

# An Analysis of Factors Responsible in Making Retailer for Selection of a Cement Brand and Further Expectation from Cement Companies for Competitive Marketing of Cement

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**Abstract-** In India, there are multiple cement brands available in the market which makes the brands selection a difficult process. The project focuses on studying the major factors retailer consider important compare to other factors in selecting cement for their retail business. This will give an insight into the market and try to identify the major product features and services expected by the retailer from the cement companies. Exploratory research was done initially with sample size 10 which include individual home builder, masons, engineer/architect, contractors, builders and dealer to get an insight into the product features and services they are aware off and the variables that influence the selection of cement. The questionnaire listing various factors affecting their selection process was further modified and administered with a sample of 100 retailers.

Further, the author applied factor analysis to summarize the major factors that influenced decision making process using SPSS software.

**Index Terms-** Cement, channel, influencers, product features, services, retailer etc.

- To explore the cement product features that a retailer looks upon
- To explore the services that a retailer looks upon during selection process of cement.

To factorize various cement product features and services provided as perceived by retailer. Based on those factors suggest suitable measures to improve the penetration rate to various retailer segment through specific promotion campaigns which will help in offering differentiated product.

To summarize the effort, the first and second objectives involve exploring and involve reviewing the literature related to cement selection process and cement product features/services. The third part involves research design, data analysis and major interpretation of the results from a survey questionnaire administered to the respondents. Finally the analysis of the research findings, the marketing implications and inferences and limitation of the study presented and general conclusions are drawn.

## I. INTRODUCTION

Various cement companies in West Bengal (ACC, Ambuja, Ultratech, Lafarge, Jaypee, Konark, Rashmi) claim to produce cement as per grade of BIS standards which are 33, 43 and 53 grade cement, so there is hardly any scope for differentiation in product of various cement companies and even they market cement and attempt to prove that they are different and better than other cement manufacturer quality wise. The multiple brands available in the market make the brands selection a difficult process.

As majority of customer lack basic understanding regarding technical aspect of cement, it becomes a highly difficult task to convince the customer about the superiority of any particular brand over other brands.

So there is a need to identify and understand the retailer behavior in selecting cement on basis of present product features and services being offered, and their further needs and services expected by them which will help them in offering differentiated product to the end customer.

### 1.1 Objective of this research

The Study attempts to cover the following areas:

## II. LITERATURE SURVEY

Doyle P (2002) in his book ‘Marketing Management and Strategy’, states that a market consists of customers with similar needs. But customer in market is never homogenous. They differ in the benefits they wanted. Very few products or services can satisfy all the customers in a market. Not all the customers want or are prepared to pay for the same thing.

Jobber, D (2007) states the objective is to identify groups of customers with similar requirements so that they can be served effectively while being of sufficient size for the products or services to be supplied sufficiently.

Jobber, D (2007) explains briefly that creating a differential advantage involves using a marketing mix to create something special for the customer. Jobber presents four keys to successful positioning: a) Clarity: b) Consistency: c) Credibility: d) Competitiveness.

Perceived quality of a Brand is the customer’s judgment about a product’s overall excellence or superiority that is different from objective quality (Zeithaml 1988, pp. 3 and 4). Objective quality refers to the technical, measurable and verifiable nature of products/services, processes and quality controls. Since it’s impossible for consumers to make complete and correct judgments of the objective quality, they use, quality

attributes that they associate Zeithaml 1988, Hence perceived quality is formed to judge the overall quality of a product/service.

**The Five stages of the buying decision process** were first introduced by John Dewey (1910). The stages are:

1. Problem/Need Recognition
2. Information Search
3. Evaluation of Alternatives
4. Purchase Decision
5. Post-Purchase Behavior

Zeithaml, A, Pasuraman, A., Berry, L. (1990). Delivering Quality Service: Balancing Customer Perceptions and Expectations. New York: The Free Press Division of Macmillan, Inc. Zeithaml, et.al. found that a "Service Performance Gap" occurred when employees were unable or unwilling to perform the service at the desired level.

According to Porter, E Michael. (1998). on competitive advantage: creating and sustaining superior performance a firm can choose a competitive advantage by following one of the three Generic competitive strategies: a) Cost leadership b) Product differentiation c) Focus -Market segmentation.

### III. RESEARCH DESIGN AND DATA ANALYSIS

On what basis retailer select cement? How product features and services are important for retailer during selection of cement.

At the first stage, author made an extensive search in review of current literature such as working papers, research, and newspaper and magazine articles with a view to identify the common basic product features of cement and services searched across dealer or retailer segment and examining the strategic importance of their preferences towards certain factors for selection of particular cement.

Exploratory research was done on the basis of a questionnaire with a sample size of 10 which include dealer/retailer, buying process and the variables that influence the selection of cement.

The questionnaire listing various factors affecting their selection process was further modified and administered with a sample size of 100 retailers.

Interestingly in case of cement retailer, they select more than the physical product. Retailer go an augmented product which include easy availability, credit terms, timely delivery, originality of cement bags, site related technical service and complaint handling. So when it is difficult to differentiate physical product, superior augmentation of a cement brand, can add substantial value in the eyes of the retailer.

