnaires filled by the respondents from the primary survey conducted in the towns of Naharkotiya, Duliajan and Moran, which lies in Dibrugarh district.

Demographic characteristics of the respondents include data pertaining to age, sex and education levels. More than 50 percent of the respondents were in the age group of 20-35, followed by 36 percent in the age group of 35-50 and remaining 10 percent in 50-75 age groups. Out of the 75 respondents 41 (54.66 percent) were males and 34 (45.34 percent) females.

Table 1: Demographic Characteristics of Respondents, 2018

Demographic Characteristics	No. of respondents	Percentage of respondents
Age Group		
20-35	40	53.33
35-50	27	36
50-75	8	10.67
Gender		
Male	41	54.67
Female	34	45.33
Educational Qualifications		
Uneducated	4	5.33
Secondary education	32	42.67
Graduated	26	34.67
Post graduated	13	17.33

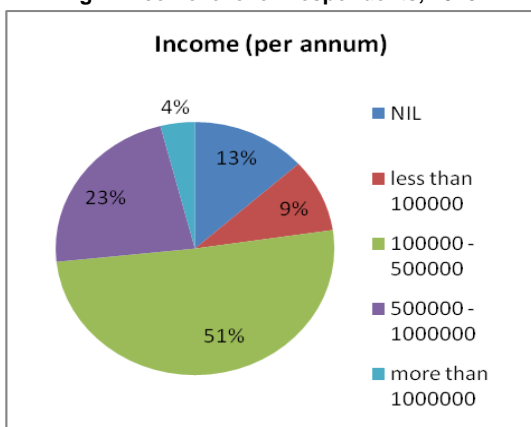
Source: Primary Survey conducted by the researcher, July 2018

Moreover, considering the educational qualification around 42.67 percent of the respondents had secondary education, whereas 34.67 percent of the respondents were graduated followed by 17.33 percent of the respondents post graduates and remaining 5.33 percent as uneducated (Table 1).

Income is a basic form of exchanging money for providing goods and services or it can be through investing capital. It determines the standard of living of people and economic development of the region.

Field survey found more than 50 percent of the people having an income of Rs1 to 5 lakhs and around 23 percent of the respondents having an income of Rs5 to 10 lakhs, whereas, around 9 percent accounted for income levels less than Rs1 lakh per annum. 4 percent of the respondents reported income more than Rs 10 lakhs (Fig.1). All respondents were convinced that the oil industry in the region has provided jobs and services to the people and more or less all economy was based on this industry.

Fig 1: Income level of Respondents, 2018



Source: Primary survey conducted by the researcher, 2018

Apart from the overall affluence in the study area, lots of educational institutions have also come up after the establishment of oil industry. Education provides the base for any development of the region as it is preparing the young people for the race of their lives. The oil companies in these townships have taken an initiative to spread the seeds of education to the local people by setting up many educational institutes. 84 percent of the respondents confirmed that the oil industry in their region has established educational institution to develop the region, whereas more than 90 percent of respondents confirmed 1 to 3 institutions established after the coming up of oil industry and the other 7.94 percent of them asserted 3 to 6 institutions established in this region as a result of establishment of the industry (Table 2).

Table 2: Educational Institutes established by industry

Educational institutes established by industry	No. of respondent	Percentage
Yes	63	84
No	12	16
No. of institutes established		
1 to 3	58	92
3 to 6	5	8

Source: Primary Survey conducted by the researcher, July 2018.

Infrastructure is the basic physical structures needed for the functioning of a society or enterprise. Survey found that 48 percent of the people responded that there was provision of water supply in their region provided by the company, whereas, 52 percent of the people retorted that there was no provision of water supply by the oil company. 76 percent of the respondents agreed that there was a provision for electricity supply because of the industry, whereas 24 percent of the respondents believed that there were no such provisions. Further 45 percent of the people reported that there were proper sewage facilities provisions, but 55 percent of the people perceived that there were no proper sewage facilities provided by the oil companies/ industries (Table 3).

Table 3: Provision of Infrastructure by Oil Industry

Provision of water supply	No. of respondent	Percentage
Yes	36	48
No	39	52
Provision of electricity		
Yes	57	76
No	18	24
Provision of sewage facilities		
Yes	34	45
No	41	55

Source: Primary survey conducted by the researcher, 2018

Health facilities are a basic requirement of every region for providing health and Medicare. General health facilities include hospitals, clinics, outpatient care centers, and specialized care centers etc. Almost every industry generally focuses on the health facilities in a region for the development purpose.

Table 4: Medical facilities provided

Provision of medical facilities	No. of respondent	Percentage
Provided	72	96
Not provided	3	4

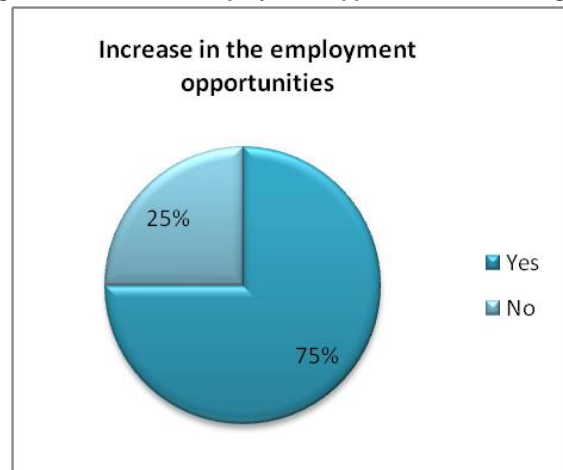
Source: Primary survey conducted by the researcher, 2018.

Present study found that majority of the sample population (96 percent) agreed to the fact that there were provisions of proper medical facilities in the study area (Table 4). They believed that Oil Company is providing the basic medical facilities for the local people in their region. Only 4 percent of

the respondents were still not convinced that there were proper medical facilities provided by industry.

Establishment of industries has always been considered to be boosting the employment opportunities for the local people. As the new industry is established, for its construction and functioning, labor and skilled workers are required. This enhances the employment opportunities for the local people.

Fig 2: Increase in the employment opportunities in the region



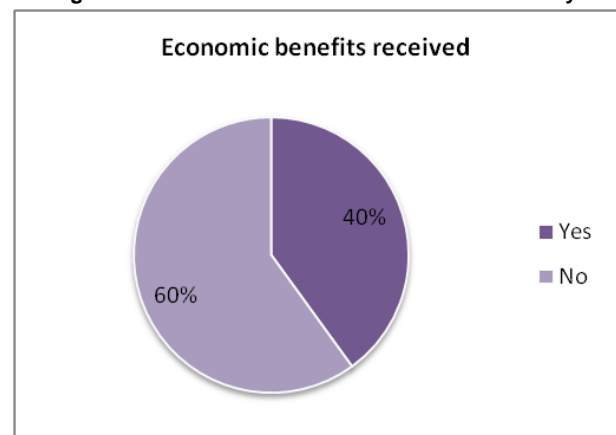
Source: Primary survey conducted by the researcher, 2018

Field study (Fig. 2) found that around three fourth or 75 percent of the people reported that there was an increase in the employment opportunities as a result of industrial set up and other 25 percent did not observe increase in employment after the industrial setup.

As per the field study (Fig. 3) it is also found that 60 percent of the respondents believed they were not receiving any economic benefits from the industry, whereas only 40 percent of them said that they had received economic benefits after the oil industry set up in the region.

The establishment of oil industry has led to development of a chain of other services such as for infrastructure in terms of housing, educational facilities, medical facilities, recreational facilities etc. So, Industry also brings social benefits along with economic growth.

Fig 3: Economic benefits received from the industry



Source: Primary survey conducted by the researcher, 2018

Table 5: Social benefits received from the industry

Social benefits from the industry	No. of respondent	Percentage
Better livelihood		
Yes	72	96
No	3	4
Safe and better society		
Yes	67	89
No	8	11
Improved infrastructure		
Yes	71	95
No	4	5

Source: Primary survey conducted by the researcher, 2018

Field data shows the social benefits received from the industry in the region (Table 5). In case of livelihood received from the industry, more than three fourth of the respondents accepted that there was a better livelihood received from the industry, whereas remaining does not accept this point of view. On the other hand, 89 percent of the respondents said that there was even conservation of resources and better environment as the industry set up, where as 11 percent respondents argued that industry hasnot been creating a safe and better society. Around 95 percent of the respondents reported that there was an improved infrastructure development as a result of the industrial set up in this region; where as 5 percent of them did not perceive such change in the infrastructure in this region.

Oil industries have both positive and negative impacts in the study area. It is found that around 93.33 percent of the respondents said that they are not facing any such problem but remaining 6.67 percent of the respondents believe that there have been problems of pollution and health issues associated with oil industry (Table 6).

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Table 6: Problems associated with oil industry

Problems associated with oil industry	No. of respondent	Percentage
Pollution and health issues	5	6.67
No problem	70	93.33

Source: Primary survey conducted by the researcher, 2018

6. Conclusion

The oil industry in the area has proved to be a major advantage for the region since it improved the socio-economic conditions of the people. Among all the respondents more than three fourth of them accepted that there is a better livelihood opportunities received from the industry. Most of the respondents have agreed that there has been an improvement in the provision of infrastructural facilities such as water and electricity supply and sewage facilities. Oil industry has both positive and negative impact in the study region. As the industry build up, there are many problems which can generate pollution. Taking in account of the data collected from the survey, it was found that most of the respondents had no problem acquired from the oil industry but there are some respondents who accepted that they faced some pollution and health issues such as air pollution, water pollution, noise pollution, soil pollution, oil spill during heavy rainfall and other health related problem like breathing problems, skin problem etc.

Considering the impact of oil industries on the socio-economic life of the people, the level of satisfaction among the people gives an insight of the ground realities. According to the survey conducted, it is clearly seen that the people are highly satisfied with the establishment of the industry, where 72 respondents accepted that they were satisfied with the positive impacts of the oil industry in the region, while only 3 respondents reported that they were not satisfied with the industrial establishment, as it has caused environmental pollution. A future research will try to provide in-depth analysis of the impact of oil industry in the region.