



“Dolomite Mineral Industries performance with reference to Management Ratios in Gujarat”

Abstract:

Dolomite is one kind of mineral which is available in eastern part of Gujarat. That is known as Chhota- Udaipur district (Totally Tribal Area). In this district more than 124 MSME industries working on making various products from dolomite minerals. Research would like to focus on dolomite industries various problem and prospectus from its stake holder like Factory holders, Industrialist, worker, local community, lease holder and society at large. It is mainly focus on management of dolomite industries. This paper contains points like About Dolomite, About Chhota Udaipur District, The Problem Area, Significant the Study, Objectives of the study, Uses of Dolomite Mineral, Universe of the Study and Sample Design, Research Instrument, Data Analysis and Presentation, Limitations of Study, Testing of Hypothesis, Interpretations and Conclusion followed by references. As part of MSME only these dolomite mineral industries are working in this tribal area.

Key Words: *Dolomite Minerals, Managerial Skills and Tribal Area*

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Introduction:

Introduction contain about two major points of this research paper i.e. about dolomite and about Chhota-udaipur district. Details is given below in this regards. This is an empirical study so, research has followed scientific approach to design the research methodology for investigation. For this study, the researcher has collected primary data from selected dolomite industries in Chhota Udaipur district, Gujarat. And also collected some secondary data as a source of information for the study purpose. The collected data & information are suitably classified & Tabulated as per requirement. For sampling, the convenient sampling Technique is used. The number of dolomite factory is very large around 124 numbers in Chhota –Udaipur district so, it is beyond the capacity of individual researcher to conduct the study with census. Hence, researcher has taken into consideration the survey conducted by geology & mining department Chhota- Udaipur for selection Group. From that ten dolomite industries considered for the work. Primary data collected by personal interview of managers of selected industries with structured questionnaires.

Chhota Udaipur district (also ChhotaUdepur district) is a district in the state of Gujarat in India. It was carved out of the Vadodara district on 26 January 2013 with its headquarters at Chhota Udaipur town and is the 28th district of Gujarat. Chhota Udaipur was the capital of the erstwhile Princely State of Chhota Udaipur, founded in 1743 by Rawal Udeysinhji, a descendant of Patai Rawal of Champaner. This state was a second class state under Rewa Kantha Agency and merged with the Union of India on March 10, 1948. Aishwarya Pratap sikh Chauhan is the last son of Maharaja Virendra Pratap sikh Chauhan. He is at present the Maharaja of chhota-udaipur. Dolomite mineral is mainly available in Chhota Udaipur District in Gujarat. In chhota Udaipur more than 124 industries presently working of dolomite. As part of MSME only this dolomite mineral industries are working in this tribal area.

Most probably the mineral dolomite was first described by Carl Linnaeus in 1768. In 1791, it was described as a rock by the French naturalist and geologist Deodat Gratet de dolomieu (1750–1801), first in buildings of the old city of Rome, and later as samples collected in the mountains now known as the Dolomite Alps of northern Italy. Nicolas-Theodore de Saussure first named the mineral (after Dolomieu) in March 1792. Dolomite, and marble -the carbonate rocks - are the principal karst-forming rocks. Karst is a type of topography that is formed on limestone, gypsum, and other rocks by dissolution that is characterized by sinkholes, caves, and underground drainage regions. Karst areas constitute about 10 percent of the land surface of the world.

Significant the Study

Dolomite is an essential product nowadays. It is useful in many things or product as raw material. It is used as a content. It is mainly available in powder form from white stone. It is normally found in Chhota-udaipur district especially in Chhota-udaipur taluka in Gujarat. This product is very cheap so, everyone can use it easily. The uses of this powder in glass, oil paints, chemical product, cosmetic products, cattle field, steel product, Rangoli, ceramic products, tiles, white cement & many more.

Objectives of the study

1. To study the role of dolomite industries in rural Areas.
2. To know the effect of dolomite stone to Factory holders, Industrialist, worker, local community, lease holder and society at large.
3. To study the various problem faced by the dolomite industry.
4. To study the managerial skills and total cost –sales relations of the industry.

Construction aggregate, cement manufacture, dimension stone, calcined to produce lime, sometimes an oil and gas reservoir, a source of magnesia for the chemical industry, agricultural soil treatments and metallurgical flux.

Main Producer states in India: Mainly available in Gujarat, Madhya Pradesh, Rajasthan, Karnataka Etc.

Universe of the Study and Sample Design:

- As per Govt. Record total 124 dolomite industries registered under chhota – Udaipur district as universe of the study
- out of 124 industries researcher has selected 10 industries on the base of convenient sampling method.
- For study purpose 10 industry selected and the List of the Industries for the study are as under.

Table No. 1. List of the selected dolomite Industries for study purpose.

Sr. No.	Dolomite Industry Name	Short Name	Place
1	Khodiyaar Mineral	KYM	Chhotaudepur, Gujarat
2	Mahavir Mineral	MHM	Chhotaudepur, Gujarat
3	Kohinoor Mineral	KNM	Chhotaudepur, Gujarat
4	Bhakti Mineral	BHM	Chhotaudepur, Gujarat
5	Shital Mineral	STM	Chhotaudepur, Gujarat
6	Krishna Mineral	KRM	Chhotaudepur, Gujarat

7	Patel Minerals	PTM	Chhota Udepur, Gujarat
8	Shreeji Mineral	SHM	ChottaUdepur, Gujarat
9	Vallabh Chips Industries	VCI	Chhota Udepur , Gujarat
10	Shivam Mineral	SVM	Chhotaudepur, Gujarat
Source of Data: Primary collected			

Research Instrument:

A structured questionnaire is used for data collection from the selected 10 dolomite Industries from Chhota-udaipur district. The details of questionnaire and response from respondent is given in the fourth chapter followed by this chapter.

Time period: Financial and Accounting Data collected for Last Ten Years i.e. 2007-08 to 2016-17 from the selected industries.

Collection of Data:**Primary Data**

- The Primary data is collected through structured close ended questionnaires.

Secondary Data

- Published work and on-line information obtained for basic information and for review of Literature work.

Hypotheses:

The research has formulated Null Hypothesis and alternate hypothesis. The null hypothesis tested with the help of appropriate and applicable statistical tools.

- H_0 =Dolomite industries do not have any significant difference in the performance of Management ratios of last ten years.
- H_1 = Dolomite industries do not have any significant difference in the performance of Management ratios of last ten years.

Data Analysis and Presentation:

- For hypotheses testing relevant statistical test is used here i.e. student t test. Here, t test is calculated on manual basis
- Data are presented through using tables, charts, interpretations selected industries and hypothesis formulating, calculation test, testing of hypotheses and Interpretation of Result. Hypotheses tested at significant level of 5% And Applicable Require Degree of Freedom.
- As par suitability of collected data for this study the student *t*- test is applicable. Its calculation, formula and other details of specification is given below.

Limitations of Study:

1. The study based on mainly on primary data hence the respondent has not given required all information.
2. The selected industries fall under tiny industries so; they were normally not publishing annual reports or any secondary publications. The office of the various industries had rough data or rough calculations of various activities and they had not maintained fair book in this regard.

3. The accounting technique & statistical techniques have their own limitation, so, they are also applied to this study. And study is only focuses on profitability of the selected industries.

Data Collections and analysis

Table No. 2 Last 10 years Management Ratios data of Selected 10 Dolomite industries

Dolomite Industries (1 to 10)										
	1	2	3	4	5	6	7	8	9	10
Year	KYM	MHM	KNM	BHM	STM	KRM	PTM	SHM	VCI	SVM
2007-08	84.39	86.35	79.35	83.24	86.54	86.34	89.64	86.34	87.24	87.65
2008-09	79.35	87.35	81.24	86.35	85.24	89.67	90.21	87.54	86.35	88.97
2009-10	82.36	80.14	84.36	85.36	84.31	82.35	88.35	84.35	80.26	87.35
2010-11	85.37	81.25	76.35	84.57	87.54	82.54	89.36	85.69	85.47	84.24
2011-12	80.26	86.21	83.37	87.24	86.34	85.27	91.24	86.35	80.27	84.57
2012-13	88.65	88.37	89.34	87.65	89.34	88.98	95.64	88.75	89.25	89.45
2013-14	89.54	86.38	88.57	85.64	88.29	86.31	94.56	91	91.24	90.21
2014-15	89.09	89.9	89.56	89.53	88.34	90.09	95.7	91.26	90.81	89.42
2015-16	86.39	90.24	84.57	88.54	87.34	84.76	93.27	88.78	86.29	86.35
2016-17	87.59	91.25	85.24	84.25	88.24	87.34	94.26	90.12	83.29	88.31
Total	852.99	867.44	841.95	862.37	871.52	863.65	922.23	880.18	860.47	876.52
Avg.	85.299	86.744	84.195	86.237	87.152	86.365	92.223	88.018	86.047	87.652

Source: Primarily data collected

Management ratio shows managerial skills and Effectiveness of the business. For Management ratio lower the ratio consider as good performance its formula is given below to understand its concept.

Formula: $\frac{\text{Total cost} \times 100}{\text{Sales}}$

Hypothesis testing

Mean X = 86.99

Median N (n+1/2= 6th years observations) = 84.195

Mode Z (Highest or maximum time repeated value) = 92.223

Mode Z is considering the value of = $\mu = 92.223$

$H_0 = \mu = 92.223$

$H_1 = \mu \neq 92.223$

$\sum xi = 869.9$

$\sum di = 0.032$

$\sum di^2 = 41.484$

For, t -test Standard Deviation (S) is required = 2.036

Now, t-test formula

$t = \frac{|\bar{x} - \mu| \cdot n}{S}$

Answer of t-test calculation is $t = 9.02$

degree of freedom (d.f.) = $n-1 = 10-1 = 9$

5% level of significant st 9 d.f. = 2.262

t-Calculatation > t- table

9.02 2.262

t-Calculatation value is higher than t- table value

Hence, H_0 = is Rejected

H_1 = is Accepted

$H_1 = \mu \neq 92.223$

(t- table value is taken from statistic table of t -Distribution)

Interpretations: Here null hypothesis (H_0) rejected so, alternate hypothesis is accepted i.e. (H_1) Dolomite industries do have any significant difference in the performance of Management ratios of last ten years. It shows that all the selected dolomite industry had different combination and composition every year as far as total cost and sales relation was concerned. It was very with every year. Industries should try to decrease it and create more distance between two variables i.e. total cost and sales.

Conclusion: Researcher had found that the Average Management ratios of selected dolomite industries of last ten years was between 84.19 to 92.22 percentage. Management ratio shows managerial skills and Effectiveness of the business. Here, in this study shows the relations or proposition of sales and cost incurred. These management ratios show moderate performance of dolomite industries in compare to other tiny industries. Moreover, from the result of hypothesis testing indicates that Dolomite industries do have significant difference in the performance of Management ratios of last ten years. It shows that all the selected dolomite industry had different mixture and configuration of cost and sales every year. Industries should try to decrease it and create more distance between two variables i.e. total cost and sales. Sales should be increase and cost should be decrease.

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