The study is both exploratory and descriptive in nature based on secondary data as well as primary data. Exploratory research was conducted through pilot interview to identify the major factors responsible for the select decision for the third objective of this research.

Data that will be collected throughout this study is expected to be mainly of a qualitative nature. Two valuable source of

evidence are documentation and interview. Documents could be either internal like management reports, market research journal. First data collection from Secondary sources: The secondary data was collected from the company and the company's website. Data collection from primary source includes retail stores to get an insight into the cement industry and current trends in the industry. Face to Face interview and documentation are used as main data collection methods for this study. First systematic random sampling was adopted from a list of dealer/retailer. To begin with the respondents were asked to rate the product features/ services in a 5-point Likert Scale is used. Where 1-Strongly disagree and 5-Strongly agree. Study attempt to cover 10 districts/districts town of West Bengal namely viz. Kolkata(Cossipore, Kalighat) Howrah(shalimar), Midnapore, Malda, Siliguri, Nadia(Krishnanagar), Murshidabad(Beharmpore) Burdwan, Bankura, Birbhum(Sainthia). Fifteen product features and nineteen services were listed for popular cement brands.

### 3.1 DATA REDUCTION BY FACTOR ANALYSIS

Applying the concept of principal component and the varimax procedure to get an appropriate result of factor analysis.

The construct validity is determined through the factor analysis in which the KMO index of sampling adequacy is above 0.60 and Bartlett's test of sphericity is .000 (sig) which is significant at 5% level. The construct validity proves that questionnaire constructed is valid and can proceed for factor analysis. The author adopted Bartlett's test of Sphericity and KMO measure of sampling adequacy mainly to establish the reliability and scientific validity of the data and technique opted for the purpose of the study for further analysis. Bartlett's test of Sphericity indicates whether correlation matrix under review is an identity matrix, which would indicate that variables chosen for the purpose of the study are unrelated. Values (less than 0.05) indicate that there are probably significant relationships among the chosen variables.

The communality is measured which helps in finding the amount of variance that the variable shares with the other variables, which in turn, gives the proportion of variance explained by the common factors.

### 3.2 PRODUCT FEATURES

From exploratory survey there are variables namely reasonable price w.r.t to other brands, Good reputation of the brand through word of mouth from other users/ widely used, freshness, fineness, absence of adulteration in cement/good quality, shelf life, strength consideration, colour of cement, packaging, durability, Low setting time, consistency in performance across season, curing time and effort, crack reduction, sales and customer service support which influence the decision making of the cement retailer.

#### 3.2.1 EMPIRICAL RESULT FOR CEMENT RETAILER:

In the reliability test of the variables, the cronbach alpha coefficient is found to be .818 in Table 1, which is accepted.

**TABLE 1**  
**Reliability Coefficients**

Reliability statistics

Cronbach's Alpha	N of Items
.818	15

In Table 2 Kaiser-Meyer-Olkin measure of sampling adequacy gives the value of .671 which indicates that the factors selected is ideal for factor analysis and Bartlett's test of Sphericity indicates that at 105 degrees of freedom (df) Chi-Square values for the factors derived are highly significant.

**TABLE 2: KMO and Bartlett's Test:**

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.671
Bartlett's Test of Sphericity	Approx. Chi-Square	720.752
	df	105
	Sig.	.000

Communality,  $h^2$ , is the *squared multiple correlation* for the variable as dependent using the factors as predictors. The communality measures the percent of variance in a given variable explained by all the factors jointly and may be interpreted as the *reliability of the indicator*.

**TABLE 3:**

**Communalities**

	Initial	Extraction
PRICE	1.000	.792
REPUTAT	1.000	.682
FRESHNES	1.000	.770
FINENESS	1.000	.821
UNADULTE	1.000	.725
LIFE	1.000	.703
STRENGTH	1.000	.680
COLOUR	1.000	.761
PACKAGIN	1.000	.699
DURABILT	1.000	.781
SET.TIME	1.000	.753
CONSIG	1.000	.717
CUTIME	1.000	.636
CRACKRED	1.000	.581
SERVICE	1.000	.544

Extraction Method: Principal Component Analysis.

In this experiment, the extracted factors explain over 82% of preferences for fineness but only 54% for services. In general, communalities show for which measured variables the factor analysis is working best and least well. As shown in Table 4, the first six components accounted for 78.214 % of the total variance, further does not change after rotation. Further, principal components' extraction, these values will be the same as those reported under initial Eigen values.

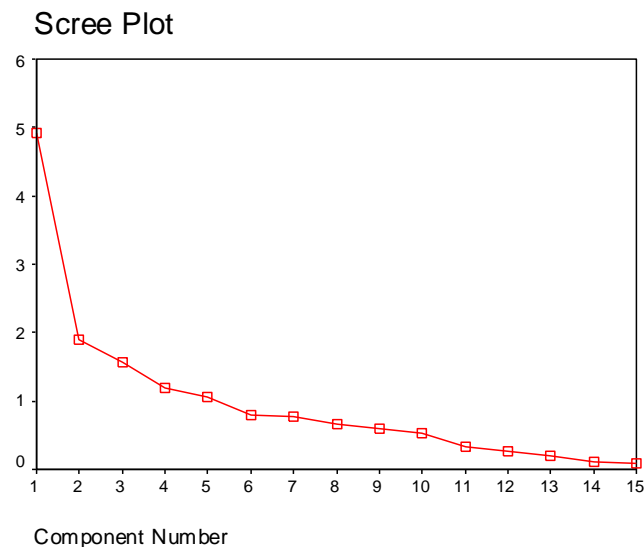
**TABLE 4: TOTAL VARIANCE EXPLAINED**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	4.915	32.768	32.768	4.915	32.768	32.768	2.872	19.144
2	1.904	12.691	45.458	1.904	12.691	45.458	2.618	17.455	36.599
3	1.575	10.500	55.959	1.575	10.500	55.959	1.794	11.962	48.560
4	1.185	7.902	63.861	1.185	7.902	63.861	1.772	11.814	60.375
5	1.066	7.109	70.970	1.066	7.109	70.970	1.589	10.595	70.970
6	.793	5.285	76.255						
7	.778	5.188	81.443						
8	.663	4.420	85.863						
9	.589	3.927	89.791						
10	.538	3.583	93.374						
11	.322	2.147	95.521						
12	.273	1.819	97.341						
13	.207	1.380	98.720						
14	.104	.692	99.413						
15	8.812E-02	.587	100.000						

Extraction Method: Principal Component Analysis.

In this factor analysis, the first 5 components recorded Eigen value above 1 (4.915, 1.904, 1.575, 1.185 and 1.066).

**Figure 1: Scree Plot**



**Rotated Component Matrix**

Rotation serves to make the output more understandable and is usually necessary to facilitate the interpretation of factors. The factor solution was derived from the component analysis with VARIMAX rotation of the 15 cement attributes listed for the purpose of the study. The cut – off point for interpretation purpose is +0.55 for the taken sample size.

Factor 1 has four significant loadings; factor 2 has one significant loading while factor 3, 5 has two significant loadings, factor 4 has three significant loadings. For the purpose of naming the factor, factor 1 was designated as most preferred Quality and similarly factor 2 as reputation, factor 3 as curing time, factor 4 packaging, factor 5 prices and effort.

**TABLE 5:**  
**Rotated Component Matrix<sup>a</sup>**

	Component				
	1	2	3	4	5
PRICE	.122	-.160	2.716E-02	-.120	.858
REPUTAT	.177	.801	7.197E-02	-5.16E-02	4.033E-02
FRESHNES	-4.49E-02	.400	.350	.657	.233
FINENESS	.713	.477	-5.21E-02	.229	.174
UNADULTE	.647	.527	.123	-.103	4.748E-02
LIFE	.318	.559	.408	2.692E-02	.350
STRENGTH	-.138	.387	3.660E-02	-2.00E-02	.714
COLOUR	.172	.836	.177	2.752E-02	-2.90E-02
PACKAGIN	.148	-8.16E-02	.139	.807	-2.37E-02
DURABILT	.857	.166	1.036E-02	.127	5.750E-02
SET.TIME	.779	-1.04E-03	.337	-.145	-.109
CONSIG	.365	.260	.683	-4.32E-02	.220
CUTIME	1.771E-02	9.597E-02	.788	6.988E-02	-3.08E-02
CRACKRED	.500	8.515E-02	.435	.349	-.114
SERVICE	-3.52E-02	-8.41E-02	-.198	.665	-.231

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

**Component Transformation Matrix:** It describes the specific rotation applied to factor solution. This matrix is used to compute the rotated factor matrix from the original (unrotated) factor matrix. It shows the off-diagonal elements which are greater than  $\pm 0.5$ ; a larger rotation was applied by the following the extraction method of principal component analysis and varimax with Kaiser normalization. It provides the correlations between the factors in the original and in the rotated solutions.

**TABLE 6:**  
**Component Transformation Matrix**

Component	1	2	3	4	5
1	.636	.602	.414	.146	.199
2	.239	-.282	.065	.727	-.575
3	-.627	.268	.179	.597	.383
4	.102	-.662	.630	-.036	.392
5	.368	-.219	-.629	.304	.574

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.

### 3.3 SERVICES NEEDED

Based on the exploratory/qualitative survey various specific services needed for the customer.

From above exploratory research there a lot of service variables needs to be comply. Service variables namely quick response, exact price rate, pre and post technical service, Pre and post sales feedback and communication, billing and accounting, credit, timely order and delivery process, direct delivery from factory, easily availability, brand faith, recommendation of engineers/mason/architect, good relationship, advertisement promotion and branding, discount, more company official market visit, handling of grievances and complaints are of equally importance in select decision.

#### 3.3.1 EMPIRICAL RESULT FOR RETAILER: DATA REDUCTION BY FACTOR ANALYSIS

Reliability Coefficients, N of Cases = 100.0, N of Items = 19, Alpha = .8265

**TABLE 7:**

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.780
Bartlett's Test of Sphericity	Approx. