2016

UNIVERSITY GRANTS COMMISSION

MINOR RESEARCH PROJECT

FILE NO. F.23-947/13 (WRO)

"ROLE OF DOLOMITE INDUSTURY IN THE DEVELOPMENT OF THE TRIBAL AREAS OF CHHOTA-UDAIPUR DISTRICT"

Submitted by:

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ON

" ROLE OF DOLOMITE INDUSTURY IN THE DEVELOPMENT OF THE TRIBAL AREAS OF CHHOTAUDAIPUR DISTRICT"

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Submitted to:

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Ministry of Human Resource Development

Government of India

Western Regional Office, Ganeshkhind

Pune

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PREFACE

About Chhota Udaipur District : Chhota Udaipur district (also Chhota-Udepur 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 sigh Chauhan is the last son of Maharaja Virendra Pratap sigh Chauhan. He is at present the Maharaja of chhota-udaipur. The district consists of the six talukas of Chhota Udepur, Pavi Jetpur, Kawant, Naswadi, Sankheda and the newly created Bodeli taluka. The district headquarters is located at Chhota Udepur. The district was created to facilitate decentralization and ease of access to government services. Its creation, announced in the run up to the Assembly elections in Gujarat in 2012, was also seen by the media and political analysts as a government strategy to attract tribal votes. Chhota Udaipur is a tribal dominated district and the district headquarters is located 110 km away from Vadodara. It shares its borders with the state of Madhya Pradesh. Chhota Udepur is the third tribal dominated district in eastern Gujarat after the Narmada and Tapi districts.

About Dolomite Industries: 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 is used as an ornamental stone, a concrete aggregate, and a source of magnesium oxide, as well as in the Pidgeon process for the production of magnesium. It is an important petroleum reservoir rock, and serves as the host rock for large strata-bound Mississippi Valley-Type (MVT) ore deposits of base metals such as lead, zinc, and copper.

The aim of choosing this topic is nobody had completed this type of study previously. I want to highlight problem worker, employees, factory owner, mines lease holder and local communities of this area to the society and government. And from this report government may incited various scheme to boost up the industries development.

- **Mr. Maheshkumar Chimanlal Rathava**

ACKNOWLEDGEMENTS

Any word or expression would to be ineffectual to express our gratitude towards THEALMIGHTY! I bow down to THE ALMIGHTY for everything with the help of which I could prepare this Minor Research Project Report.

I am thankful to Dr. Sandip K. Bhatt Professor& Head, P.G. Department of Business Studies Vallabh Vidyanagar. I have been greatly benefited from his earnest support and stimulation to complete this Minor Research Project. I am also thankful to my college Principal and faculty members for providing me necessary support for this work.

I also thankful to UGC Chairman, Regional Level Chairman, Secretary, Joint Secretary, Dy. Secretary and various department of UGC for accepting my proposal and initiated grant to me for this work.

I am also thankful to the Gujarat University, Govind Guru University, Department of Mines and Minerals of Gujarat Government, Employment office of Chhota Udipur District, Public Information Department of the District, Statistics Department of the District, President, secretary and association of Dolomite Industries, collector office, Owner and employees of Dolomite Industries for supporting me and provide all the necessary information for this work.

I am respectively thankful to My Father Chimanlal, Mother vasuben, Brother Alpeshbhai, Wife sunitaben**,** and my friends who encouraged and helped me at all the stages of this work.

My Special thanks to Dr. Gaurangkumar C. Barot who not only inspired and supports me but also gave me the idea of working on this Project.

Last but not least I am thankful to all those persons who help me directly or in directly for this work.

- **Mr. Maheshkumar Chimanlal Rathava**

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ABBREVIATIONS

&	And
A.D.	Anno Domini
AAA	American Accounting Association
Adm.	Administrations
AICPA	American Institute of certified Public Accountants
APB	Accounting Principles Board
AS	Accounting Standards
B/s	Balance Sheet
Etc.	Etcetera
FASB	Financial Accounting Standard Board
GAAP	Generally Accepted Accounting Principles
Guj.	Gujarat State
i.e.	That is
ICAI	Institute of Chartered Accountants of India
IFRS	International Financial Reporting Standard
No.	Number
P& L a/c	Profit and Loss Account
Ref.	References
RRBs	Regional Rural Banks
USA	United States of America
VAT	Value Added Tax & AND
t	*t Test*
$t^2 c$	t^2 calculation
$t^2 t$	t table value
d. f.	degree of freedom
H_0	null hypothesis
H_1	alternate hypothesis
S	Standard Deviation
FA	Fix Assets

CA	Current Assets
MMGI	Modern Mineral Grinding Industry
RKM	Radha Kishan Mineral
Ml. M	Mahalaxmi Micro.
Md. M	Mahadev Micro.
AC	Ambica Chips
LCGF	Laxmi Chips & Glass Factory
SM	Swamikrupa Minerals
SRM	Shri Ram Mineral
AMM	Akhileshwari micro minerals
BLMGI	Bharat Laxmi minerals grinding Industry
GIDC	Gujarat industrial Development Corporations
Dist.	District
MP	Madhya Pradesh
Raj.	Rajasthan
Hrs	Hours
Avg.	Average

Chapter No. 1

INTRODUCTION

Chapter No. 1

INTRODUCTION

1.1. About Chhota-Udaipur District

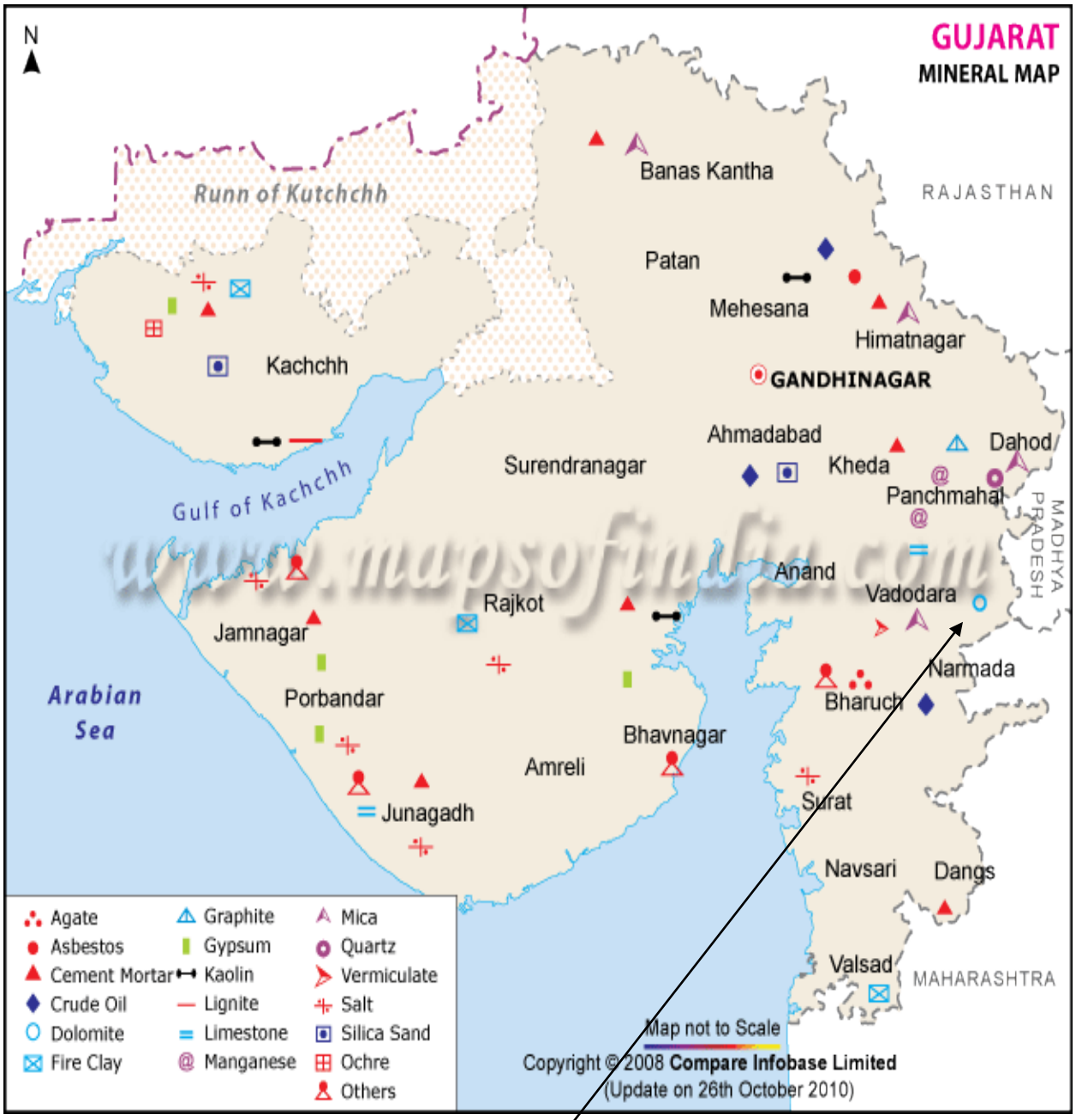
1.2. About Dolomite Industries

1.1. About Chhota Udaipur District

Graph No. 1.1. Political map of Gujarat and location of Chhota Udaipur District

Chhota Udaipur District in Gujarat

Graph No. 1.2. Mineral Map of Gujarat and Production of Dolomite in Chhota Udaipur District



Production of Dolomite in Chhota Udaipur District

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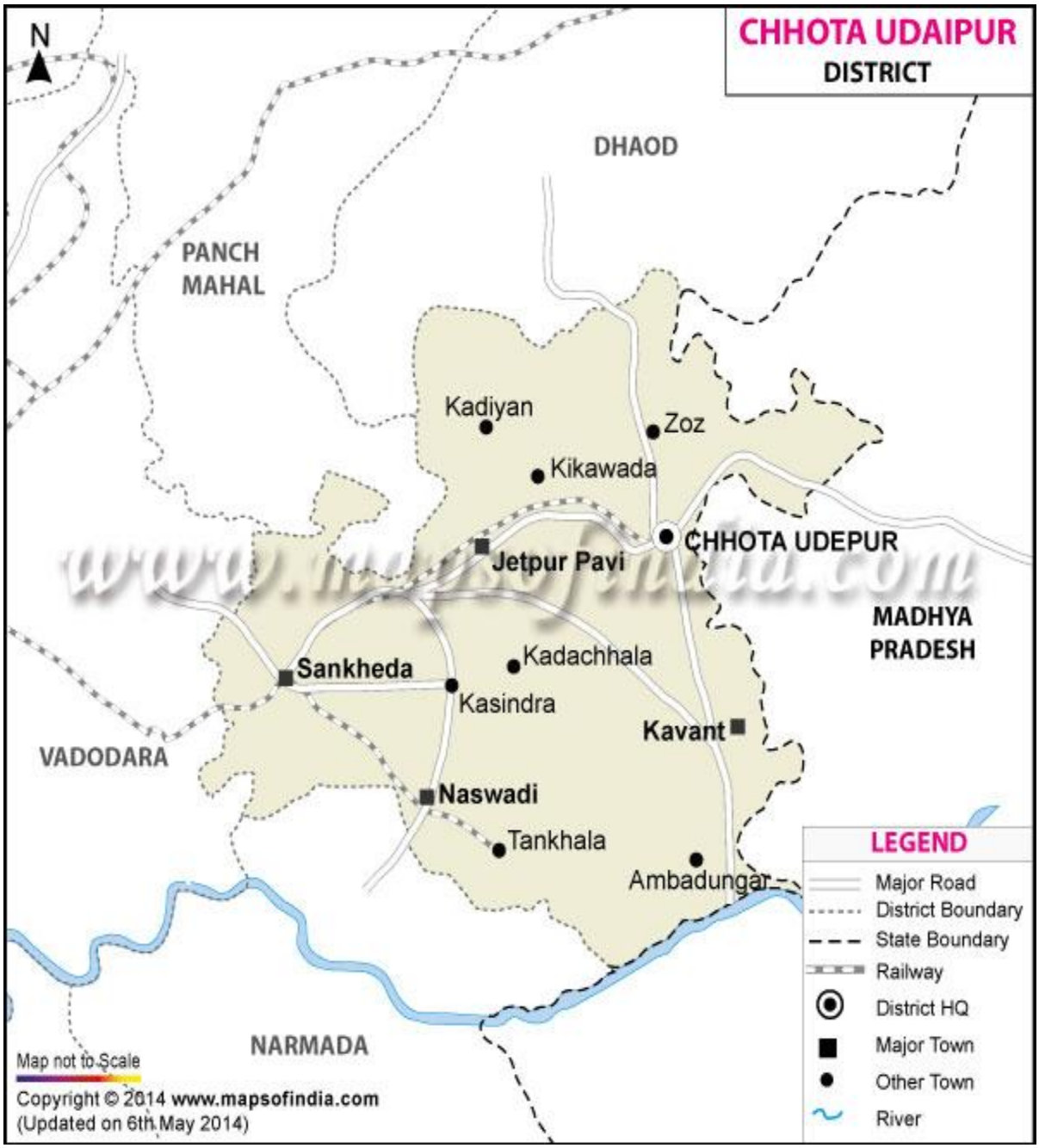


Chhota Udaipur district (also ChhotaUdepur district) is a district in the state of Gujarat in India. It was carved out of the Vadodara district on 26 January 2013 with its headquarters at Chhota Udaipur town and is the 28th district of Gujarat. Chhota Udaipur was the capital of the erstwhile Princely 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 sigh Chauhan is the last son of Maharaja Virendra Pratapsigh Chauhan. He is at present the Maharaja of chhotaudaipur.

Brief History of Chhota Udaipur District:

The district consists of the six talukas of Chhota Udepur, PaviJetpur, Kawant, Naswadi, Sankheda and the newly created Bodeli taluka. The district headquarters is located at Chhota Udepur. The district was created to facilitate decentralization and ease of access to government services. Its creation, announced in the run up to the Assembly elections in Gujarat in 2012, was also seen by the media and political analysts as a government strategy to attract tribal votes. Chhota Udaipur is a tribal dominated district and the district headquarters is located 110 km away from Vadodara. It shares its borders with the state of Madhya Pradesh. Chhota Udepur is the third tribal dominated district in eastern Gujarat after the Narmada and Tapi districts.

Chhota Udepur district has a forest area of 75,704 hectares and has deposits of dolomite, fluorite, granite and sand all of which are mined. The district is also home to a large dairy industry. The Rathwa tribal who live here produce the Pithora mural paintings by mixing colors with liqueur and milk and then using it to depict intricate motifs and scenes on the walls of their village dwellings.

Chhota Udepur, once a princely state of Gujarat lies in the heart of a tribal area with rich indigenous history and culture which is more representative of the region than palaces. The town is a good base from which to explore the surrounding tribal villages, particularly in the Rathwa communities. The Tribal Museum here displays a nice collection of people and culture of this place. Every Saturday there is a tribal market which is a hub for local artisans making pithoda paintings and terracotta horses.

Chhota Udepur sits on the edge of a big lake, with a series of temples along the skyline. Structures from the 1920s such as the Kusum Vilas Palace (now a heritage hotel) and

PremBhavan are also worth visiting, though they need permission from the local royal family. The Kali Niketan (Nahar Mahal) palace, built as the summer residence of the erstwhile royal family is a notable monument in Chhota Udaipur. The Jain temple is an interesting example of the influence of Victorian art on local building styles, which is otherwise rare, display in traditional Jain buildings elsewhere.

Tourist Attractions:

The main tourist attractions in ChhotaUdepur are temples like the Jain Derasar and Kali Temple and the Kusum Vilas Palace and Prem Bhavan Palace.

1) Kali Temple:

The Kali Temple is dedicated to the Goddess Kali and is worshipped by the royal family.

2) Jain Derasar:

The Jain Derasar is a typical example of plaster-decorated buildings of Gujarat, imitating woodcarvings and figurines in plasterwork, showing the influence of Victorian art. The arcades, with decorated pillars, the figures with musical instruments, their dressing, headgears and hairstyles painted in an unconventional manner with bright colors, make a beautiful composition.

3) Kusum Vilas Palace:

The Kusum Vilas Palace was designed by a famous architectural firm of Bombay - Bhatkar&Bhatkar in the early 1920. The design concept was to create a palace in a harmonious fusion of the architectural style of Champaner with modern amenities of an elevator and other functional requirements. A large porch, arcaded facade and balanced architectural treatment of the 5 storied central wing with receding volume, capped with a dome lends majesty to the palace. The interiors are a blend of east and west. The carved plasters, friezes gilded with real gold are the replicas of the such architectural elements at Champaner. The British made elevator has a foyer at ground level, enclosed by the series of exquisitely carved stone jalis bringing in aethereal light effect. The grand reception room on ground floor has large doors, a carved false ceiling, French furniture, Belgian mirrors and superb Italian marble statues. The wall paintings by an Indian artist, depicting the picturesque settings at ChhotaUdepur and previous capital Mohan are most remarkable.

4) PremBhavan Palace:

The PremBhavan Palace is located in the same palace campus of Kusum Vilas Palace and has now been converted into a heritage hotel. This hotel offers excellent accommodation, food and package tours to nearby interesting places

Travel Guide to ChhotaUdepur

ST buses from Vadodara are frequent, though also frequently crowded. Another interesting possibility for travel is the narrow-gauge rail which goes every day except Mondays and Fridays,

By road: Vadodara, 112 km from Ahmedabad and 420 km from Mumbai, is located on National Highway 8. There are various state transport (ST) buses and private luxury coaches from all over Gujarat, Maharashtra, Madhya Pradesh, Delhi, and Rajasthan. Ahmedabad-Vadodara intercity buses take 2 hours and run every 15 minutes. There are also several private bus companies on or near Station Road.

By rail: Vadodara, a major railway junction is located on the Western Railway, which connects Mumbai, Delhi and Ahmedabad.

By air: Vadodara is connected by various domestic airlines to Ahmedabad, Delhi, Mumbai, Daman, and Pune.

Chart No. 1.4 Neighbor Districts and state of Chhota Udaipur District

Panchmahal district	Dahod district	Jhabua district, Madhya Pradesh
Vadodara district	**Chhota Udaipur district**	Alirajpur district, Madhya Pradesh
Vadodara district	Narmada district	Nandurbar district, Maharashtra

Table No.1.1. Total villages and populations of Chhota Udaipur District

	Town / Villages	Populations
#	Chhota Udaipur Municipality	25,787
1	Achhala	1,982
2	Achheta	1,094
3	Alsipur	659
4	Ambala	2,934
5	Antroli	2,306
6	Badvav	637
7	Balavant	897
8	Bandala	696
9	Bandibhint	1,191
10	Baroj	2,974
11	Bedvi	670
12	Bhensa	291
13	Bhilpur	2,276
14	Bhorda	2,585
15	Bhordali	1,176
16	Bilvant	910
17	Bodgam	2,248
18	Bokadiya	1,669
19	Bopa	1,126
20	Chanduvant	571
21	Chathawada	812
22	Chichod	2,376

23	Chilarvant	1,708
24	Chiliyavant	1,700
25	Chisadiya	3,165
26	Chokdi	975
27	Chorvana	908
28	Dadigam	1,053
29	Devaliya	3,784
30	Dhadagam	1,670
31	Dhamodi	634
32	Dhandhoda	3,312
33	Dharmaj	199
34	Dholisimel	1,171
35	Dhorkuva	444
36	Diyavant	971
37	Dobachapura	400
38	Dolariya	3,826
39	Dumali	2,212
40	Dun	933
41	Dungarbhint	1,613
42	Ekalbara	2,364
43	Ferkuva	1,283
44	Gabadiya	1,366
45	Gadola	563
46	Ganthiya	1,480
47	Ghelvant	1,820

48	Ghoghadev	1,301
49	Gondariya	255
50	Guda	1,824
51	Gunata	2,521
52	Gungawada	1,576
53	Hansda	1,315
54	Harpalpura	1,385
55	Harvant	1,569
56	Jadiyana	1,480
57	Jaloda	2,536
58	Jamla	2,545
59	Jamli	1,623
60	Judavant	911
61	Juna Udaipur	41
62	Kachhel	1,552
63	Kachhel	934
64	Kakadkund	420
65	Kanas	1,733
66	Kanavant	1,444
67	Kasara	759
68	Katarvant	598
69	Kevdi	1,436
70	Khadakwada	1,649
71	Khadkhad	2,173
72	Khajuriya	2,891

73	Khodvaniya	1,751
74	Khos	265
75	Khuntaliya	1,081
76	Kikawada	2,433
77	Kokadpa	1,069
78	Kol	1,499
79	Koli	2,592
80	Koliyathar	756
81	Kothara	883
82	Kumbhani	1,541
83	Lagami	1,086
84	Lehvant	1,003
85	Limbani	475
86	Luni	1,395
87	Mal	606
88	Malaja	2,108
89	Maldhi	1,165
90	Malu	1,200
91	Mandalva	2,703
92	Manka	538
93	Marchipani	128
94	Mithali	1,176
95	Mithibor	2,109
96	MotaRampura	836
97	MotiSadhli	3,279

98	Nakamli	979
99	Nalej	1,337
100	Nana Rampura	827
101	NaniSadhli	1,167
102	Navagam	1,205
103	Ode	1,724
104	Odhi	573
105	Oliamba	1,713
106	Ozadi	454
107	Padaliya	1,426
108	Padharvant	1,454
109	Palsanda	2,672
110	Piplej	961
111	Potiya	728
112	Puniyavant	2,249
113	Rajuvant	791
114	Rangpur	2,800
115	Ranikheda	619
116	Raysingpura	2,820
117	Rinchhvel	453
118	Rozkuva	1,520
119	Rozva	1,153
120	Runvad	1,434
121	Sanada	1,842
122	Siloj	978

123	SimalFaliya	2,064
124	Simalkuva	638
125	Singla	1,479
126	Singlaja	545
127	Surkheda	1,389
128	Sursi	647
129	TalavFaliya	1,007
130	Tejgadh	6,545
131	Tenaliya	135
132	Timla	1,641
133	Tundva	2,343
134	Ukhalvant	1,137
135	Vachalibhint	2,248
136	Vadhvan	494
137	Vagalwada	1,030
138	Vanar	1,622
139	Vasedi	2,326
140	Vijol	1,111
141	Virpur	2,343
142	Zer	3,360
143	Zinzarvani	1,175
144	Zoz	4,650

1.2. About Dolomite Industries

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 DeodatGratet 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.

Physical Properties of Dolomite

The mineral dolomite crystallizes in the trigonal-rhombohedral system. It forms white, tan, gray, or pink crystals. Dolomite is a double carbonate, having an alternating structural arrangement of calcium and magnesium ions. It does not rapidly dissolve or effervesce (fizz) in dilute hydrochloric acid as calcite does. Crystal twinning is common.

Solid solution exists between dolomite, the iron-dominant ankerite and the manganese-dominant kutnohorite. Small amounts of iron in the structure give the crystals a yellow to brown tint. Manganese substitutes in the structure also up to about three percent MnO. A high manganese content gives the crystals a rosy pink color. Lead, zinc, and cobalt also substitute in the structure for magnesium. The mineral dolomite is closely related to huntite $Mg_3Ca(CO_3)_4$.

Because dolomite can be dissolved by slightly acidic water, areas of dolomite are important as aquifers and contribute to karst terrain formation.

Table no.1.2. Physical Properties of Dolomite

Physical Properties of Dolomite	
Chemical Classification	Carbonate
Color	Colorless, white, pink, green, gray, brown, black
Streak	White
Luster	Vitreous, pearly
Diaphaneity	Transparent to translucent
Cleavage	Perfect, rhombohedral, three directions
Mohs Hardness	3.5 to 4
Specific Gravity	2.8 to 2.9
Diagnostic Properties	Rhombohedral cleavage, powdered form effervesces weakly in dilute HCl, hardness
Chemical Composition	$CaMg(CO_3)_2$
Crystal System	Hexagonal
Uses	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, metallurgical flux

Uses of Dolomite

Dolomite is used as an ornamental stone, a concrete aggregate, and a source of magnesium oxide, as well as in the Pidgeon process for the production of magnesium. It is an important petroleum reservoir rock, and serves as the host rock for large strata-bound Mississippi Valley-Type (MVT) ore deposits of base metals such as lead, zinc, and copper.

Where calcite limestone is uncommon or too costly, dolomite is sometimes used in its place as a flux for the smelting of iron and steel. Large quantities of processed dolomite are used in the production of float glass. In horticulture, dolomite and dolomite limestone are added to

soils and soilless potting mixes as a pH buffer and as a magnesium source. Home and container gardening are common examples of this use. Dolomite is also used as the substrate in marine (saltwater) aquariums to help buffer changes in pH of the water. Calcined dolomite is also used as a catalyst for destruction of tar in the gasification of biomass at high temperature.

Particle physics researchers like to build particle detectors under layers of dolomite to enable the detectors to detect the highest possible number of exotic particles. Because dolomite contains relatively minor quantities of radioactive materials, it can insulate against interference from cosmic rays without adding to background radiation levels.

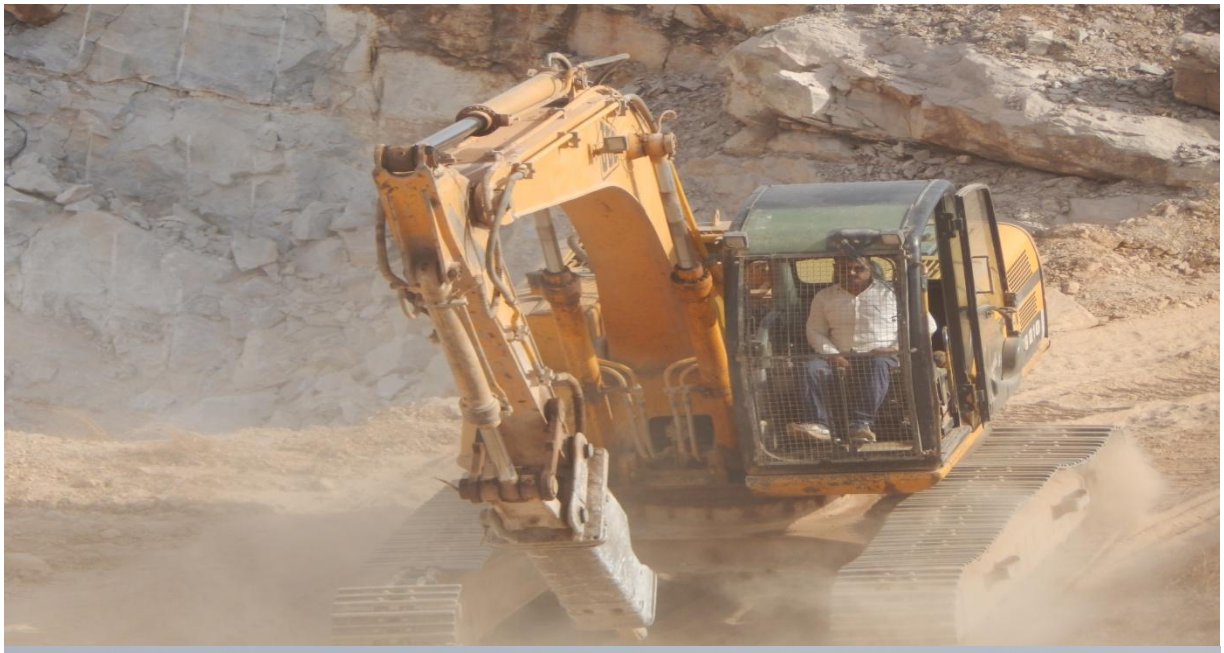
Dolomite is commonly used in a variety of products A few of these are listed below:

- Antacids (neutralizes stomach acid)
- base for face creams, baby powders, or toothpaste
- calcium/magnesium nutritional supplements for animals and humans
- ceramic glazes on china and other dinnerware (dolomite is used as source of magnesia and calcia)
- fertilizers (dolomite added as soil nutrient)
- glass (used for high refractive optical glass)
- gypsum impressions from which dental plates are made (magnesium carbonate)
- mortar and cement
- plastics, rubbers, and adhesives

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

To know more about Dolomite Industries following are given images of Dolomite Industries, mines, and types of Dolomites.

4 Images of Dolomite Mines



4 Images of Dolomite Industries / factory


OMYACARB 2T - OJ
OMYACARB 2T - OJ
OMYACARB 2T - OJ

2 Images of types of Dolomites

Chapter No. 2

REVIEW LITERATURE

CHAPTER NO. 2

REVIEW LITERATURE

In this area of dolomite or dolostone very few research work or publications work done till date. Basically dolomites belong to science subject for study and analysis purpose work done. physical properties and its particles and its combinations etc. related work done in the field of science. Researcher has narrated few points in this regard as mentioned below.

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 (Drew, 1999), and there is widespread concern for the effects that human activities have upon the karst environment. Much of the concern is motivated by the adverse environmental impacts of previous human activities in karst areas and the effects that those impacts have had on the quality of life. Many human activities can negatively impact karst areas, including deforestation, agricultural practices, urbanization, tourism, military activities, water exploitation, mining, and quarrying (Drew, 1999).

Minerals associated with karst have been exploited for many years. Some carbonate rocks contain valuable supplies of water, oil, and gas, may weather to form bauxite deposits, and are associated with manganese and phosphate rock (guano).

Coal is often found within thick carbon-ate rock sequences. Like other rocks, karst rocks may host ore deposits containing lead, zinc, iron, and gold.

Much of the resource extraction conducted in areas of karst is for the rock itself. Unweathered carbonate rocks provide crushed stone and dimension stone resources. The term "crushed stone" refers to the product resulting from the crushing of rocks such that substantially all faces are created by the crushing operation (ASTM, 2000). The term "dimension stone" is generally applied to masses of stone, either naturally occur-ring or prepared for use in the form of blocks of specified shapes and sizes, that may or may not have one or more mechanically dressed surface (Bowles, 1939: ASTM, 1998).

Carbonate rocks provide dimension stone, aggregate resources, and raw materials for cement and other industrial and agricultural uses. Over 70 percent of crushed stone produced in

the United States is made from carbonate rock. The products derived from carbonate rocks provide essential materials for society materials that we need to maintain our current standard of living. Quarrying carbonate rocks for use as crushed stone and dimension stone can be accomplished with no significant impacts to the environment, if done carefully and within the limits set by nature. However, if proper precautions are not taken many human activities in karst, including extraction of carbonate rocks, can result in damage to the environment and associated increases in costs for environmental compliance or liability.

Dolomite of ‘‘primary’’ origin develop in the carbonate sequence on very low gradientidal flats and coastal sabkhas which might be either marginal to shallow-marine or a lagoonal set up under extreme arid conditions dominated by circulation of hot supersaline brine (Reading, 1996). Transportation, breaking down and deposition of infraclass signify wave action. Wave ripples, fenestrae, dissolution cavities, dessication cracks, brecciation, columnar and domalstromatolites, muddrapes and herringbone cross bedding, in the phosphaticdolostones indicate that the deposition may have occurred in an intertidal environment influenced by a complex interaction between fair weather waves and tidal currents (e.g. Reineck and Singh,1980; Wright and Short, 1984).

Stromatolites in this complex vary in shape and size. Stromatolites are indicative of shallow water conditions. The morphometry of the stromatolites is an important indicator of the energy condition during its growth in depositional set up (cf. Krylov, 1976; Walther in Reading, 1996). Large colonies of stromatolites could only grow in quiet and low-energy conditions. Owing to a possible presence of a paleotopographic high towards north, the wave action might have increased promoting growth of highly elongated stromatolitic forms parallel to the current directions. Chert deposition in upper part of Vempalle Formation indicates non supply of detritus and tectonically inactive source area. The brecciated nature of the chert reflects contemporaneous fluctuations during deposition of chert. The forces which were responsible for bringing lava up may have caused brecciation of chert in the earlier stages (Nagaraja Rao et al., 1987).

The peritidal carbonate complex displays an overall shoaling-upward trend, expressed by an upward increase of shallow-water features such as small-scale wave ripples, microbial laminae, fenestrae, vugs, tepees, desiccation cracks and exposure-related brecciation (Jiang, et.al, 2002). These features are prevalent in massive dolostones of the studied area indicating their deposition in peritidal carbonate complex. Evidences of repeated exposure are present in the lithounits of Vempalle Formation in the form of dessication cracks in different levels.

The phosphatic dolostone facies is, however, gradational to the upper calcareous shalyfacies, which deposited under deep subtidal environment. Occassional increase of terrigenousclastics is observed in the lithounits, which is a response to the redistribution of topographic highs in the source area. Siliclastic sedimentation within the region of shallow carbonate production is most dictated by the character of the onshore sediments. Along with relative or absolute changes in sea level, storm deposits and fuvial activity widely control the magnitude, extent, and character of allochthonoussiliclastic transport and deposition.

Pyrite formation is controlled by the chemical and hydrodynamic conditions of the environment. The scattered pyrite in the mineralised dolostone lithofacies are probably formed in a reducing condition that prevailed in the hypersaline environment (Friedman, 1966; Friedman and Sanders, 1967; Braun and Friedman, 1969; Friedman and Radke, 1979). Pyrite is very common in ancient marine rocks and develops within lowenergy environments (lagoons, estuaries, and coastal lakes). Under anaerobic conditions and warmer temperatures, certain bacteria that help in the formation of pyrite become active. The activities of this bacteria results in the reduction of sulfate into native sulfur. Iron particles from the preexisting sediments combine with sulfur to produce iron sulfides in form of pyrite framboids (spherules) as an authigenic mineral during the late diagenetic event (Suits and Wilkin, 1998).

A relationship between environmental damage and quarrying of carbonate rock has been well documented for over fifty years (Foose, 1953), there are only a few reports that include major discussions of the environmental impacts of quarrying in karst. These reports include Development of Sinkholes Resulting from Man’s Activities in the Eastern United States (Newton, 1987), Ground Subsidynce, which includes a chapter Sinkholes on Limestones(Waltham, 1989), and Karst Hydrogeology and Human Activities (Drew and Hötzl,

1999), which includes a chapter on Extractive Industries Impact (Hess and Slattery, 1999). There are a few individual reports scattered through the literature that address the environmental impacts of quarrying carbon-ate rocks in karst. In addition, there are reports that describe environmental impacts on karst from mining resources other than carbonate rock. Theories about how extraction of carbonate rock can impact the environment can be extrapolated from some of these reports. This report describes the state-of-the-knowledge regarding the environmental impacts from quarrying carbon-ate rocks in karst. Documentation of the relationships between carbonate rock quarries and environmental problems in karst has existed for nearly fifty years, but is scarce. There are numerous articles in the literature that describe environmental impacts on karst from human activities other than quarrying, but there are relatively few articles that specifically refer to impacts from quarrying.

The reported environmental impacts have occurred in a wide variety of karst terrains, under a wide variety of climatic conditions, where the natural systems have been stressed by a wide variety of human activities. It should not be assumed that impacts in one karst terrain under a particular set of natural and man-made conditions will also happen in a different karst terrain with a different set of natural and man-made conditions.

There was a tremendous variety of carbonate rocks and these rocks exist in a broad range of climatic situations. Weathering of carbonate rocks produces diverse types of karst landscapes, far too many types to be described here. Instead, this report gives a simplified description of the karst forming processes. Readers interested in learning the details of karst formation are encouraged to consult the numerous textbooks and research reports that describe the geohydrologic and geomorphic processes involved with karst development. For example, Karst Geomorphology (Sweeting, 1981) contains benchmark papers about karst, including excerpts from Das Karstphänomen (Cvijíc, 1893). Process geomorphology (Ritter and others, 1995), a recent textbook, discusses karst from a process / response perspective. Karst Geomorphology (Jennings, 1985) is a technical description of karst written for the non-scientific audience. Karst Lands (White and others, 1995) is a concise article in American Scientist that describes karst formation and hydrology. Sinkholes in Pennsylvania (Kochanov, 1999) is a non-technical description of karst prepared for non-scientific audiences. The International Geographical Union

Commission on Sustainable Development and Management of Karst Terrains published eight annotated bibliographies of karst research studies (for example, Urushibara-Yoshino, 2000).

Natural karst processes occur gradually over hundreds to thousands of years. The formation of karst includes interactions between carbonate rocks and slightly acidic water. (Actually karst can form on other soluble rocks such as gypsum; however, this report is restricted to carbonate rocks.) Carbonic acid is a mild acid formed when rainwater and carbon dioxide react. As the rainwater passes through the soil, the water absorbs more carbon dioxide and becomes more acidic. Carbonate rock contains openings between beds of rock and as fractures or joints created when the rocks were uplifted, uncovered, faulted, or folded. The slightly acidic water percolates into the rocks through these openings. The openings are enlarged by solvent action of acidic water. The dissolution process is self-accelerating: openings that are enlarged first will transmit more water, thus increasing the rate that acid is brought into contact with the rock, resulting in additional enlargement of the openings.

As underground flow paths con-trolled by joints, fractures, and bedding planes continue to enlarge over time, water movement changes from small volumes through many small, scattered openings in the rock to concentrated flow through a few well-developed conduits. As flow paths continue to enlarge, caves, conduits, and sinkholes may be formed. Surface streams may lose water to the subsurface or flow into cave entrances, only to reappear many miles away.

Unusual bedrock surfaces may be created as the carbonate rock is dissolved. In temperate climates, some of the surfaces resemble abstract sculptures or contain pointed columns called pinnacles. A residual soil forms over the bedrock because there are minerals within limestone that are not affected by carbonic acid. As the process of dissolution continues, these insoluble minerals collect on top of the bedrock surface as clayey residual material. Some residual material is carried by water into openings in bedrock where they clog the openings. Other material, such as stream alluvium, may overly the clay. Depending on the climate, topography, and type of parent bedrock, soil on the bedrock surface can be non-existent or greater than 50 m thick.

One of the most frequent complaints the public makes to the crushed stone industry situated near population centers is about blasting noise (National Academy of Sciences, 1980). Blasting may occur daily or as infrequently as once or twice a year. The blasting techniques used in crushed stone operations are significantly different than those used in dimension stone quarrying.

Whereas large amounts of explosives are used in crushed stone operations to produce appropriate-sized rubble, the dimension stone industry uses only small amounts of explosives to loosen large blocks of stone.

Geology, topography, and weather affect the impacts of blasting. Blasting noise generally increases with the amount of explosive, with specific atmospheric conditions, and with proximity to a blast. The area in front of a blast commonly receives more noise than an area behind a blast. People differ greatly in their response to blasting (National Academy of Sciences, 1980).

The technology of rock blasting is highly developed, and when blasting is properly conducted most environmental impacts should be negligible. By following widely recognized and well-documented limits on ground motion and air concussion, direct impacts from ground shaking and air concussion can be effectively mitigated. Those limits and methods to measure them are discussed in Moore and Richards (1999), Bell (1992), Berger and others (1991), and National Academy of Sciences (1980).

When an explosive is detonated enormous amounts of energy are released. Most of the energy of a properly designed blast works to displace rock from the quarry face. The remaining energy is released as vibrations through and along the surface of the earth and through the air. Most of the energy that goes through the earth comes to the surface within a few meters of the detonation and travels as surface waves, which may cause ground shaking. A small amount of the energy is transmitted through the rocks as shear waves, which commonly are insignificant.

When a blast is detonated, some energy will escape into the atmosphere causing a disturbance in the air. Part of this disturbance is sub audible (air concussion) and part can be heard (noise). Air concussion is most noticeable within by the construction industry. Crushed carbonate rock also has numerous agriculture and industrial uses. Agricultural uses include fertilizers and insecticides. Industrial uses include the manufacture of cement, pharmaceuticals, processed food, glass, plastics, floor coverings, paper, rubber, leather, synthetic fabrics, glue, ink, crayons, shoe polish, cosmetics, chewing gum, toothpaste, and antacids. During 1999, over one billion tons of crushed limestone, dolomite, and marble valued at over $5.5 billion were produced from about 2,200 quarries operating in 48 states. The top 10 states (in decreasing order of production) each produced over 45 million tons of crushed carbonate rocks – Texas, Florida, Illinois, Ohio, Missouri, Pennsylvania, Tennessee, Kentucky, Indiana, and Alabama (Tepordei, 1999). All of these states contain areas of karst.

Dimension stone has a large number of uses ranging from rustic walls and roughly-shaped paving stones to highly polished floor tile, counter tops, and building facades. The final use of the stone, as well as the methods to quarry and mill the stone, depend on the properties of the source rock. Today, stone is considered by many to be the premier building material and is experiencing resurgence in use for commercial and residential construction. During 1999, dimension limestone or dolomite were extracted from 33 quarries in 10 States. Production was 446,000 metric tons valued at $74.9 million. The top five producing states, in descending order by tonnage, were Indiana, Wisconsin, Texas, Minnesota, and Kansas. Other states producing dimension limestone or dolomite include Alabama, Arkansas, California, Ohio, and Vermont. Marble was extracted from 11 quarries in 5 states. Production was 40,300 metric tons valued at $9.5 million. Vermont was the leading producing State, followed by Tennessee, Georgia, Colorado, and Arkansas (Dolley, 1999). a structure, particularly when windows and doors are closed. The air concussion creates a pressure differential between the outside and inside the structure causing it to vibrate.

Poorly designed or poorly con-trolled blasts may cause rocks to be projected long distances from the blast site (flyrock), which can be a serious hazard. Flyrock is not commonly a problem with carefully designed and executed blasting plans, but is a situation that deserves careful attention. The pinnacled bedrock in karst can complicate blasting, increasing the risks for flyrock.

Blast-induced vibrations and shock waves can cause stalagmites and stalactites to break off and cause cave roofs to crack or collapse. Blasting may cause fracturing of quarry walls, increasing permeability and increasing drainage towards quarry face (Gagen and Gunn, 1987, Gunn and Bailey, 1993). The blast zone beneath the quarry floor in sub-water table quarries may be considered as a separate aquifer with high fracture density, low primary porosity, and negligible conduit development (Smart and others, 1991).

Blasting-induced fracturing or aperture widening may play a role in initiating flooding events.

Lolcama and others (1999) describe a situation where blasting opened a conduit under the floor of a quarry. The conduit was connected to a nearby river and to a local water storage basin. Extensive grouting was required to stop the inflow of water from those sources.

Blasting can negatively impact karst biota and may cause problems with ground-water availability and quality.

Great numbers of quarries in a karst region amplifies the geomorphic impact (Sauro, 1993). Stanton (1966) suggested that the disturbance created by numerous smaller quarries is greater than that created by one large quarry and recommended that geomorphic disturbance be minimized by maximizing reserves through deep quarrying. Stanton (1990) later suggested that limestone has more value in situ as a source of water and for its scenic value than as a source of crushed stone and recommended avoiding extraction of limestone altogether when alter-natives are available.

Chapter No. 3

RESEARCH METHODOLOGY

CHAPTER NO. 3

RESEARCH METHODOLOGY

Sr. No.	Topics in the Chapter
3.1	The Problem Area
3.2	Significances of the Study
3.3	Objectives of the Study
3.4	Universe of the Study and Sample Design
3.5	Research Instrument
3.6	Collection of Data
3.7	Hypotheses
3.8	Limitation of the Study
3.9	Data Analysis and Presentation
3.10	Outline of the Chapter Plan

3.1) The Problem Area:

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.

3.2) Significant the Study:

Dolomite is an essential product now a days. It is useful in many things or product as raw material. it is used as a content. It is mainly available in powder form 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.

3.3) 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 various accounting aspects like profitability, managerial skills, efficiency, Productivity, and assets –sales relations of the industry.

3.4) Universe of the Study and Sample Design:

- As per Govt. Record (Vadodara city, Gujarat) 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. 3.1. List of the selected dolomite Industries for study purpose.

Sr. No.	Dolomite Industry Name	Short Name	Village & District
1	Modern Mineral Grinding Industry	MMGI	Runvada,Chhotaudepur, Gujarat
2	RadhaKishan Mineral	RKM	Vanar,,Chhotaudepur, Gujarat
3	Mahalaxmi Micro.	Ml. M	Runvada, Chhotaudepur, Gujarat
4	Mahadev Micro.	Md.M	Chhotaudepur, Chhotaudepur, Gujarat
5	Ambica Chips	AC	Vasedi, Chhotaudepur, Gujarat
6	Laxmi Chips & Glass Factory	LCGF	Chotta-udepur, Chhotaudepur, Gujarat
7	Swamikrupa minerals	SM	Vasedi, Chhota Udepur, Gujarat
8	Shri Ram Mineral	SRM	Chotta –Udepur, Chotta –Udepur, Gujarat
9	Akhileshwari Micro Minerals	AMM	Chhota Udepur, Chhota Udepur , Gujarat
10	Bharat Laxmi Minerals Grinding Industry	BLMGI	Runvada, Chhotaudepur, Gujarat

3.5) Research Instrument:

A structured questionnaire is used for data collection from the selected 10 dolomite Industries from chhota- udapur 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 forLast Ten Years i.e. 2007-2016 from the selected industries.

3.6) Collection of Data:

Primary Data

- The Primary data is collected through structured ended questionnaires Containing around 40 questions.

Secondary Data

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

3.7) Hypotheses:

The research has formulated Null Hypothesis and alternate hypothesis. The null hypothesis tested with the help of appropriate and applicable statistical tools. The Statement of hypotheses are as under:

Hypothesis No. 1

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

Hypothesis No. 2

- 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 have any significant difference in the performance of Management ratios of last ten years.

Hypothesis No. 3

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

Hypothesis No. 4

- H_0 =Dolomite industries do not have significant difference in the performance of Productivity Ratios of last ten years.
- H_1 = Dolomite industries do have significant difference in the performance of Productivity ratio of last ten years.
-

3.8) Data Analysis and Presentation:

- For the present work, the researcher has collected data of cost sheets and fix and current Assets data of last ten years from selected dolomite Industries. Various accounting concept and formulas applied for the work and find out Net Sales, Gross Profit, Total Cost. various relevant ratio also calculated for the work such as Profitability Ratio Management Ratio, Assets Turnover ratio, Productivity Ratio.
- 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.

  About t-test

  This is very important distribution was given by W.S. Gosse in 1908. He published his work under the pen-name of student. Hence the distribution is known as student's t distribution. For testing the significance of the difference between samples mean and the population mean, t distribution can be used.

  t-test degree of freedom
- The probability table of t distribution is given for various levels of significance and for different degree of freedom. Degree of Freedom is the number of independent observation of the variable. The number of independent observations is different for different statistics.

<u>Calculations tools for t test:</u>

Mean X, Median N , Mode Z , $\sum xi$, $\sum di$, $\sum di^2$, Standard Deviation (S)

t-test formula

$$t = \frac{|x - \mu|\ n-1}{S}$$

- degree of freedom (d.f.)
- 5% level of significant
- Comparison of t -Calculation and t- table for final result of hypothesis testing

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

3.9) Limitations of Study:

1. The study based on mainly on primary data hence the respondent has not given required all information.
2. All the information provided by the respondents that were tentative or approximate figures and data of the respective industries.
3. 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.
4. Only 10 dolomite industry is selected so, it is not representing the whole universe of 124 industries.
5. The accounting technique & statistical techniques have their own limitation, so, they are also applied to this study.
6. Time constrain also affect the study.

3.10) Chapter scheme:

Chapter – 1: Introduction

Chapter - 2: Review Literature

Chapter – 3: Research Methodology

Chapter - 4: Profile of Selected Dolomite Industries

Chapter - 5: Data Analysis and Interpretations

Chapter - 6: Conclusion

- Bibliography

Chapter No. 4

PROFILE OF SELECTED DOLOMITE INDUSTRIES

CHAPTER NO. 4

PROFILE OF SELECTED DOLOMITE INDUSTRIES

Table No. 4. List of the selected dolomite Industries for study purpose.

Sr. No.	Dolomite Industry Name	Short Name	Village & District
1	Modern Mineral Grinding Industry	MMGI	Runvada,Chhotaudepur, Gujarat
2	RadhaKishan Mineral	RKM	Vanar,,Chhotaudepur, Gujarat
3	Mahalaxmi Micro.	Ml. M	Runvada, Chhotaudepur, Gujarat
4	Mahadev Micro.	Md.M	Chhotaudepur, Chhotaudepur, Gujarat
5	Ambica Chips	AC	Vasedi, Chhotaudepur, Gujarat
6	Laxmi Chips & Glass Factory	LCGF	Chotta-udepur, Chhotaudepur, Gujarat
7	Swamikrupa minerals	SM	Vasedi, Chhota Udepur, Gujarat
8	Shri Ram Mineral	SRM	Chotta –Udepur, Chotta –Udepur, Gujarat
9	Akhileshwari Micro Minerals	AMM	Chhota Udepur, Chhota Udepur , Gujarat
10	Bharat Laxmi Minerals Grinding Industry	BLMGI	Runvada, Chhotaudepur, Gujarat

Following are given profile of 10 selected industries. Researcher had personally visited all the selected industries and prepared a structured questionnaire in Gujarati language. All the questions and other things asked to the responsible person of the respective industry in table form. It covers information like accounting, financial, productions, employees, resources of raw material, packing, suggestions, and their problems are narrated. Some required data collected from the year 2007 to 2016. As industries are very tiny and lack of man power no proper data maintained by the industries. They have provided rough or approximate data. Then after all the information translated into English language from Gujarati for the study purpose.

Table No.4.1. Industry Profile No. 1: Modern Mineral Grinding Industry(MMGI)

Sr. No.	Industry Name	Modern Mineral Grinding Industry
1	Village Dist.	Runvada Chhotaudepur, Gujarat
2	Type of Industry	Sole Proprietor
3	Dolomite product capacity	400 mesh
4	Daily Production	15 to 20 tons
5	Daily working Hours	18 Hrs.
6	No. of Employees	7
7	Resource of Dolomite stone Available Place/ Village	Vanar
8	Product produce from Dolomite Stone	Talcum Powder, Colors Etc.
9	Export level	India
10	Use of energy/ fuel	Electricity
11	Life value of machinery	15 years
12	Service of machinery	Every month
13	Taking insurance of Employee	Yes
14	Health checkup of employee	Once in year
15	Contribution in provident fund by the employer	No
16	Taking measures/ Preventive Actions of safety for employee	Yes
17	Maintaining social relationship with employee	Yes
18	Which categories employees mostly working	Schedules Tribes
19	Which Banks use for loans	Public and private both
20	Which loan normally uses	C.C. Loan
21	Any special benefit received from govt. as this industries is working in Backward Area	No
22	Special Economic Zones Benefits Available	No
23	Training provided by any Management Firm or By Govt.	No
24	Any subsidy available from Govt.	No
25	Association formed by the Dolomite Industries	Yes
26	Meeting held by the association in year	Three times in Year

27	This Industries have Membership of Chamber of Commerce	No
28	Visit of any Business or trade fair	Yes
29	Packing use for final product	Use of 50 kg plastic bags (As same to cement bags)
30	Use of trade Mark	No
31	Use of normally Accounting methods	Tally Normally
32	Auditing work done	Yes
33	Quality assurance certificate Obtained	Yes
34	Obtained Certificate from Pollution Control board	Yes
35	Competition with	Madhya Pradesh and Rajasthan State
36	Available any State Industrial Development Corporation in District Like GIDC	No
37	Any Suggestions / Problems Facing	1) Transportation cost is very high 2) Royalty price is very High in compare to State of MP and Rajasthan
		Source: Primary data Collected

Table No. 4.2. Industry Profile No. 2: RadhaKishan Mineral(RKM)

Sr. No.	Industry Name	RadhaKishan Mineral
1	Village Dist.	Vanar Chhotaudepur, Gujarat
2	Type of Industry	Partnership
3	Dolomite product capacity	300 mesh
4	Daily Production	25 to 30 tons
5	Daily working Hours	20 Hrs
6	No. of Employees	7
7	Resource of Dolomite stone Available Place/ Village	Jamala
8	Product produce from Dolomite Stone	Ceramic tiles soap
9	Export level	India
10	Use of energy/ fuel	Electricity
11	Life value of machinery	15 years
12	Service of machinery	Every month
13	Taking insurance of Employee	Yes
14	Health checkup of employee	Once in year
15	Contribution in provident fund by the employer	No
16	Taking Measures/ Preventive Actions of safety for employee	Yes
17	Maintaining social relationship with employee	Yes
18	Which categories employees mostly working	Schedules Tribes, Schedules Cast
19	Which Banks use for loans	Public and private both
20	Which loan normally uses	C.C. Loan
21	Any special benefit received from govt. as this industries is working in Backward Area	No
22	Special Economic Zones Benefits Available	No
23	Training provided by any Management Firm or By Govt.	No
24	Any subsidy available from Govt.	No
25	Association formed by the Dolomite Industries	Yes
26	Meeting held by the association in year	Three times in Year

27	This Industries have Membership of Chamber of Commerce	No
28	Visit of any Business or trade fair	Yes
29	Packing use for final product	Use of 50 kg plastic bags (As same to cement bags)
30	Use of trade Mark	No
31	Use of normally Accounting methods	Tally computer Accounting Normally
32	Auditing work done	Yes
33	Quality assurance certificate Obtained	Yes
34	Obtained Certificate from Pollution Control board	Yes
35	Competition with	Madhya Pradesh and Rajasthan State
36	Available any State Industrial Development Corporation in District Like GIDC	No
37	Any Suggestions / Problems Facing	1) Govt. intervention 2) In compare to Rajasthan Gujarat dolomite is Less in quality and whiteness
Source: Primary data Collected		

Table No. 4.3. Industry Profile No. 3: MahalaxmiMicro.(MI.M)

Sr. No.	Industry Name	Mahalaxmi Micro.
1	Village Dist.	Runvada Chhotaudepur, Gujarat
2	Type of Industry	Sole Proprietor
3	Dolomite product capacity	450 mesh
4	Daily Production	18 to 20 tons
5	Daily working Hours	16 to 18 Hrs.
6	No. of Employees	8
7	Resource of Dolomite stone Available Place/ Village	Kanavat
8	Product produce from Dolomite Stone	Iron, tooth paste and Glass
9	Export level	India
10	Use of energy/ fuel	Electricity
11	Life value of machinery	15 years
12	Service of machinery	Every month
13	Taking insurance of Employee	Yes
14	Health checkup of employee	Once in year
15	Contribution in provident fund by the employer	No
16	Taking Measures/ Preventive Actions of safety for employee	Yes
17	Maintaining social relationship with employee	Yes
18	Which categories employees mostly working	Schedules Cast
19	Which Banks use for loans	Public and private both
20	Which loan normally uses	C.C. Loan
21	Any special benefit received from govt. as this industries is working in Backward Area	No
22	Special Economic Zones Benefits Available	No
23	Training provided by any Management Firm or By Govt.	No
24	Any subsidy available from Govt.	No
25	Association formed by the Dolomite Industries	Yes
26	Meeting held by the association in year	Three times in Year

27	This Industries have Membership of Chamber of Commerce	No
28	Visit of any Business or trade fair	Yes
29	Packing use for final product	Use of 50 kg plastic bags (As same to cement bags)
30	Use of trade Mark	No
31	Use of normally Accounting methods	Tally computer Accounting Normally
32	Auditing work done	Yes
33	Quality assurance certificate Obtained	Yes
34	Obtained Certificate from Pollution Control board	Yes
35	Competition with	Madhya Pradesh and Rajasthan State
36	Available any State Industrial Development Corporation in District Like GIDC	No
37	Any Suggestions / Problems Facing	Selling cost is high
		Source: Primary data Collected

Table No. 4.4. Industry Profile No. 4: Mahadev Micro.(MD.M)

Sr. No.	Industry Name	Mahadev Micro.
1	Village Dist.	Chhotaudepur Chhotaudepur, Gujarat
2	Type of Industry	Parternership
3	Dolomite product capacity	300 mesh
4	Daily Production	20 to 22 tons
5	Daily working Hours	18 to 20 Hrs.
6	No. of Employees	8
7	Resource of Dolomite stone Available Place/ Village	Jamala
8	Product produce from Dolomite Stone	Plastic, Chemical, Medicine Etc.
9	Export level	Gujarat & India
10	Use of energy/ fuel	Electricity
11	Life value of machinery	15 years
12	Service of machinery	Every month
13	Taking insurance of Employee	Yes
14	Health checkup of employee	Once in year
15	Contribution in provident fund by the employer	No
16	Taking measures/ Preventive Actions of safety for employee	Yes
17	Maintaining social relationship with employee	Yes
18	Which categories employees mostly working	Schedules Tribes
19	Which Banks use for loans	Public and private both
20	Which loan normally uses	C.C. Loan
21	Any special benefit received from govt. as this industries is working in Backward Area	No
22	Special Economic Zones Benefits Available	No
23	Training provided by any Management Firm or By Govt.	No
24	Any subsidy available from Govt.	No
25	Association formed by the Dolomite Industries	Yes
26	Meeting held by the association in year	Three times in Year

27	This Industries have Membership of Chamber of Commerce	No
28	Visit of any Business or trade fair	Yes
29	Packing use for final product	Use of 50 kg plastic bags (As same to cement bags)
30	Use of trade Mark	No
31	Use of normally Accounting methods	Tally Normally
32	Auditing work done	Yes
33	Quality assurance certificate Obtained	Yes
34	Obtained Certificate from Pollution Control board	Yes
35	Competition with	Madhya Pradesh and Rajasthan State
36	Available any State Industrial Development Corporation in District Like GIDC	No
37	Any Suggestions / Problems Facing	1)Transportation cost is very high 2) Scarcity of working Capital
		Source: Primary data Collected

Table No.4.5. IndustryProfile No. 5: Ambica Chips (A.C.)

Sr. No.	Industry Name	Ambica Chips
1	Village Dist.	Vasedi Chhotaudepur, Gujarat
2	Type of Industry	Sole Proprietor
3	Dolomite product capacity	350 mesh
4	Daily Production	16 to 18 tons
5	Daily working Hours	18 to 20 Hrs.
6	No. of Employees	8
7	Resource of Dolomite stone Available Place/ Village	Vanar
8	Product produce from Dolomite Stone	Iron, Chemical, Glass Etc.
9	Export level	Gujarat & India
10	Use of energy/ fuel	Electricity
11	Life value of machinery	15 years
12	Service of machinery	Every month
13	Taking insurance of Employee	Yes
14	Health checkup of employee	Once in year
15	Contribution in provident fund by the employer	No
16	Taking measures/ Preventive Actions of safety for employee	Yes
17	Maintaining social relationship with employee	Yes
18	Which categories employees mostly working	Schedules Tribes, Schedule Cast
19	Which Banks use for loans	Public and private both
20	Which loan normally uses	Bank Overdraft
21	Any special benefit received from govt. as this industries is working in Backward Area	No
22	Special Economic Zones Benefits Available	No
23	Training provided by any Management Firm or By Govt.	No
24	Any subsidy available from Govt.	No
25	Association formed by the Dolomite Industries	Yes
26	Meeting held by the association in year	Three times in Year

27	This Industries have Membership of Chamber of Commerce	No
28	Visit of any Business or trade fair	Yes
29	Packing use for final product	Use of 50 kg plastic bags (As same to cement bags)
30	Use of trade Mark	No
31	Use of normally Accounting methods	Tally Normally
32	Auditing work done	Yes
33	Quality assurance certificate Obtained	Yes
34	Obtained Certificate from Pollution Control board	Yes
35	Competition with	Madhya Pradesh and Rajasthan State
36	Available any State Industrial Development Corporation in District Like GIDC	No
37	Any Suggestions / Problems Facing	1) available less white stone in compare to Rajasthan 2) Variation in royalty price
		Source: Primary data Collected

Table No.4.6. IndustryProfile No. 6: Laxmi Chips & Glass Factory (LCGF)

Sr. No.	Industry Name	Laxmi Chips & Glass Factory
1	Village Dist.	Chotta-udepur, Chhotaudepur, Gujarat
2	Type of Industry	Partnership
3	Dolomite product capacity	400 mesh
4	Daily Production	20 to 22 tons
5	Daily working Hours	18 to 20 Hrs.
6	No. of Employees	9
7	Resource of Dolomite stone Available Place/ Village	Vanar
8	Product produce from Dolomite Stone	Glass, ceramic tiles, soap Etc.
9	Export level	Gujarat & India
10	Use of energy/ fuel	Electricity
11	Life value of machinery	15 years
12	Service of machinery	Every month
13	Taking insurance of Employee	Yes
14	Health checkup of employee	Once in year
15	Contribution in provident fund by the employer	No
16	Taking measures/ Preventive Actions of safety for employee	Yes
17	Maintaining social relationship with employee	Yes
18	Which categories employees mostly working	Schedules Tribes,
19	Which Banks use for loans	Public and private both
20	Which loan normally uses	Bank Overdraft
21	Any special benefit received from govt. as this industries is working in Backward Area	No
22	Special Economic Zones Benefits Available	No
23	Training provided by any Management Firm or By Govt.	No
24	Any subsidy available from Govt.	No
25	Association formed by the Dolomite Industries	Yes
26	Meeting held by the association in year	Three times in Year

27	This Industries have Membership of Chamber of Commerce	No
28	Visit of any Business or trade fair	Yes
29	Packing use for final product	Use of 50 kg plastic bags (As same to cement bags)
30	Use of trade Mark	No
31	Use of normally Accounting methods	Tally Normally
32	Auditing work done	Yes
33	Quality assurance certificate Obtained	Yes
34	Obtained Certificate from Pollution Control board	Yes
35	Competition with	Madhya Pradesh and Rajasthan State
36	Available any State Industrial Development Corporation in District Like GIDC	No
37	Any Suggestions / Problems Facing	1) Government interventions 2) Variation in royalty price
Source: Primary data Collected		

Table No.4.7. Industry Profile No. 7: Swamikrupa Minerals (SW)

Sr. No.	Industry Name	Swamikrupa minerals
1	Village Dist.	vasedi Chhota Udepur, Gujarat
2	Type of Industry	Partnership
3	Dolomite product capacity	300 mesh
4	Daily Production	15 to 20 tons
5	Daily working Hours	18 Hrs.
6	No. of Employees	7
7	Resource of Dolomite stone Available Place/ Village	Vanar
8	Product produce from Dolomite Stone	Glass, Talcum Powder Etc.
9	Export level	India
10	Use of energy/ fuel	Electricity
11	Life value of machinery	15 years
12	Service of machinery	Every month
13	Taking insurance of Employee	Yes
14	Health checkup of employee	Once in year
15	Contribution in provident fund by the employer	No
16	Taking measures/ Preventive Actions of safety for employee	Yes
17	Maintaining social relationship with employee	Yes
18	Which categories employees mostly working	Schedules Tribes
19	Which Banks use for loans	Public and private both
20	Which loan normally uses	C.C. Loan
21	Any special benefit received from govt. as this industries is working in Backward Area	No
22	Special Economic Zones Benefits Available	No
23	Training provided by any Management Firm or By Govt.	No
24	Any subsidy available from Govt.	No
25	Association formed by the Dolomite Industries	Yes
26	Meeting held by the association in year	Three times in Year

27	This Industries have Membership of Chamber of Commerce	No
28	Visit of any Business or trade fair	Yes
29	Packing use for final product	Use of 50 kg plastic bags (As same to cement bags)
30	Use of trade Mark	No
31	Use of normally Accounting methods	Tally Normally
32	Auditing work done	Yes
33	Quality assurance certificate Obtained	Yes
34	Obtained Certificate from Pollution Control board	Yes
35	Competition with	Madhya Pradesh and Rajasthan State
36	Available any State Industrial Development Corporation in District Like GIDC	No
37	Any Suggestions / Problems Facing	1) Transportation cost is very high 2) Royalty price is very High in compare to State of MP and Rajasthan
		Source: Primary data Collected

Table No.4.8. Industry Profile No. 8: Shri Ram Mineral (SRM)

Sr. No.	Industry Name	Shri Ram Mineral
1	Village Dist.	Chotta -Udepur Chotta –Udepur, Gujarat
2	Type of Industry	Partnership
3	Dolomite product capacity	300 mesh
4	Daily Production	18 to 21 tons
5	Daily working Hours	18 Hrs.
6	No. of Employees	9
7	Resource of Dolomite stone Available Place/ Village	Kanavat
8	Product produce from Dolomite Stone	Iron, tooth paste and Glass
9	Export level	India
10	Use of energy/ fuel	Electricity
11	Life value of machinery	15 years
12	Service of machinery	Every month
13	Taking insurance of Employee	Yes
14	Health checkup of employee	Once in year
15	Contribution in provident fund by the employer	No
16	Taking measures/ Preventive Actions of safety for employee	Yes
17	Maintaining social relationship with employee	Yes
18	Which categories employees mostly working	Schedules Tribes & Schedules Cast
19	Which Banks use for loans	Public and private both
20	Which loan normally uses	C.C. Loan
21	Any special benefit received from govt. as this industries is working in Backward Area	No
22	Special Economic Zones Benefits Available	No
23	Training provided by any Management Firm or By Govt.	No
24	Any subsidy available from Govt.	No
25	Association formed by the Dolomite Industries	Yes
26	Meeting held by the association in year	Three times in Year

27	This Industries have Membership of Chamber of Commerce	No
28	Visit of any Business or trade fair	Yes
29	Packing use for final product	Use of 50 kg plastic bags (As same to cement bags)
30	Use of trade Mark	No
31	Use of normally Accounting methods	Tally Normally
32	Auditing work done	Yes
33	Quality assurance certificate Obtained	Yes
34	Obtained Certificate from Pollution Control board	Yes
35	Competition with	Madhya Pradesh and Rajasthan State
36	Available any State Industrial Development Corporation in District Like GIDC	No
37	Any Suggestions / Problems facing	-Dolomite stone is less in whiteness in compare to Other state
		Source: Primary data Collected

Table No. 4.9. Industry Profile No. 9: Akhileshwari Micro Minerals(AMM)

Sr. No.	**Industry Name**	**Akhileshwari Micro Minerals**
1	Village Dist.	Chhota Udepur Chhota Udepur , Gujarat
2	Type of Industry	Sole Proprietor
3	Dolomite product capacity	350 mesh
4	Daily Production	15 to 20 tons
5	Daily working Hours	17 Hrs.
6	No. of Employees	8
7	Resource of Dolomite stone Available Place/ Village	Vanar
8	Product produce from Dolomite Stone	Chemicals, Glass, Talcum Powder, Colors Etc.
9	Export level	India
10	Use of energy/ fuel	Electricity
11	Life value of machinery	15 years
12	Service of machinery	Every month
13	Taking insurance of Employee	Yes
14	Health checkup of employee	Once in year
15	Contribution in provident fund by the employer	No
16	Taking measures/ Preventive Actions of safety for employee	Yes
17	Maintaining social relationship with employee	Yes
18	Which categories employees mostly working	Schedules Tribes, Schedules Cast
19	Which Banks use for loans	Public and private both
20	Which loan normally uses	C.C. Loan
21	Any special benefit received from govt. as this industries is working in Backward Area	No
22	Special Economic Zones Benefits Available	No
23	Training provided by any Management Firm or By Govt.	No
24	Any subsidy available from Govt.	No
25	Association formed by the Dolomite Industries	Yes
26	Meeting held by the association in year	Three times in Year

27	This Industries have Membership of Chamber of Commerce	No
28	Visit of any Business or trade fair	Yes
29	Packing use for final product	Use of 50 kg plastic bags (As same to cement bags)
30	Use of trade Mark	No
31	Use of normally Accounting methods	Tally Normally
32	Auditing work done	Yes
33	Quality assurance certificate Obtained	Yes
34	Obtained Certificate from Pollution Control board	Yes
35	Competition with	Madhya Pradesh and Rajasthan State
36	Available any State Industrial Development Corporation in District Like GIDC	No
37	Any Suggestions / Problems Facing	Subsidy from Govt. is problematic
		Source: Primary data Collected

Table No.4.10. Industry Profile No. 10: Bharat Laxmi minerals grinding Industry (BLMGI)

Sr. No.	Industry Name	Bharat Laxmi Minerals Grinding Industry
1	Village Dist.	Runvada Chhotaudepur, Gujarat
2	Type of Industry	Sole Proprietor
3	Dolomite product capacity	300 mesh
4	Daily Production	18 to 20 tons
5	Daily working Hours	17 Hrs
6	No. of Employees	8
7	Resource of Dolomite stone Available Place/ Village	Vanar
8	Product produce from Dolomite Stone	Chemical, Colors Etc.
9	Export level	India
10	Use of energy/ fuel	Electricity
11	Life value of machinery	15 years
12	Service of machinery	Every month
13	Taking insurance of Employee	Yes
14	Health checkup of employee	Once in year
15	Contribution in provident fund by the employer	No
16	Taking measures/ Preventive Actions of safety for employee	Yes
17	Maintaining social relationship with employee	Yes
18	Which categories employees mostly working	Schedules Tribes
19	Which Banks use for loans	Public and private both
20	Which loan normally uses	C.C. Loan
21	Any special benefit received from govt. as this industries is working in Backward Area	No
22	Special Economic Zones Benefits Available	No
23	Training provided by any Management Firm or By Govt.	No
24	Any subsidy available from Govt.	No
25	Association formed by the Dolomite Industries	Yes

26	Meeting held by the association in year	Three times in Year
27	This Industries have Membership of Chamber of Commerce	No
28	Visit of any Business or trade fair	Yes
29	Packing use for final product	Use of 50 kg plastic bags (As same to cement bags)
30	Use of trade Mark	No
31	Use of normally Accounting methods	Tally Normally
32	Auditing work done	Yes
33	Quality assurance certificate Obtained	Yes
34	Obtained Certificate from Pollution Control board	Yes
35	Competition with	Madhya Pradesh and Rajasthan State
36	Available any State Industrial Development Corporation in District Like GIDC	No
37	Any Suggestions / Problems Facing	1) Transportation cost is very high 2) Royalty price is very High in compare to State of MP and Rajasthan
		Source : Primary Data collected

Chapter No. 5

DATA ANALYSIS AND INTERPRETATIONS

CHAPTER NO. 5

DATA ANALYSIS AND INTERPRETATIONS

Data were primarily collected from selected industries. Here in this chapter all the data Tabulated, analyzed, summarized and calculated as per the need of the study. Firstly, cost sheet or structure is given here of all the industries followed by interpretation of that and various accounting formulas are applied and calculated to get the result. Formulas like sales, profit, total cost then after cost sheet related ratios i.e. Profitability and Management Ratios. At the end of all type of calculation the result is given which indicated the positions or performance of that industries. Then after Fix and Current assets related data is given in table form. With help of Assets Data, the Assets Turnover ratios and Productivity Ratios calculated and its interpretations also given. These calculations are shown for one year i.e. 2016. Secondly, Researcher have done same kind of work for last ten years i.e. 2007 to 2016. Which used in hypothesis testing. Year wise and industry wise data table is prepared for the same. Graph is also prepared to understand the situation and trend of last 10 years. For hypotheses testing t test is applicable and used here at the end interpretation of hypothesis testing result is given to understand the position of the dolomite Industries.

Industry No. 1: Modern Mineral Grinding Industry (MMGI)

Table No.5.1. Cost Structure/ sheet of theModern Mineral Grinding Industry (MMGI) For the Year 2016

	Particular	Rs. per ton	Rs per ton.
	Production/ Factory cost	600	
	Prime Cost		600
	Add: Office Cost	200	200
	Office and Administrative Cost		800
	Add: Selling Expenses	90	90
	Total Cost		890
	Profit	90	90
	Selling Price per ton		980
Source: Data Collected at Primary level			

Interpretation: The above table shows the cost sheet of Modern Mineral Grinding Industry (MMGI). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the prime cost was 600 Rs. Per ton, the office cost was 200 Rs per ton, the total cost of was 890 Rs. Per ton. Selling price was per ton is 980 Rs and profit earned by the industry was 90 Rs per ton with. Total production for the year 2016 was 4080 tons. Sales, Profits, Cost, Profitability Ratios & Management Ratios are calculatedbelow for analysis and interpretation purpose.

Total Production per year = 4080 Tons

Formula:

1) Sales = Total production of the year tons X Per ton selling price

4080 tons X980 Rs. =39,98,400 Rs.

2) Profit = Total production of the year tons X Per ton profit price

4080 tons X 90 Rs = 3,67,200 Rs.

3) Total Cost = Total production of the year tons X Per ton total cost price

4080 tons X 890 Rs. = 36,31,200 Rs.

Calculations of Ratios

4) Profitability Ratios: for profitable ratio higher the ratios higher the performance considers.
= Gross Profit X 100

Net Sales
= 3,67,200X 100
39,98,400
=0.091 x 100
= 9.18 %

Result: For profitable ratio higher ratios considers as good performance. Here 9.18% ratios of the industry show moderate performance. However, industry should try to increase it.

5) Management Ratios:
Total cost x 100
Sales
= 36,31,200 x 100
39,98,400
= 0.90 x 100
= **90.81%**

Result: For Management ratio lower the ratio consider as good performance. Here 90.81% ratios of the industry show moderate performance. However, industry should try to decrease it.

Table No. 5.2. Assets Data of Modern Mineral Grinding Industry (MMGI) for the year 2016

Fix Assets	**Rs.**	**Rs.**
Land	10,00,000	
Building	15,00,000	
Machinery	20,00,000	
Other Instruments	3,00,000	
		48,00,000
Current Assets		
Debtors		
Stock	30,00,000	
Bank Balance	20,00,000	
		50,00,000
Total Assets		98,00,000
Source: Primary data collected		

Interpretation: The above table shows the Assets Data of Modern Mineral Grinding Industry (MMGI). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the fix assets of the industry were Rs. 48,00,000 lacs with current assets of Rs. 50,00,000 and the total of both i.e. total assets were 98,00,000 Rs. in the last year. Assets Turn over Ratios& Productivity Ratios is calculated below for analysis and interpretation purpose.

Calculations of Ratios

6) Assets Turnover ratio

Formula = Net Sales
Total Assets
= 39,98,000
98,00,000

= 0.40 Time

Result: For Assets turnover ratio higher ratio considers as good performance. Here 0.40 times ratios of the industry show moderate performance. However, industry should try to increase it.

7) ProductivityRatios

=Output (worth of sales per year/ Net sales per year)
Input (Employees Contributions)

Calculation of Input
= 7 employee x 9 Hrs. &Avg. working Per day = 63 hrs. per day
= 63 hrs. per day x 360days in year = 22,680 InputHrs. per year (Employees Contributions)

= 39,98,400
22680

= 176.29 Rs. Per hour Productivity

Result: For Productivity ratio higher ratio considers as good performance. Here 176.29 Rs. per Hour productivity ratios of the industry show Moderate performance. However, industry should try to increase it.

Industry No. 2: RadhaKishan Mineral (RKM)

Table No. 5.3. Cost Structure/ sheet of RadhaKishan Mineral (RKM)Industry for the year 2016

	Particular	**Rs. Per Ton**	**Rs. Per Ton**
	Production/ Factory cost	680	
	Prime Cost		680
	Add: Office Cost	220	220
	Office and Administrative Cost		900
	Add: Selling Expenses	80	80
	Total Cost		980
	Profit	120	120
	Selling Price per ton		1100
Source: Data Collected at Primary level			

Interpretation: The above table shows the cost sheet of RadhaKishanMineral (RKM). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the prime cost was 680 Rs. Per ton, the office cost was 220 Rs per ton, the total cost of was 980 Rs. Per ton. selling price was per ton is 1100 Rs and profit earned by the industry was 120 Rs per ton with. Total production for the year 2016 was 7500 tons. Sales, Profits, Costs, Profitability Ratios & Management Ratios are calculated below for analysis and interpretation purpose.
Total Production per year = 7500 Tons

Formula:

1) Net Sales = Total production of the year tons X Per ton selling price

7500 tons X 1100 Rs= 82,50,000 Rs

2) Gross profit = Total production of the year tons X Per ton profit price

7500 tons X 120 Rs = 9,00,000 Rs.

3) Total Cost = Total production of the year tons X Per ton total cost price

7500 tons X 980 Rs. = 73, 50,000 Rs.

Calculations of Ratios

4) Profitability ratio

$$= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{9,00,000}{82,50,000} \times 100$$

$$= 0.109 \times 100$$

= 10.90 %

Result: For profitable ratio higher ratios considers as good performance. Here 10.90 % ratio of the industry shows moderate performance. However, industry should try to increase it.

5) Management Ratios:

Total cost x 100
Sales

= 73,50,000 x 100
82,50,000

= 0.89 x 100

= **89.09%**

Result: For Management ratio lower the ratio consider as good performance. Here 89.09 % ratio of the industry shows moderate performance. However, industry should try to decrease it.

Table No.5.4. Assets Data RadhaKishanMineral (RKM)for the year 2016

Fix Assets	**Rs.**	**Rs.**
Land	15,00,000	
Building	18,00,000	
Machinery	16,00,000	
Other Instruments	2,00,000	
		51,00,000
Current Assets		
Debtors	7,00,000	
Stock	18,00,000	
Bank Balance	9,00,000	
		34,00,000
Total Assets		85,00,000
Source : Primary data Collected		

Interpretation: The above table shows the Assets Data of RadhaKishan Mineral (RKM). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the fix assets of the industry were Rs. 51,00,000 lacs with current assets of Rs. 34,00,000 and the total of both i.e. total assets were 85,00,000 Rs. in the last year. Assets Turn over Ratios & Productivity Ratios is calculated below for analysis and interpretation purpose.

Calculations of Ratios

6) Assets Turnover ratio

Formula = Net Sales
Total Assets

= 82,50,000
85,00,000

=0.97 Time

Result: For Assets turnover ratio higher ratio considers as good performance. Here 0.97 times ratios of the industry show good performance. However, industry should try to maintain and increase it.

7) Productivity Ratios

= Output (worth of sales per year/ Net sales per year)
Input(Employees Contributions)

Calculation of Input
= 7 employee x 10Hrs Avg. working Per day = 70 hrs. per day
= 70 hrs. per day x 360 days in year = 25,200 Input Hrs. per year (Employees Contributions)

$$= \frac{82,50,000}{25200}$$

= 327.38 Rs. Per hour Productivity

Result: For Productivity ratio higher ratio considers as good performance. Here 327.38 Rs. Per Hour productivity ratios of the industry show good performance. However, industry should try to maintain and increase it.

Industry No. 3: Mahalaxmi Micro. (Ml. M)

Table No. 5.5. Cost Structure/ sheet of Mahalaxmi Micro (MI.M.) Industry for the year 2016

	Particular	**Rs. Per Ton**	**Rs. Per Ton**
	Production/ Factory cost	620	
	Prime Cost		620
	Add: Office Cost	210	210
	Office and Administrative Cost		830
	Add: Selling Expenses	110	110
	Total Cost		940
	Profit	90	90
	Selling Price per ton		1030
Source: Data Collected at Primary level			

Interpretation: The above table shows the cost sheet Mahalaxmi Micro (Ml. M). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the prime cost was 620 Rs. Per ton, the office cost was 210 Rs per ton, the total cost of was 940 Rs. Per ton. Selling price was per ton is 1030 Rs and profit earned by the industry was 90 Rs per ton with. Total production for the year 2016 was 6000 tons. Sales, Profits, Costs, Profitability Ratios & Management Ratios are calculated below for analysis and interpretation purpose.

Total Production per year = 6000 Tons

Formula:

1) Net Sales = Total production of the year tons X Per ton selling price

6000 tons X 1030 Rs. = 61,80,000 Rs.

2) Gross profit = Total production of the year tons X Per ton profit price

6000 tons X 90 Rs = 5,40,000 Rs.

3) Total Cost = Total production of the year tons X Per ton total cost price

6000 tons X 940 Rs. = 56,40,000 rs.

Calculations of Ratios

4) Profitability ratio

$$= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{5,40,000}{81,80,000} \times 100$$

$$= 0.066 \times 100$$

= 6.60 %

Result: For profitable ratio higher ratios considers as good performance. Here 6.60% ratios of the industry show moderate performance. However, industry should try to increase it.

5) Management Ratios:

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

$$= \frac{56,40,000}{61,80,000} \times 100$$

$$= 0.91 \times 100$$

$$= \mathbf{91.26\%}$$

Result: For Management ratio lower the ratio consider as good performance. Here 91.26% ratios of the industry show moderate performance. However, industry should try to decrease it.

Table No. 5.6. Assets Data of Mahalaxmi Micro (MI.M.) Industry for the year 2016

Fix Assets	**Rs.**	**Rs.**
Land	28,00,000	
Building	32,00,000	
Machinery	25,00,000	
Other Instruments	4,50,000	
		89,50,000
Current Assets		
Debtors	15,00,000	
Stock	34,00,000	
Bank Balance	20,00,000	
		69,00,000
Total Assets		1,58,50,000
Source: Primary Data Collected		

Interpretation: The above table shows the Assets Data of Mahalaxmi Micro (Ml. M). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the fix assets of the industry were Rs. 89,50,000 lacs with current assets of Rs. 69,00,000 and the total of both i.e. total assets were 1,58,50,000 Rs. in the last year. Assets Turn over Ratios & Productivity Ratios is calculated below for analysis and interpretation purpose.

Calculations of Ratios

6) Assets Turnover ratio

$$\text{Formula} = \frac{\text{Net Sales}}{\text{Total Assets}}$$

$$= \frac{61,80,000}{1,58,50,000}$$

= 0.38 time

Result: For Assets turnover ratio higher ratio considers as good performance. Here 0.38 times ratios of the industry show moderate performance. However, industry should try to increase it.

7) Productivity Ratios

= Output (worth of sales per year/ Net sales per year)
Input(Employees Contributions)

Calculation of Input
= 8employees x 8.5Hrs Avg. working Per day = 68 hrs. per day
= 68 hrs. per day x 360 days in year = 24,820 Input Hrs. per year (Employees Contributions)

= 61,80,000
24820

= 248.99 Rs. Per hour Productivity

Result: For Productivity ratio higher ratio considers as good performance. Here 248.99 Rs. per Hour productivity ratios of the industry show good performance. However, industry should try to maintain and increase it.

Industry No. 4: Mahadev Micro. (Md. M)

Table No. 5.7. Cost Structure/ sheet of Mahadev Micro. (Md. M) Industry for the year 2016

	Particular	**Rs. Per ton**	**Rs. Per ton**
	Production/ Factory cost	580	
	Prime Cost		580
	Add: Office Cost	220	220
	Office and Administrative Cost		800
	Add: Selling Expenses	130	130
	Total Cost		930
	Profit	110	110
	Selling Price per ton		1040
Source: Data Collected at Primary level			

Interpretation: The above table shows the cost sheet of Mahadev Micro. (Md. M). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the prime cost was 580 Rs. Per ton, the office cost was 220 Rs per ton. the total cost of was 930 Rs. Per ton. selling price was per ton is 1040 Rs and profit earned by the industry was 110 Rs per ton with. Total production for the year 2016 was 1040 tons. Sales, Profits, Costs, Profitability Ratios & Management Ratios are calculated below for analysis and interpretation purpose.

Total Production Per year = 6100 Tons

Formula:

1) Net Sales = Total production of the year tons X Per ton selling price

6100 tons X 1040 Rs. = 63, 44,000 Rs.

2) Gross profit = Total production of the year tons X Per ton profit price

6100 tons X 110 Rs. = 6,71,000 Rs.

3) Total Cost = Total production of the year tons X Per ton total cost price

6100 tons X 930 Rs. = 56, 73,000 Rs.

Calculations of Ratios

4) Profitability ratio

$$= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

= 6,17,000X 100
63,44,000
=0.097 x 100
= 9.72 %
Result: For profitable ratio higher ratios considers as good performance. Here 9.72% ratios of the industry show moderate performance. However, industry should try to increase it.

5) Management Ratio:
Total cost x 100
Sales
= 56,73,000 x 100
63,44,000
= 0.89 x 100
= **89.42 %**
Result: For Management ratio lower the ratio consider as good performance. Here 89.42% ratios of the industry show moderate performance. However, industry should try to decrease it.

Table No. 5.8. Assets Data of Mahadev Micro. (Md. M) Industry for the year 2016

Fix Assets	**Rs.**	**Rs.**
Land	30,00,000	
Building	29,00,000	
Machinery	26,00,000	
Other Instruments	4,00,000	
		89,00,000
Current Assets		
Debtors	28,00,000	
Stock	39,00,000	
Bank Balance	12,00,000	
		79,00,000
Total Assets		1,68,00,000
Source: Primary Data collected		

Interpretation: The above table shows the Assets Data of Mahadev Micro. (Md. M). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the fix assets of the industry were Rs. 89,00,000 lacs with current assets of Rs. 79,00,000 and the total of both i.e. total assets were 1,68,00,000 Rs. in the last year. Assets Turn over Ratios & Productivity Ratios is calculated below for analysis and interpretation purpose.

Calculations of ratio

6) Assets Turnover ratio

Formula = Net Sales
Total Assets
= 63,44,000
1,68,00,000

=0.37 Time
Result: For Assets turnover ratio higher ratio considers as good performance. Here 0.37 times ratios of the industry show moderate performance. However, industry should try to increase it.

7) Productivity Ratio
= Output(worth of sales per year/ Net sales per year)
Input (Employees Contributions)

Calculation of Input
= 8 employees x 9.5Hrs Avg. working per day = 76 Hrs. per day
= 76 hrs. per day x 360 days in year = 27,360 Input Hrs. per year (Employees Contributions)

= 63,44,000
27,360

= 231.87 Rs. Per hour Productivity

Result: For Productivity ratio higher ratio considers as good performance. Here 231.87 Rs. Per Hour productivity ratios of the industry show good performance. However, industry should try to maintain and increase it.

Industry No. 5: Ambica Chips (AC)

Table No.5.9. Cost Structure of Ambica Chips (AC) Industry for the year 2016

	Particular	**Rs. Per ton**	**Rs. Per ton**
	Production/ Factory cost	650	
	Prime Cost		650
	Add: Office Cost	230	230
	Office and Administrative Cost		880
	Add: Selling Expenses	100	100
	Total Cost		980
	Profit	110	110
	Selling Price per ton		1090
Source: Data Collected at Primary level			

Interpretation: The above table shows the cost sheet of Ambica Chips (AC). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the prime cost was 650 Rs. Per ton, the office cost was 230 Rs per ton, the total cost of was 980 Rs. Per ton. Selling price was per ton is 1090 Rs and profit earned by the industry was 110 Rs per ton with. Total production for the year 2016 was 5400 tons. Sales, Profits, Costs, Profitability Ratios & Management Ratios are calculated below for analysis and interpretation purpose.
Total Production per year = 5400 Tons

Formula:

1) Net Sales = Total production of the year tons X Per ton selling price
5400 tons X 1090 Rs. = 58,86,000 Rs.

2) Gross profit = Total production of the year tons X Per ton profit price
5400 tons X 110 Rs. = 5,94,000 Rs.

3) Total Cost = Total production of the year tons X Per ton total cost price

5400 tons X 980 Rs. = 52,92,000 Rs.

Calculations of Ratios

4) Profitability ratio

$$= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{5,94,000}{58,60,000} \times 100$$

$$= 0.101 \times 100$$

= 10.13 %

Result: For profitable ratio higher ratios considers as good performance. Here 10.13% ratios of the industry show moderate performance. However, industry should try to increase it.

5) Management Ratio

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

$$= \frac{52,92,000}{58,86,000} \times 100$$

$$= 0.89 \times 100$$

= **89.90 %**

Result: For Management ratio lower the ratio consider as good performance. Here 89.90% ratios of the industry show moderate performance. However, industry should try to decrease it.

Table No.5.10. Assets Data of Ambica Chips (AC) Industry for the year 2016

Fix Assets	**Rs.**	**Rs.**
Land	18,00,000	
Building	29,50,000	
Machinery	22,00,000	
Other Instruments	3,50,000	
		73,00,000
Current Assets		
Debtors	18,50,000	
Stock	24,00,000	
Bank Balance	11,50,000	
		54,00,000
Total Assets		1,27,00,000
Source; Primary Data Collected		

Interpretation: The above table shows the Assets Data of Ambica Chips (AC). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the fix assets of the industry were Rs. 73,00,000 lacs with current assets of Rs. 54,00,000 and the total of both i.e. total assets were 1,27,00,000 Rs. in the last year. Assets Turn over Ratios & Productivity Ratios is calculated below for analysis and interpretation purpose.

6) Calculations of Ratios

Assets Turnover ratio

Formula $= \frac{\text{Net Sales}}{\text{Total Assets}}$

$$= \frac{58,86,000}{1,27,00,000}$$

= 0.44 Time

Result: For Assets turnover ratio higher ratio considers as good performance. Here 0.44 times ratios of the industry show moderate performance. However, industry should try to increase it.

7) Productivity Ratios

=Output (worth of sales per year/ Net sales per year)
Input(Employees Contributions)

Calculation of Input
= 8 employee x 9.5Hrs. Avg. working Per day = 76 hrs. per day
= 76 hrs. per day x 360 days in year = 27,360 Input Hrs. per year (Employees Contributions)

= 58,56,000
27360

= 214.03 Rs. Per hour Productivity

Result: For Productivity ratio higher ratio considers as good performance. Here 214.03 Rs. Per Hour productivity ratios of the industry show good performance. However, industry should try to maintain and increase it.

Industry No. 6: Laxmi Chips & Glass Factory (LCGF)

Table no. 5.11. Cost Structure/ sheet of Laxmi Chips & Glass Factory (LCGF) Industry for the year 2016

	Particular	**Rs. Per ton**	**Rs. Per ton**
	Production/ Factory cost	680	
	Prime Cost		680
	Add: Office Cost	240	240
	Office and Administrative Cost		920
	Add: Selling Expenses	110	110
	Total Cost		1030
	Profit	120	120
	Selling Price per ton		1150
Source: Data Collected at Primary level			

Interpretation: The above table shows the cost sheet of Laxmi Chips & Glass Factory (LCGF). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the prime cost was 680 Rs. Per ton, the office cost was 240 Rs per ton. the total cost of was 1030 Rs. Per ton. Selling price was per ton is 1150 Rs and profit earned by the industry was 120 Rs per ton with. Total production for the year 2016 was 6000 tons. Sales, Profits, Costs, Profitability Ratios & Management Ratios are calculated below for analysis and interpretation purpose.

Total Production per year = 6000 Tons

Formula:

1) Net Sales = Total production of the year tons X Per ton selling price

6000 tons X 1150 Rs. = 69,00,000 Rs.

2) Gross profit = Total production of the year tons X Per ton profit price

6000 tons X 120 Rs. = 7,20,000 Rs.

3) Total Cost = Total production of the year tons X Per ton total cost price

6000 tons X 1030 Rs. = 61,80,000 Rs.

Calculations of Ratios

4) Profitability ratio

$$= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

= 7,20,000X 100
69,00,000
=0.104 x 100
= 10.40 %
Result: For profitable ratio higher ratios considers as good performance. Here 10.40% ratios of the industry show Good performance. However, industry should try to maintain &increase it.

5) Management Ratio
Total cost x 100
Sales
= 61,80,000 x 100
69,00,000
= 0.89 x 100
= **89.56 %**
Result: For Management ratio lower the ratio consider as good performance. Here 89.56% ratios of the industry show moderate performance. However, industry should try to decrease it.

Table no.5.12. Assets Data of Laxmi Chips & Glass Factory (LCGF) Industry for the year 2016

Fix Assets	**Rs.**	**Rs.**
Land	32,00,000	
Building	26,50,000	
Machinery	26,00,000	
Other Instruments	4,50,000	
		89,00,000
Current Assets		
Debtors	14,50,000	
Stock	26,50,000	
Bank Balance	14,00,000	
		55,00,000
Total Assets		1,44,00,000
Source: Primary Data Collected		

Interpretation: The above table shows the Assets Data of Laxmi Chips & Glass Factory (LCGF). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the fix assets of the industry were Rs. 89,00,000 lacs with current assets of Rs. 55,00,000 and the total of both i.e. total assets were 1,44,00,000 Rs. In the last year. Assets Turn over Ratios & Productivity Ratios is calculated below for analysis and interpretation purpose.

Calculations of Ratios

6) Assets Turnover ratio

Formula = Net Sales
Total Assets

= 69,00,000
1,44,00,000

= 0.47 Time

Result: For Assets turnover ratio higher ratio considers as good performance. Here 0.47 times ratios of the industry show moderate performance. However, industry should try to increase it.

7) Productivity Ratios

= Output(worth of sales per year/ Net sales per year)
Input (Employees Contributions)

Calculation of Input

= 9 employee x 9.59Hrs. Avg. working Per day = 86.31 Hrs. per day

= 86.31 hrs. per day x 360 days in year = 31,071 Input Hrs. per year (Employees Contributions)

= 69,00,00
31,071

= 222.07 Rs. Per hour Productivity

Result: For Productivity ratio higher ratio considers as good performance. Here 222.07rs. Per Hour productivity ratios of the industry show good performance. However, industry should try to maintain and increase it.

Industry No. 7: Swamikrupa Minerals (SM)

Table No.5.13. Cost Structure/ sheet of Swamikrupa Minerals (SM) Industry for the year 2016

	Particular	**Rs. Per ton**	**Rs. Per ton**
	Production/ Factory cost	500	
	Prime Cost		500
	Add: Office Cost	170	170
	Office and Administrative Cost		670
	Add: Selling Expenses	100	100
	Total Cost		770
	Profit	90	90
	Selling Price per ton		860
Source: Data Collected at Primary level			

Interpretation: The above table shows the cost sheet of Swamikrupa Minerals (SM). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the prime cost was 500 Rs. Per ton, the office cost was 170 Rs per ton. the total cost of was 770 Rs. Per ton. selling price was per ton is 860 Rs and profit earned by the industry was 90 Rs per ton with. Total production for the year 2016 was 3500 tons. Sales, Profits, Costs, Profitability Ratios & Management Ratios is calculated below for analysis and interpretation purpose.

Total Production Per year = 3500 Tons

Formula:

1) Net Sales = Total production of the year tons X Per ton selling price

3500 tons X 860rs. =30,10,000 Rs.

2) Gross profit = Total production of the year tons X Per ton profit price

3500 X 90 = 3,15,000Rs.

3) Total Cost = Total production of the year tons X Per ton total cost price

3500 tons X 770 Rs. = 26,95,000Rs.

Calculations of Ratios

4) Profitability ratio

$$= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{3,15,000}{30,10,000} \times 100$$

$$= 0.104 \times 100$$

= 10.46 %

Result: For profitable ratio higher ratio consider as good performance. Here 10.46% ratios of the industry show Good performance. However, industry should try to maintain &increase it.

5) Management Ratio

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

$$= \frac{26,95,000}{30,10,000} \times 100$$

$$= 0.89 \times 100$$

$$= \mathbf{89.53\ \%}$$

Result: For Management ratio lower the ratio consider as good performance. Here 89.53% ratios of the industry show moderate performance. However, industry should try to decrease it.

Table No. 5.14. Assets Data of Swamikrupa Minerals (SM) Industry for the year 2016

Fix Assets	**Rs.**	**Rs.**
Land	8,00,000	
Building	12,00,000	
Machinery	14,00,000	
Other Instruments	2,00,000	
		36,00,000
Current Assets		
Debtors	9,00,000	
Stock	20,00,000	
Bank Balance	14,00,000	
		43,00,000
Total Assets		79,00,000
Source: Primary Data Collected		

Interpretation: The above table shows the Assets Data of Swamikrupa Minerals (SM). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the fix assets of the industry were Rs. 36,00,000 lacs with current assets of Rs. 43,00,000 and the total of both i.e. total assets were 79,00,000 Rs. In the last year. Assets Turn over Ratios & Productivity Ratios is calculated below for analysis and interpretation purpose.

Calculations of Ratios

6) Assets Turnover ratio

$$\text{Formula} = \frac{\text{Net Sales}}{\text{Total Assets}}$$

$$= \frac{30,10,000}{79,00,000}$$

= 0.38 Time

Result: For Assets turnover ratio higher ratio considers as good performance. Here 0.38 times ratios of the industry show moderate performance. However, industry should try to increase it.

7) Productivity Ratios

$$= \frac{\text{Output (worth of sales per year/ Net sales per year)}}{\text{Input (Employees Contributions)}}$$

Calculation of Input
= 7 employee x 9 Hrs Avg. working per day = 63 Hrs. per day
= 63Hrs. per day x 360 days in year = 22,680 Input Hrs. per year (Employees Contributions)

$$= \frac{30,10,000}{22680}$$

= 132.71 Rs. Per Hour Productivity

Result: For Productivity ratio higher ratio considers as good performance. Here 132.71 Rs. Per Hour productivity ratios of the industry show moderate performance. However, industry should try to increase it.

Industry No. 8: Shri RamMineral (SRM)

Table No. 5.15. Cost Structure/ sheet of Shri Ram Mineral (SRM) Industry for the year 2016

	Particular	**Rs. Per ton**	**Rs. Per ton**
	Production/ Factory cost	650	
	Prime Cost		650
	Add: Office Cost	150	150
	Office and Administrative Cost		800
	Add: Selling Expenses	110	110
	Total Cost		910
	Profit	120	120
	Selling Price per ton		1030
Source: Data Collected at Primary level			

Interpretation: The above table shows the cost sheet of Shri Ram Mineral (SRM). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the prime cost was 650 Rs. Per ton, the office cost was 150 Rs per ton. the total cost of was 910 Rs. Per ton. selling price was per ton is 1030 Rs and profit earned by the industry was 120 Rs per ton with. Total production for the year 2016 was 5500 tons. Sales, Profits, Costs, Profitability Ratios & Management Ratios is calculated below for analysis and interpretation purpose.

Total Production Per year = 5500 Tons

Formula:

1) Net Sales = Total production of the year tons X Per ton selling price

5500 tons X 1030Rs. = 56,65,000 Rs.

2) Gross profit = Total production of the year tons X Per ton profit price

5500 tons X 120Rs. = 6, 60,000 Rs.

3) Total Cost = Total production of the year tons X Per ton total cost price

5500 tons X 910 Rs. = 50,05,000 Rs.

Calculations of Ratios

4) Profitability ratio

Formula = Gross Profit X 100
Net Sales
= 6,60,000X 100
56,65,000
=0.11 x 100
=11.65 %
Result: For profitable ratio higher ratios considers as good performance. Here 11.65% ratios of the industry show Good performance. However, industry should try to Maintain & increase it.

5) Management Ratio
Total cost x 100
Sales
= 50,05,000 x 100
56,65,000
= 0.88 x 100
= **88.34 %**
Result: For Management ratio lower the ratio consider as good performance. Here 88.34% ratios of the industry show moderate performance. However, industry should try to decrease it.

Table No. 5.16. Assets Data of Shri Ram Mineral (SRM) Industry for the year 2016

Fix Assets	**Rs.**	**Rs.**
Land	9,00,000	
Building	13,00,000	
Machinery	22,00,000	
Other Instruments	3,00,000	
		47,00,000
Current Assets		
Debtors	8,00,000	
Stock	20,00,000	
Bank Balance	12,00,000	
		40,00,000
Total Assets		87,00,000
Source: Primary Data Collected		

Interpretation: The above table shows the Assets Data of Shri Ram Mineral (SRM). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the fix assets of the industry were Rs. 47,00,000 lacs with current assets of Rs. 40,00,000 and the total of both i.e. total assets were 87,00,000 Rs. In the last year. Assets Turn over Ratios & Productivity Ratios is calculated below for analysis and interpretation purpose.

Calculations of Ratios

6) Assets Turnover ratio

= Net Sales
Total Assets

= 56,65,000
87,00,000

= 0.65 time

Result: For Assets turnover ratio higher ratio considers as good performance. Here 0.65 times ratios of the industry show Good performance. However, industry should try to Maintain & increase it.

7) Productivity Ratios

= Output(worth of sales per year/ Net sales per year)
Input(Employees Contributions)

Calculation of Input
= 9 employee x 9 Hrs. Avg. working Per day = 81 hrs. per day
= 81 hrs. per day x 360 days in year = 29,160 Input Hrs. per year (Employees Contributions)

= 56,65,000
29160

= 194.27 Rs. Per hour Productivity

Result: For Productivity ratio higher ratio considers as good performance. Here 194.27 Rs. Per Hour productivity ratios of the industry show good performance. However, industry should try to maintain and increase it.

Industry No. 9: Akhileshwari Micro Minerals(AMM)

Table No. 5.17. Cost Structure/ sheet of Akhileshwari Micro Minerals (AMM)**Industry for the year 2016**

	Particular	**Rs. Per ton**	**Rs. Per ton**
	Production/ Factory cost	650	
	Prime Cost		650
	Add: Office Cost	180	180
	Office and Administrative Cost		830
	Add: Selling Expenses	80	80
	Total Cost		910
	Profit	100	100
	Selling Price per ton		1010
Source: Data Collected at Primary level			

Interpretation: The above table shows the cost sheet of Akhileshwari Micro Minerals (AMM). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the prime cost was 650 Rs. Per ton, the office cost was 180 Rs per ton. the total cost of was 910 Rs. Per ton. selling price was per ton is 1010 Rs and profit earned by the industry was 100 Rs per ton with. Total production for the year 2016 was 1010 tons. Sales, Profits, Costs, Profitability Ratios & Management Ratios is calculated below for analysis and interpretation purpose.

Total Production Per year = 4500 Tons

Formula:

1) Net Sales = Total production of the year tons X Per ton selling price

4500 tons X 1010rs. =45,45,000 Rs.

2) Gross profit = Total production of the year tons X Per ton profit price

4500 X 100 =4,50,000 Rs.

3) Total Cost = Total production of the year tons X Per ton total cost price

4500 tons X 910 Rs. = 40,95,000 Rs.

Calculations of Ratios

4) Profitability ratio

$$= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{4,50,000}{45,45,000} \times 100$$

$$= 0.10 \times 100$$

= 10 %

Result: For profitable ratio higher ratios considers as good performance. Here 10 % ratios of the industry show Good performance. However, industry should try to Maintain & increase it.

5) Management Ratio

Total cost x 100
Sales
= 40,95,000 x 100
45, 45,000
= 0.90 x 100
= **90.09 %**

Result: For Management ratio lower the ratio consider as good performance. Here 90.09% ratios of the industry show moderate performance. However, industry should try to decrease it.

Table No.5.18 Assets Data of Akhileshwari Micro Minerals (AMM)**Industry for the year 2016**

Fix Assets	**Rs.**	**Rs.**
Land	12,00,000	
Building	12,00,000	
Machinery	22,00,000	
Other Instruments	2,50,000	
		48,50,000
Current Assets		
Debtors	5,00,000	
Stock	20,00,000	
Bank Balance	17,00,000	
		42,00,000
Total Assets		90,50,000
Source: Primary Data Collected		

Interpretation: The above table shows the Assets Data of Akhileshwari Micro Minerals (AMM). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the fix assets of the industry were Rs. 48,50,000 lacs with current assets of Rs. 42,00,000 and the total of both i.e. total assets were 90,50,000 Rs. In the last year. Assets Turn over Ratios & Productivity Ratios is calculated below for analysis and interpretation purpose.

Calculations of Ratios

6) Assets Turnover ratio

Formula = Net Sales X 100
Total Assets
= 45,45,000 X 100
90,50,000

= 0.50 time

Result: For Assets turnover ratio higher ratio considers as good performance. Here 0.50 times ratios of the industry show Good performance. However, industry should try to Maintain & increase it.

7) Productivity Ratios

=Output (worth of sales per year/ Net sales per year)
Input (Employees Contributions)

Calculation of Input
= 8employee x 8.5Hrs. &Avg. working Per day = 68 hrs. per day
= 68 hrs. per day x 360 days in year = 24,480 Input Hrs. per year (Employees Contributions)

$$= \frac{45,45,000}{24480}$$

= 185.66 Rs. Per hour Productivity

Result: For Productivity ratio higher ratio considers as good performance. Here 185.66Rs. Per Hour productivity ratios of the industry show good performance. However, industry should try to maintain and increase it.

Industry No. 10: Bharat Laxmi Minerals Grinding Industry (BLMGI)

Table No. 5.19. Cost Structure/ sheet of Bharat Laxmi Minerals Grinding Industry (BLMGI) **Industry for the year 2016**

	Particular	**Rs. Per ton**	**Rs. Per ton**
	Production/ Factory cost	700	
	Prime Cost		700
	Add: Office Cost	190	190
	Office and Administrative Cost		890
	Add: Selling Expenses	90	90
	Total Cost		980
	Profit	80	80
	Selling Price per ton		1060
Source: Data Collected at Primary level			

Interpretation: The above table shows the cost sheet ofBharat Laxmi Minerals Grinding Industry (BLMGI). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the prime cost was 700 Rs. Per ton, the office cost was 190 Rs per ton. the total cost of was 980 Rs. Per ton. selling price was per ton is 1060 Rs and profit earned by the industry was 80 Rs per ton with. Total production for the year 2016 was 5800 tons. Sales, Profits, Costs, Profitability Ratios & Management Ratios is calculated below for analysis and interpretation purpose.

Total Production Per year = 5800 Tons

Formula:

1) Net Sales = Total production of the year tons X Per ton selling price

5800 tons X 1060 Rs. = 61,48,000 Rs.

2) Gross profit = Total production of the year tons X Per ton profit price

5800 tons X 80 Rs. = 4,64,000 Rs.

3) Total Cost = Total production of the year tons X Per ton total cost price

5800 tons X 980 Rs. = 56,84,000 Rs.

Calculations of Ratios

4) Profitability ratio

Formula = Gross Profit X 100
Net Sales

= 4,64,000X 100
61,68,000

=0.075 x 100

= 7.52 %

Result: For profitable ratio higher ratios considers as good performance. Here 7.52% ratios of the industry show Below Average performance. However, industry should take immediately necessary step to increase it.

5) Management Ratio

Total cost x 100
Sales

= 58,84,000 x 100
61,48,000

= 0.95 x 100

= **95.70 %**

Result: For Management ratio lower the ratio consider as good performance. Here 95.70% ratios of the industry show Below Average performance. However, industry should take immediately necessary actions to decrease it.

Table No. 5.20. Assets Data of Bharat Laxmi Minerals Grinding Industry (BLMGI) **Industry for the year 2016**

Fix Assets	**Rs.**	**Rs.**
Land	18,00,000	
Building	22,00,000	
Machinery	22,00,000	
Other Instruments	3,50,000	
		65,50,000
Current Assets		
Debtors	10,00,000	
Stock	24,00,000	
Bank Balance	10,00,000	
		44,00,000
Total Assets		1,09,50,000
Source: Primary Data Collected		

Interpretation: The above table shows the Assets Data of Bharat Laxmi Minerals Grinding Industry (BLMGI). Industry was not publishing of Book, Report or any kind of secondary data material. So, the data was primarily collected through structured questionnaire. For the year 2016 the fix assets of the industry were Rs.65,50,000 lacs with current assets of Rs. 44,00,000 and the

total of both i.e. total assets were 1,09,50,000 Rs. In the last year. Assets Turn over Ratios & Productivity Ratios is calculated below for analysis and interpretation purpose.

Calculations of Ratios

6) Assets Turnover ratio

Formula = Net Sales / Total Assets

= 61,48,000 / 1,09,50,000

= 0.56 time

Result: For Assets turnover ratio higher ratio considers as good performance. Here 0.56 times ratios of the industry show Good performance. However, industry should try to Maintain &increase it.

7) Productivity Ratio

=Output (worth of sales per year/ Net sales per year) / Input(Employees Contributions)

Calculation of Input

= 8employee x 8.5Hrs Avg. working Per day = 68 hrs. per day

= 68 hrs. per day x 360 days in year = 24,480 Input Hrs. per year (Employees Contributions)

= 61,48,000 / 24,480

= 251.14 Rs. Per hour Productivity

Result: For Productivity ratio higher ratio considers as good performance. Here 251.14 Rs. Per Hour productivity ratios of the industry show good performance. However, industry should try to maintain and increase it.

Calculation of Hypotheses

Hypothesis No. 1. Profitability Ratios

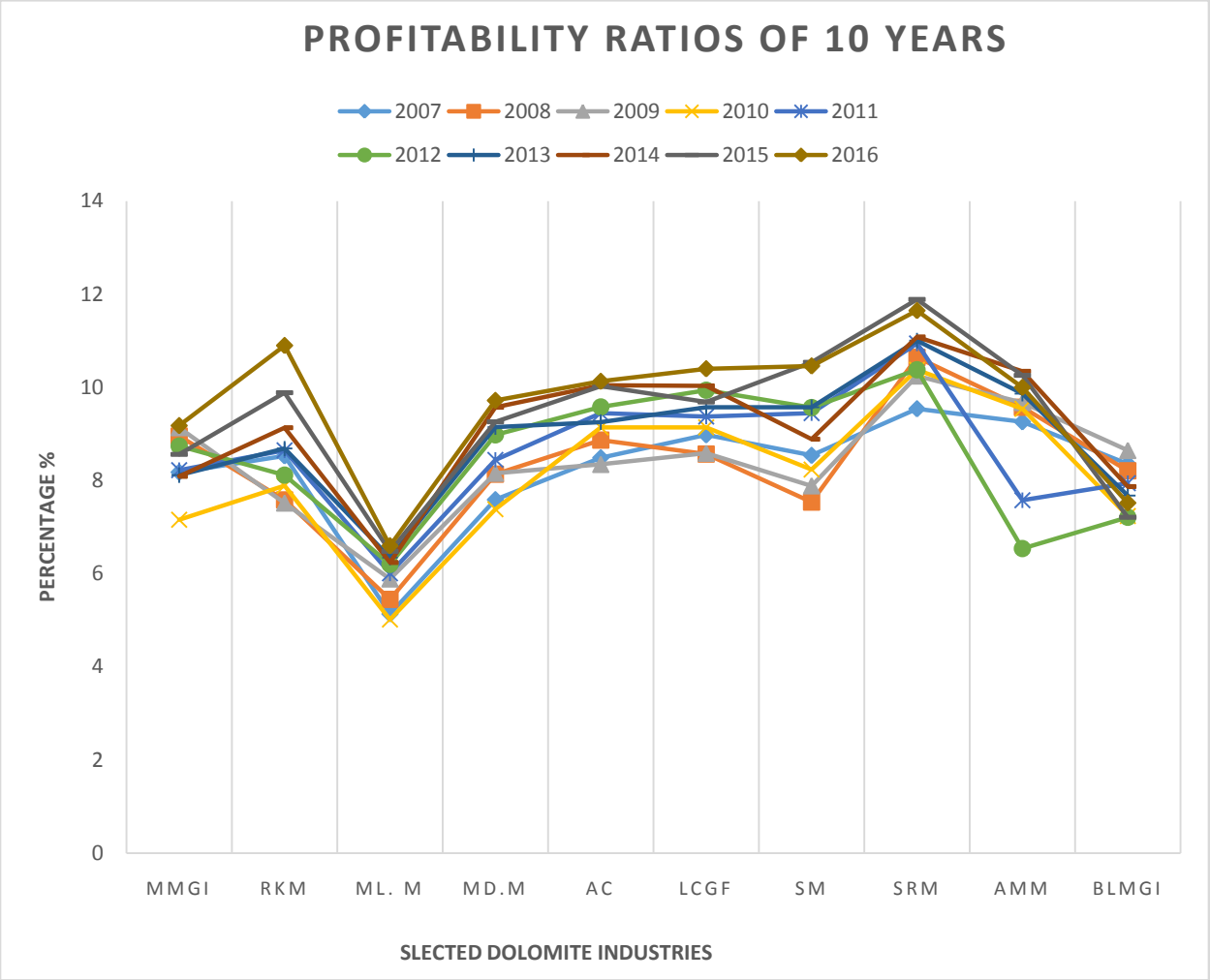
- H_0 =Dolomite industriesdo not have any significant difference in the performance of profitability ratios of last ten years.
- H_1 = Dolomite industries do have any significant difference in the performance of profitability ratios of last ten years.

Table No. 5.21. Last 10 years Profitability ratios data of Selected 10 Dolomite industries

	Profitability ratios (%)									
	Dolomite Industries (1 to 10)									
	1	2	3	4	5	6	7	8	9	10
Year	**MMGI**	**RKM**	**Ml. M**	**Md.M**	**AC**	**LCGF**	**SM**	**SRM**	**AMM**	**BLMGI**
2007	8.18	8.53	5.14	7.59	8.49	8.98	8.54	9.54	9.26	8.36
2008	8.96	7.59	5.45	8.14	8.87	8.57	7.54	10.65	9.58	8.21
2009	9.14	7.52	5.89	8.16	8.35	8.59	7.89	10.25	9.68	8.65
2010	7.16	7.89	5.02	7.39	9.14	9.14	8.24	10.38	9.54	7.24
2011	8.23	8.65	6.01	8.45	9.45	9.38	9.45	10.95	7.58	7.95
2012	8.74	8.12	6.2	8.98	9.58	9.94	9.57	10.38	6.54	7.21
2013	8.12	8.69	6.35	9.15	9.26	9.58	9.58	11.01	9.87	7.68
2014	8.09	9.14	6.24	9.58	10.05	10.04	8.89	11.09	10.35	7.87
2015	8.56	9.89	6.48	9.26	10.03	9.69	10.54	11.89	10.26	7.21
2016	9.18	10.9	6.6	9.72	10.13	10.4	10.46	11.65	10	7.52
Total	**84.36**	**86.92**	**59.38**	**86.42**	**93.35**	**94.31**	**90.7**	**107.79**	**92.66**	**77.9**
Avg.	**8.436**	**8.692**	**5.938**	**8.642**	**9.335**	**9.431**	**9.07**	**10.779**	**9.266**	**7.79**

Source: Primarily data collected

Chart No. 5.1. Last 10 years Profitability ratios data of Selected 10 Dolomite industries



Testing of Hypothesis

Mean X = 8.7379

$$X = \frac{\sum xi}{n} = \frac{87.379}{10} = 8.7379$$

Median N (n+1/2= 6th years observations) = 9.431

Mode Z = 10.779

Mode Z is considering the value of = μ = 10.77

$H_0 = \mu = 10.7$

$H_1 = \mu \neq 10.7$

xi	8.436	8.692	5.938	8.642	9.335	9.431	9.07	10.779	9.266	8.436	∑xi = 87.379
x (Mean 8.737)	8.737	8.737	8.737	8.737	8.737	8.737	8.737	8.737	8.737	8.737	
di= xi - x (Mean 8.73)	-0.301	-0.045	-2.799	-0.095	0.598	0.694	0.333	2.042	0.529	-0.94	∑di= 0.009
di^2	0.09	0.002	7.83	0.0090	0.35	0.48	0.11	4.16	0.27	0.89	$\sum di^2$ = 14.2325

∑xi = 87.379

$\sum di = 0.009$
$\sum di^2 = 14.2325$

For, t -test **Standard Deviation (S)** is to be find through following formula

$$S^2 = \frac{1}{n}\left\{\sum di^2 - \frac{(\sum di)^2}{n}\right\}$$

$$S^2 = \frac{1}{10} = \left\{14.2325 - \frac{(0.009)^2}{10}\right\}$$

$$S^2 = \frac{14.21}{10} \quad S^2 = 1.42 \quad \mathbf{S = 1.19}$$

Now, t-test formula

$$t = \frac{|x - \mu|\ n-1}{S} = \frac{|8.737-10.77|\ 10-}{1.19} = \frac{118.369}{1.19} =$$

t = 15.37

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

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

t -Calculation > t- table

15.37 2.262

t –Calculation value is higher than t- table value

Hence, H_0 = is Rejected

$H_1 = \mu \neq 10.779$

H_1 = is Accepted

(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 profitability ratios' performance of last ten years. It shows that all the selected dolomite industry had different and combination every

year as far as profit and net sales was concerned. It was very with every year. Industries should try to increase and maintain steady growth of profitability.

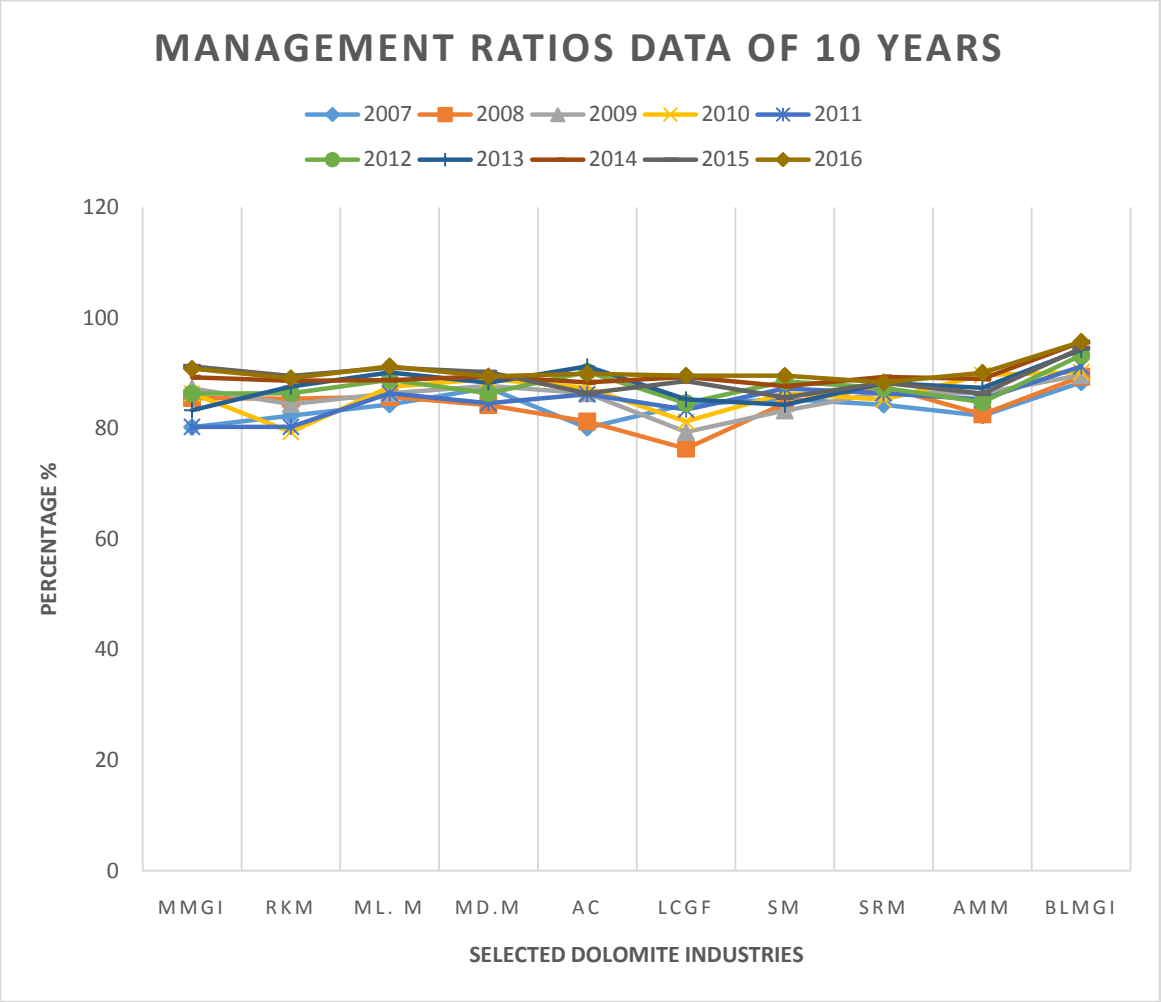
Hypothesis No. 2. Management Ratio

- 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 have any significant difference in the performance of Management ratios of last ten years.

Table No. 5.22. Last 10 years Management Ratios data of Selected 10 Dolomite industries

	Management ratios (%)									
	Dolomite Industries (1 to 10)									
	1	2	3	4	5	6	7	8	9	10
Years	**MMGI**	**RKM**	**Ml. M**	**Md.M**	**AC**	**LCGF**	**SM**	**SRM**	**AMM**	**BLMGI**
2007	80.26	82.36	84.35	87.35	80.14	84.36	85.36	84.31	82.35	88.35
2008	85.47	85.37	85.69	84.24	81.25	76.35	84.57	87.54	82.54	89.36
2009	87.24	84.39	86.34	87.65	86.35	79.35	83.24	86.54	86.34	89.64
2010	86.35	79.35	87.54	88.97	87.35	81.24	86.35	85.24	89.67	90.21
2011	80.27	80.26	86.35	84.57	86.21	83.37	87.24	86.34	85.27	91.24
2012	86.29	86.39	88.78	86.35	90.24	84.57	88.54	87.34	84.76	93.27
2013	83.29	87.59	90.12	88.31	91.25	85.24	84.25	88.24	87.34	94.26
2014	89.25	88.65	88.75	89.45	88.37	89.34	87.65	89.34	88.98	95.64
2015	91.24	89.54	91	90.21	86.38	88.57	85.64	88.29	86.31	94.56
2016	90.81	89.09	91.26	89.42	89.9	89.56	89.53	88.34	90.09	95.7
Total	**860.47**	**852.99**	**880.18**	**876.52**	**867.44**	**841.95**	**862.37**	**871.52**	**863.65**	**922.23**
Avg.	**86.047**	**85.299**	**88.018**	**87.652**	**86.744**	**84.195**	**86.237**	**87.152**	**86.365**	**92.223**
Source: Primarily Data Collected										

Chart No. 5.2. Last 10 years Management Ratios data of Selected 10 Dolomite industries



Hypothesis testing

Mean X = 86.99

$$X = \frac{\sum xi}{n} = \frac{869.9}{10} = 86.99$$

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 = μ = 92.223

$H_0 = \mu = 92.223$

$H_1 = \mu \neq 92.223$

xi	86.047	85.299	88.018	87.652	86.744	84.195	86.237	87.152	86.365	92.223	$\sum xi$ = 869.9
x (Mean 86.99)	86.99	86.99	86.99	86.99	86.99	86.99	86.99	86.99	86.99	86.99	
Di= xi - x	-0.943	-1.691	1.028	0.662	-0.246	-2.795	-0.753	0.162	-0.625	5.233	$\sum di$= 0.032
di^2	0.889	2.859	1.056	0.438	0.060	7.812	0.567	0.0262	0.390	27.38	$\sum di^2$ =41.484

$\sum xi$ = 869.9
$\sum di$= 0.032
$\sum di^2$ = 41.484

For, t -test **standard deviation (S)** is to be find through following formula

$$S^2 = \frac{1}{n}\left\{\sum di^2 - \frac{(\sum di)^2}{n}\right\}$$

$$S^2 = \frac{1}{10} = \left\{41.484 - \frac{(0.032)^2}{10}\right\}$$

$$S^2 = \frac{41.484}{10} \quad S^2 = 4.148 \quad \mathbf{S = 2.036}$$

Now, t-test formula

$$t = \frac{|x - \mu|\ n-1}{S} = \frac{|86.99-92.223|\ 10-118.369}{2.036} = \frac{}{2.036} =$$

t = 9.02
degree of freedom (d.f.) = n-1 = 10-1 = 9

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

t -Calculation > t- table

9.02 2.262

t –Calculation 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.

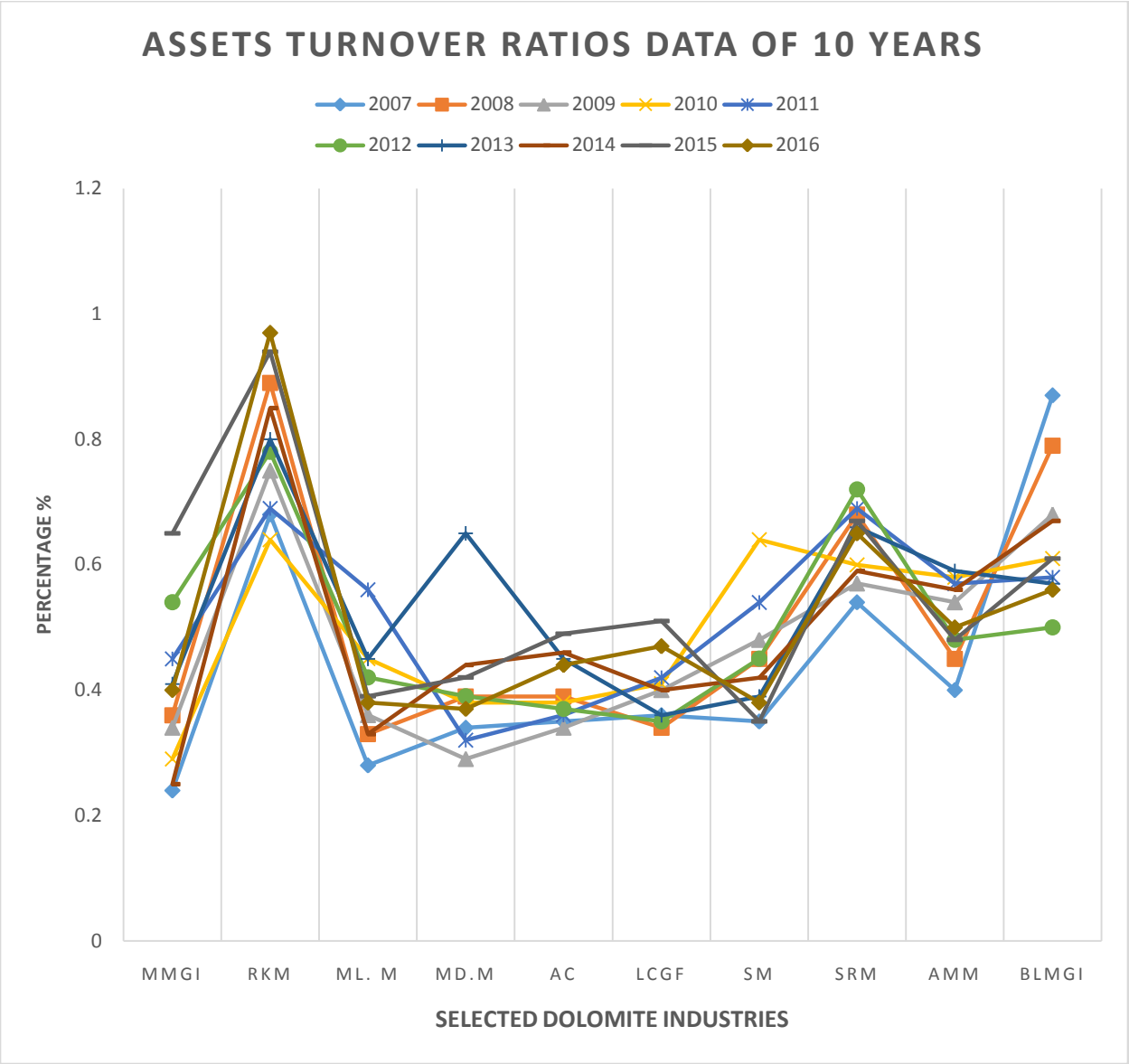
Hypothesis No. 3. Assets Turnover Ratio

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

Table No. 5.23. Last 10 years Assets Turnover Ratios data of Selected 10 Dolomite industries

	Assets Turnover ratios (%)									
	Dolomite Industries (1 to 10)									
	1	2	3	4	5	6	7	8	9	10
Years	MMGI	RKM	Ml. M	Md.M	AC	LCGF	SM	SRM	AMM	BLMGI
2007	0.24	0.68	0.28	0.34	0.35	0.36	0.35	0.54	0.4	0.87
2008	0.36	0.89	0.33	0.39	0.39	0.34	0.45	0.68	0.45	0.79
2009	0.34	0.75	0.36	0.29	0.34	0.4	0.48	0.57	0.54	0.68
2010	0.29	0.64	0.45	0.38	0.38	0.41	0.64	0.6	0.58	0.61
2011	0.45	0.69	0.56	0.32	0.36	0.42	0.54	0.69	0.57	0.58
2012	0.54	0.78	0.42	0.39	0.37	0.35	0.45	0.72	0.48	0.5
2013	0.41	0.8	0.45	0.65	0.45	0.36	0.39	0.66	0.59	0.57
2014	0.25	0.85	0.33	0.44	0.46	0.4	0.42	0.59	0.56	0.67
2015	0.65	0.94	0.39	0.42	0.49	0.51	0.35	0.67	0.48	0.61
2016	0.4	0.97	0.38	0.37	0.44	0.47	0.38	0.65	0.5	0.56
Total	3.93	7.99	3.95	3.99	4.03	4.02	4.45	6.37	5.15	6.44
Avg.	0.393	0.799	0.395	0.399	0.403	0.402	0.445	0.637	0.515	0.644
Source: Primarily Data Collected										

Chart No. 5.3. Last 10 years Assets Turnover Ratios data of Selected 10 Dolomite industries



Hypothesis testing

Mean X = 0.5032

$$X = \frac{\sum xi}{n} = \frac{5.032}{10} = 0.5032$$

Median N (n+1/2= 6th years observations) = 0.402
Mode Z (Highest or maximum time repeated value) = 0.799

Mode Z is considering the value of = $\mu = 0.799$

$H_0 = \mu = 0.799$

$H_1 = \mu \neq 0.799$

xi	0.393	0.799	0.395	0.399	0.403	0.402	0.445	0.637	0.515	0.644	∑xi =5.032
x (Mean 0.50)	0.5032	0.5032	0.5032	0.5032	0.5032	0.5032	0.5032	0.5032	0.5032	0.5032	
Di= xi - x	-0.1102	0.2958	-0.1082	-0.1042	-0.1002	-0.1012	-0.0582	0.1338	0.0118	0.1408	∑di= 2.77
di^2	0.012	0.087	0.011	0.010	0.01	0.01	0.003	0.017	0.0001	0.019	$\sum di^2$ = 0.183

∑xi =5.032
∑di= 2.77
$\sum di^2$ = 0.183

For, t -Test **Standard Deviation (S)** is to be find through following formula

$$S^2 = \frac{1}{n}\left\{\sum di^2 - \frac{(\sum di)^2}{n}\right\}$$

$$S^2 = \frac{1}{10} = \left\{0.183 - \frac{(2.77)^2}{10}\right\}$$

$$S^2 = \frac{0.577}{10} \quad S^2 = 0.0577 \quad \mathbf{S = 0.24}$$

Now, t-test formula

$$t = \frac{|x - \mu|\ n-1}{S} = \frac{|0.5032.0.799|\ 10-12.691}{0.24\quad 0.24} = 11.21$$

t = 11.21
degree of freedom (d.f.) = n-1 = 10-1 = 9

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

t -Calculation > t- table

11.21 2.262

t –Calculation value is higher than t- table value

Hence, H_0 = is Rejected

$H_1 = \mu \neq 0.799$

H_1 = is Accepted

(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 significant difference in the performance of Assets Turnover ratios of last ten years. It shows that all the selected dolomite industry had different combination and composition every year as far as Net Sales and Total Assets relation was concerned. It was very with every year. Industries should try to increase the proposition of ratios and try to increase the distance between two variables i.e. Net Sales and Total Asset. Try to increase sales in comparison of assets.

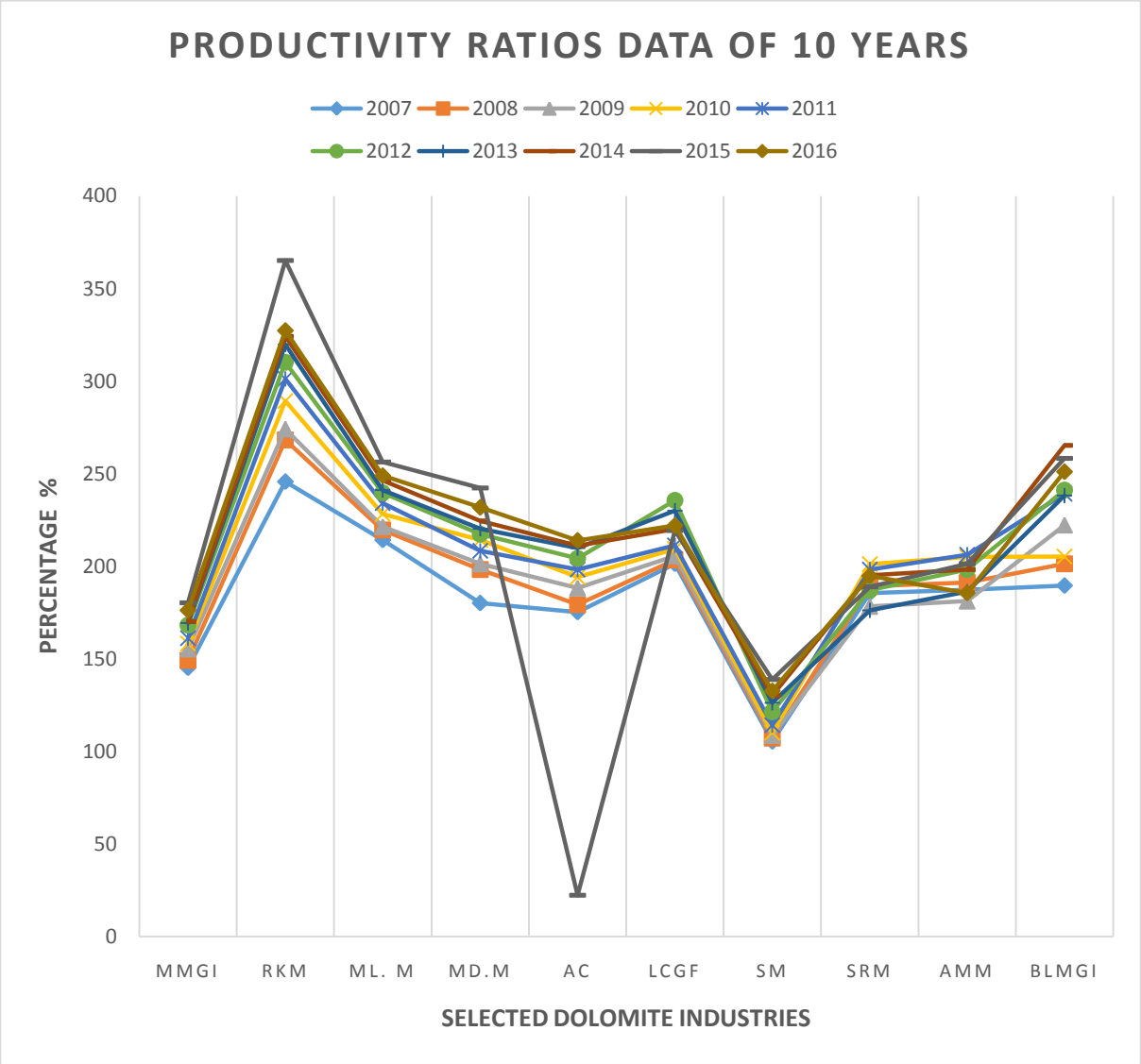
Hypothesis No. 4. ProductivityRatio

- H_0 =Dolomite industries do not have significant difference in the performance of Productivity Ratios of last ten years.
- H_1 = Dolomite industries do have significant difference in the performance of Productivity ratio of last ten years.

Table No.5.24. Last 10 years Productivity Ratios data of Selected 10 Dolomite industries

	Productivity Ratio(%)									
	Dolomite Industries (1 to 10)									
	1	2	3	4	5	6	7	8	9	10
Years	MMGI	RKM	Ml. M	Md.M	AC	LCGF	SM	SRM	AMM	BLMGI
2007	145.24	245.87	214.35	180.24	175.35	201.45	105.36	185.64	187.34	189.65
2008	149.25	268.34	219.68	198.27	179.35	203.62	107.24	189.35	191.27	201.45
2009	155.34	274.24	221.45	201.35	188.35	205.68	108.65	178.38	181.24	222.35
2010	158.34	289.35	228.36	214.36	194.24	209.34	110.24	201.24	205.24	205.36
2011	161.24	301.24	234.24	208.36	198.35	211.35	114.25	198.35	206.24	239.24
2012	168.24	310.25	239.65	217.35	204.35	235.64	121.38	187.24	198.24	241.25
2013	169.34	319.84	241.25	220.36	209.87	230.14	126.35	176.35	186.35	238.24
2014	170.28	324.24	246.35	224.54	211.24	220.14	130.25	195.24	198.35	265.35
2015	180.28	365.24	256.38	242.35	22.36	219.37	138.95	188.97	201.45	258.35
2016	176.29	327.38	248.99	231.87	214.03	222.07	132.71	194.87	185.66	251.14
Total	1633.8	3025.9	2350.7	2139.0	1797.4	2158.8	1195.3	1895.6	1941.3	2312.3
Avg.	163.38	302.59	235.07	213.90	179.74	215.88	119.53	189.56	194.13	231.23
Source: Primarily Data Collected										

Chart No. 5.4. Last 10 years Productivity Ratios data of Selected 10 Dolomite industries



Hypothesis Testing

Mean X = 204.50

$$X = \frac{\sum xi}{n} = \frac{2045.06}{10} = 204.5$$

Median N (n+1/2= 6th years observations) = 215.88
Mode Z (Highest or maximum time repeated value) = 302.59

Mode Z is considering the value of = μ = 302.59

$H_0 = \mu = 302.59$

$H_1 = \mu \neq 302.59$

xi	163.3	302.5	235.0	213.9	179.7	215.8	119.5	189.5	194.1	231.2	∑xi =2045.0
x (Mean 204.50)	204.50	204.50	204.50	204.50	204.50	204.50	204.50	204.50	204.50	204.50	
di= xi - x	-41.11	98.09	30.57	9.405	-24.75	11.38	-84.96	-14.93	-10.36	26.73	∑di= 0.064
di^2	1690.5	9623.4	934.52	88.45	612.6	129.5	7218.5	223.1	107.3	714.9	$\sum di^2$ = 21342.9

∑xi =2045.06
∑di= 0.064
$\sum di^2$ = 21342.98

For, t –test StandardDeviation (S) is to be find through following formula

$$S^2 = \frac{1}{n}\left\{\sum di^2 - \frac{(\sum di)^2}{n}\right\}$$

$$S^2 = \frac{1}{10} = \left\{21342 - \frac{(0.064)^2}{10}\right\}$$

$$S^2 = \frac{21342.98}{10} \quad S^2 = 2134.29 \quad \mathbf{S = 46.19}$$

Now, t-test formula

$$t = \frac{|x - \mu|\ n-1}{S} = \frac{|204.50-302.59|\ 10-1\ 882.81}{46.19\ 46.19} = \frac{}{} = 78.75$$

t = 78.75
degree of freedom (d.f.) = n-1 = 10-1 = 9

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

t -Calculation > t- table

78.75 2.262

t –Calculation value is higher than t- table value

Hence, H_0 = is Rejected

$H_1 = \mu \neq 302.59$

H_1 = is Accepted

(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 significant difference in the performance of Productivity ratio of last ten years. It shows that all the selected dolomite industry had different combination and composition every year as far as Output (worth of sales per year/ Net sales per year) and Input (Employees Contributions) relation was concerned. It was very with every year. Industries should try to increase the proposition of ratios and try to increase the distance between two variables i.e. output and input. Try to increase output performance in comparison of input.

Chapter No. 6

CONCLUSION

CHAPTER NO. - 6

CONCLUSION

Conclusion:

Researcher covered two points in this chapter from the study. The first point 6.1. related to findings which covers results of all hypotheses tested and what kind of practices, procedure, and methods dolomite industry should implement for the advancement of their business. The second point 6.2. focuses on Suggestions for the betterment of dolomite industries, what are the problems of workers, owners, lease holders, suppliers, threat from the competitors. Expectation of these industry peoples seeking from the Government. And role of industry towards the society. Following is given details for the same.

6.1. Findings: -

1. Researcher had found that Average profitability ratios of selected dolomite industries of last ten years was between 7.79 to 10.77 percentage. For every business profitability is prime motive and these profitability ratios shows moderate performance of industries in compare to other tiny industries. Many tiny industries have 20 to 30 percentage Average profitability ratios. Moreover, from the result of hypothesis testing indicates that dolomite industries do have significant difference in profitability ratios' performance in the last ten years. It shows that all the selected dolomite industry had different and arrangement of sales and profit relations every year. Industries should try to increase and maintain steady growth of profitability.
2. 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.

3. Researcher had found that the Average Assets Turnover ratios of selected dolomite industries of last ten years was between 0.39 to 0.79 percentage. Its shows The Total Assets Turnover Ratio measures how productively the firm is managing all of its assets to generate Sales. This ratio is calculated by dividing Sales by Total Assets. These ratios infect consider good performance for the industries. Moreover, from the result of hypothesis testing indicates that Dolomite industries do have significant difference in the performance of Assets Turnover ratios of last ten years. It shows that all the selected dolomite industry had different mixture and composition of Net Sales and Total Assets relation. Industries should try to increase the proposition of ratios and try to increase the distance between two variables i.e. Net Sales and Total Assets. Try to increase sales in comparison of assets.
4. Researcher had found that the Average Productivity ratios of selected dolomite industries of last ten years was between 163.3 to 302.5 percentage. Productivity simply refers to the measurement of how efficient a company's production process is. Managers use these productivity measurements so they can determine which departments, plants or workers are most efficient and how to maximize usage of the company's resources to attain an optimum level of production and higher sales or revenue. This measurement takes into consideration the input and the output involved in the production process. Here, for this study output (Net sales per year) and Input (Employees Contributions) relation is assessed. This ratio shows good performance for the industries. Moreover, from the result of hypothesis testing indicates that Dolomite industries do have significant difference in the performance of Productivity ratio of last ten years. It shows that all the selected dolomite industry had different mixture and structure of Output (worth of sales per year/ Net sales per year) and Input (Employees Contributions) relation every year. Industries should try to increase the proposition of ratios and try to increase the gap between two variables i.e. output and input. Try to increase output performance in comparison of input.

6.2. Suggestions:

Suggestions for dolomite Industries is divide in to four part parts the first part is related to society. In this part suggestion is given for the betterment of society and what could have done better for them is given here. Secondly suggestions are given for economic development and growth. In this point how dolomite industries could contribute, accelerate the growth of economy and over all development the tribal development. The third point is related to the Employees/ Labor of the Dolomite Industries. In this point various suggestions are given related to betterment and benefits of the employees are seeking and deserving. And the last point is based on owner of the dolomite industries. What kind of contribution they should initiate for the industries? How the Government and other benefits provided to them for the growth of the industries?

For Society

- To create more and more opportunity through new ways and means of various industries establishment in tribal area of Chhota Udaipur District.
- To create special cell, campaigning and special drive which provide information regarding earning and job related information to tribal and backward people.
- Give priority in various job tribal people in this area including private and Government both jobs.
- If more and more earning opportunity creates may led to reducing thieves' activity, robbery activity and bad activities etc.
- To take initiative by local bodies like Taluka Panchayat, Zilla panchayat, Nagar Palika, Gram panchayat and NGOs to develop this tribal District.
- To reduce or stop child labor works in this area.
- To provide more facility in educations for the development of the Area.
- To aware tribal people regarding their rights.
- Need of Plantation work in this area.
- To establish "Sahkari Madali" (Co-Operative Federations) for tribal development.
- Provide training to tribal people for to be an entrepreneur and imparting skill of it.

For Economic Development

- To establish more and more dolomite industries in this area

- More liberalization given to dolomite industry by the Government in implication of various rules and regulations.
- Dolomite industries should try to improve the quality of its final products.
- To induct new technology in dolomite industry
- More benefits, schemes, promotions offer given to dolomite industry by the District Industry centers, Village industries centers, Cottage industries, GIDC, SIDBI, NABARD, etc.

For employees/ Labor of Dolomite Industries

- Employees working on contract basis make them permanent.
- Insurance facilities not given to Employees. Dolomite industry must provide them insurance facility.
- Less facility provided to employees. Instead provide them facility like Health, food, safety, etc.
- Wages rate not given to the employees as per government rules.
- Labor court should start in this district.
- All the labor must get all the benefits according to labor law.
- For the protection of forest of this district labor should take initiative of plantations.
- Resident facility should provide by the industries owner to employee.

For the owner of Dolomite Industries

- Owner of the dolomite industry should help in public works such as construction of building of schools, hospital, water tank etc.
- Government should provide subsidy to dolomite industries owner
- Latest machinery and technological development required
- GIDC should be develop in the district.
- Tax benefit should be given by the government
- Government should develop and established dolomite research Centre
- To establish industries in this district which are use dolomite powder as raw material in their final product. Such as chemical, talcum powder, washing powder, soap, plastic, tiles making, color, glass factory etc.

- Banks should provide more overdraft and loan facility to the owner of dolomite industry.
- To set uniform price of dolomite powder. Presently, different price rate is applicable as per industry as per villages and as per the mines.
- Allotments of mines lease to owner of dolomite industries.
- Set up industrial area with all amenities near to dolomite mines. So transportations cost reduce.
- Startup grants/ seed grants are to be given to the new established dolomite industries.
- Railway facility also is provided for transportation work.

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