

## FACTORS INFLUENCING PRIVATE ENTREPRENEURS TO INVEST IN CEMENT MANUFACTURING UNITS WITH SPECIAL REFERENCE TO GRINDING AND BLENDING UNITS IN SOUTH INDIA

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### ABSTRACT:

Cement Industry is one of the largest industries of the world and occupies the position of second largest cement manufacturer in the world next to china. Cement industry serves as one of the basic industries for development and its employment generation capacity. Hence this research focuses on recognizing the factors that influence private entrepreneurs towards investment in cement manufacturing units, especially in grinding and blending units in south India. A structured questionnaire was used to procure primary data from 150 respondents and the reliability of the questionnaire has been tested using Cronbach's alpha test. Factor analysis was used to decide the principal factors and the number of dimensions that exist in the set of factors influencing private investors to invest in cement manufacturing units. Six principal factors were extracted using factor analysis, which showed that factors of production and economic factors are considered for the larger percentage of variance. This study showed that investors give more importance to economic factors and production factors rather than Possessing industrial status, providing huge employment opportunities and environmental protection which were given least importance while investing in cement manufacturing units.

**KEY WORDS:** Factor analysis, Investment, Grinding and blending units

### INTRODUCTION:

The common cement or Portland cement was prepared and Patented by **Joseph Aspdin** in 1824. During the later part of the 19<sup>th</sup> century, Production of cement was carried out by many countries, many years after the first patent was taken by Aspdin in England. India stepped into the Cement Era in 1914, when the Indian Cement Company Ltd. started producing Cement in Porbundar in Gujarat. Nevertheless, even before that a small cement factory was incorporated in Madras in 1904 by a company named South India Industrial Ltd.

Indian Cement Company Ltd manufactured only one type of cement which was designed by the British standing committee as "Artificial Portland Cement". This company promoted its product in Mumbai, Karachi, Madras and other parts and became a financial success. At that time India had to import cement from England. The price of the imported cement was higher. Many other factors such as an increase in domestic demand, reduction in supply from abroad (due to war), availability of Indian Capital, ample raw material, Cheap labor, support of the government etc. made it a leading industry in India in a short span of time. Later on two more cement units in Rajasthan and Madhya Pradesh was started.

During the First World War period control of all these industries was taken by the government. In 1948, many expansion schemes were introduced to increase the production.

In 1950-51, many operating units established with an installed capacity of 3.3 million tons. During the first five year plan it was targeted to raise the production capacity to 5.4 million tons and it was achieved. Next it has planned to increase the capacity of 100 million tons during the 11<sup>th</sup> five year plan. Presently the Cement production hit 329 million tones (MT) in FY20 and is expected to touch 381 MT by FY22. The consumption also stood at 327 MT in FY20 and estimated to reach 379 MT by FY22. The production of cement capacity is expected to touch 550 MT by 2020. The Indian cement industry is controlled by a few companies. The top 20 cement companies account for almost 70 per cent of the total cement production in the country. 210 large cement plants in India together accounts for a total installed capacity of over 410 MT, with 350 small plants accounting for the rest. Of these 210 large cement plants, 77 are in the states of Andhra Pradesh, Rajasthan and Tamil Nadu. Owing to the growing demand in several sectors such as housing, commercial construction and industrial construction, cement industry is expected to reach 550-600 million tonnes per annum (MTPA) by the year 2025.

#### REVIEW OF LITERATURE:

**Sowmya. J.Mounika Reddy (2016)** has conducted their survey on the topic “A study on Investor’s perception towards investment avenues. The objective of the study is to explore investor’s perception towards investment in various investment avenues. The researcher has carried out the study with the sample size of 200 investors in Hyderabad city of Telangana. Both primary and secondary sources of data have been applied. Primary data has been collected through structured questionnaire and Secondary data has been collected from 10 investors of stock broking agencies. The Simple random technique has been adopted. Data analysis has been done using Descriptive statistics. The study concluded that investor preferring to invest in bank deposit shows higher likelihood to make their investment avenues than higher risk.

**Anitha, D.Phani Bhargavi (2014)** carried out their research to know the preference and analyze the significance of demographic factors that influence the investor decision towards making investments. Primary data have been accumulated using structured questionnaire and distributed to 128 respondents. In their research they considered investment behavior in a risky situation as dependent variable and demographic factors such as age gender and education as independent variable. For data analysis Pearson’s Chi square test has been employed. From the study it was found that there is a significant relationship between risk and investment decision. The study revealed that the old age investor has more risk perception and young people have low risk perception. Similarly, female have a less risk preference when compared to male.

**Raju and Anita Patra (2016)** has made an attempt to study on Investor’s Attitude towards Investment in Equity Stocks with Reference to East Godavari, West Godavari & Vijayawada Districts of Andhra Pradesh. The Random sampling technique has been applied for gathering the data from investors. The investors were selected by the random sampling method. The sample size taken for the study covers about 600 investors covering three Districts in Andhra Pradesh. 200 investors were selected from each district. Ten approved stock Brockings had been selected and twenty investors had contacted with the help of stock brokers. The period of a study spanned from January 2015 to December 2016. The data collected is arranged and described using tables and percentages. Descriptive statistics and Chi-square test has been used for data analysis. Out of the total 22 variables, it is found out that five factors had very high influence over the investor’s attitude towards investing in equity stocks earnings ratio and therefore this study has revealed that the factors had very high influence over the retail investor’s attitude towards investing in equity stocks.

**Chellasamy & Prema (2018)** explored the factors that influencing the Capital Structure of select Pharmaceutical companies using multiple regression analysis and the study concluded that the Profitability is the most important factor which influences the determinants of Capital Structure.

#### **STATEMENT OF THE PROBLEM:**

The growth in Indian manufacturing sector is a key for the country's growth. . The variations in regional demand and supply situation brought a tremendous change in price level and grant power to the leading large cement manufacturers to control the price policy. Today, the cement industry accounts for 7% of the world's total carbon dioxide emissions. Due to ongoing urbanization and growth developments, demand for cement increases. Hence as a part of new solutions to produce cement in a more eco- friendly manner and also in order to meet the growing willingness of society and industries, many investors have chosen grinding and blending cement units as a good choice. So this paper attempts to find out each and every factors that influence the Private entrepreneurs to invest in Grinding and blending cement units in South India and to prove how it is ultimately beneficial for our country's prosperity.

#### **OBJECTIVE:**

1. To analyze the factors influencing Private entrepreneurs towards investment in the Cement manufacturing sector, especially in Grinding and Blending units.

#### **RESEARCH METHODOLOGY:**

##### **Sources of data:**

Primary data were collected through a structured questionnaire. The respondents selected for this study were private entrepreneurs who invested in cement manufacturing units, especially under grinding and blending units in south India. The survey was conducted in five states Andhra Pradesh, Telangana, Karnataka, Tamil Nadu and Kerala. The list of investors have been taken from the BIS website which includes investors invested in private limited company, partnership firm and proprietorship firm. Questionnaires were sent to investors through the mail. Respondents were requested to assess the significance of twenty six variables. Among twenty six variables ten variables had been taken from the review of literature and remaining 16 variables has been selected by conducting Pilot study with the involvement of 30 investors who were experts and have great experience in this field along with the academicians and they guided me to add few more variables. The variables were expressed as close-ended questions measured on a five-point Likert-like scale which ranked from 1 (strongly disagree) to 5 (strongly agree).

##### **Statistical tools used:**

SPSS software has been used for statistical analysis. Factor analysis was applied to determine the principal factors and the number of dimensions that exist in the set of factors influencing private investors to invest in cement manufacturing units. By this method similar variables were grouped into dimensions. To determine whether the 26 variables are considered relevant for factor analysis, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were calculated. The data are appropriate for factor analysis if the KMO value is above 0.8. **KMO** return values should be between 0 and 1. The thumb rule for interpreting the statistic is if **KMO** values stand between 0.8 and 1 then it indicate the sampling is adequate and if **KMO** values less than 0.6 then it indicate that the sampling is not adequate and the necessary steps has to be taken to increase the sample size.

**Limitation of the study:**

1. The Study is confined to only 150 investors and the authenticity of the study depends upon the true and frank statement disclosed by the investors.
2. The Study used only some factors to analyze the factors influencing private entrepreneurs towards investment in cement manufacturing units.
3. The survey is conducted only in south India.
4. The study also has restrictions on time, place and resources.

**Results and Discussions:**

**Table: 1 Cronbach’s Alpha Test**

Cronbach’s alpha	Cronbach’s alpha based on standardized items	N of items
.854	.860	26

**Table 1** explores the reliability of the questionnaire has been tested using Cronbach’s alpha. The Cronbach’s alpha coefficient was used to measure the internal consistency of factors in each group. In this study overall principal factors had Cronbach’s alpha above 0.85 and individually it has above 0.50. The value of the reliability statistics was .854 which means 85 per cent and this is greater than 60 per cent.

Factor analysis was employed to determine the principal factors and the number of dimensions of the factors influencing Private entrepreneurs towards Investment in the cement manufacturing sector.

**Table :2 KMO and Bartlett’s Test**

Kaiser-Meyer-Olkin Adequacy.	Measure of Sampling	.803
Bartlett’s Sphericity	Test of Approx. Chi-Square	1556.690
	df	325
	Sig.	.000

**Source: SPSS Output**

**Table 2** shows the result of the KMO and Bartlett’s test carried out to determine the appropriateness of the variables for factor analysis. The table shows a KMO value of 0.803 which is above the recommended value of 0.5 which implies that factor analysis is suitable for the data. The Chi-square value of 1556.690 obtained for Bartlett’s test was highly significant at 0.000 and strongly allows for the appropriateness of using factor analysis of the data. In order to extract the number of the principal factors from the 26 variables under the method of principal component analysis, Eigen values greater than one rule were taken.

**Factor analysis** is a method that is used to reduce a large number of variables into fewer numbers of factors. This method extracts maximum common variance from all variables and puts them into a common score. As an indicator of all variables, we can apply this score for further analysis. Factor analysis is part of the general linear model (GLM) and this method also assumes several assumptions: there is a linear relationship, there is no multicollinearity, it includes relevant variables into analysis, and there is a true correlation between variables and factors.

Principal common analysis is the most common method used by researchers. PCA starts extracting the maximum variance and puts them into the first factor. After that, it eliminates that variance explained by the first factors and then starts extracting maximum variance for the second factor. This process goes to the last factor. Factor loading is basically the correlation coefficient for the variable and factor. Factor loading shows the variance explained by the variable on that particular factor. In the SEM approach, as a rule of thumb, 0.7 or higher factor loading represents that the factor extracts sufficient variables from that variable.

**Eigenvalues:**

Eigenvalues are also called characteristic roots. Eigenvalues show variance explained by that particular factor out of the total variance. From the commonality column, we can know how much variance is explained by the first factor out of the total variance. For example, if our first factor explains 68 per cent variance out of the total, this means that 32 per cent variance will be explained by the other factor.

**Criteria for determining the number of factors:**

According to the Kaiser Criterion, Eigen values are a good criterion for determining a factor. If Eigenvalues are greater than one, we should consider that a factor and if Eigenvalues is less than one, then we should not consider that a factor.

**Table: 3 Result of factor analysis**

PRINCIPAL FACTOR	FACTOR LOADING	EIGEN VALUE	% OF VARIANCE	CRONBACH'S ALPHA
FACTORS OF PRODUCTION		6.175	23.74	.780
AVAILABILITY OF LABOR	.782			
AVAILABILITY OF LAND	.690			
AVAILABILITY OF RAW MATERIALS	.717			
ACCESSIBILITY OF TRANSPORT FACILITIES	.667			
AVAILABILITY OF FINANCE FACILITIES	.629			

<b>ECONOMICAL FACTORS</b>				
INCREASE IN THE SIZE OF POPULATION	.757	3.266	12.56	.580
INCREASE IN THE CONSUMPTION GROWTH	.653			
EASY AVAILABILITY OF MARKET INFORMATION	.638			
SUUPPLY OF QUALITY CEMENT AT AFFORDABLE PRICE	.629			
PRICE FLUCTUATIONS IN BRANDED CEMENTS	.721			
<b>FINANCIAL FACTORS</b>		<b>2.188</b>	<b>8.41</b>	<b>.525</b>
PROFITABILITY	.522			
WEALTH MAXIMIZATION	.582			
ATTRACTION OF MINIMUM INVESTMENT	.550			
PREDICTION IN INCREEMENT IN SHARE VALUE	.583			
MODERATE RISK IS INVOLVED	.552			
EXPECTED RATE OF RETURN OBTAINED	.497			
<b>PSYCHOLOGICAL FACTORS</b>		1.742	6.70	.614
MINIMUM INVESTORS PROVIDE TRANSPARENCY AMONG CO INVESTORS	.653			
MAINTENANCE OF GOOD RELATIOSHIP AMONG CONSUMERS	.629			

EXPERIENCE, KNOWLEDGE AND SELF CONFIDENCE OF THE PROMOTERS	.582			
<b>GOVERNMENT FACTORS</b>		1.341	5.15	.530
CENTRALISATION PROCEDURE FOR INDUSTRIAL REGISTRATION	.757			
GOVERNMENT INITIATIVES TO BOOST UP CEMENT SECTOR	.614			
<b>SOCIAL FACTORS</b>		1.257	4.83	.591
ENVIRONMENTAL PROTECTION	.686			
PROVIDING HUGE EMPLOYMENT OPPURTUNITIES	.630			
POSSESSING INDUSTRIAL STATUS IN THE SOCIETY	.721			

Varimax rotation together with Kaiser Criterion was used to classify and reduce the factors to interpretable components. A total of 6 components was extracted from the variables which explain 61.88 percent of total variance. All variables with factor loading of 0.5 and above were maintained. Thus, only two variables dealers network within the state and Gain good company reputation with a factor loading of 0.472 and 0.423 was ignored.

**In table: 3**, Factor 1 was identified as 'Factors of production' with 5 variables and it was accounted for 23.74 percent of total variance. The second principal factor identified was economic factors with 5 variables and it accounted for 12.56 percent of total variance. Factor 3 includes 6 items and recognized as financial factors and it is accounted for 8.41 percent out of total variance. The three items in Factor 4 were recognized as 'Psychological factors and accounted for 6.70 percent of total variance. Factor 5 comprised of two items and recognized as government factors and it is accounted for 5.15 percent of the total variance and last factor was identified as social factor which comprised of 3 items and it accounts for 4.83 percent of total variance.

#### **CONCLUSION:**

From the result it was found that, Six principal factors were extracted using factor analysis, which showed that factors of production and economic factors are considered for the larger percentage of variance. This research has proved that investors give priority to economic

factors and production factors instead of Possessing industrial status, providing huge employment opportunities and environmental protection which were given minimum importance while investing in cement manufacturing units.

Thus, government and policy makers together should come forward to provide appropriate information and guidance at right time to the investors to make investment. More importantly, the Government should take initiatives to provide more favorable environment for entrepreneurial growth and development. This will encourage greater participation by the Private sector in the development of the economy and increase the confidence in the minds of young entrepreneurs to invest in cement sector to create a sparkling entrepreneurial society through eco-friendly and sustainable economic growth with the creation of huge employment opportunities. This will also ensure higher incomes for the people, which will again flow into the market and encourage even greater production and brings tremendous growth in state development.

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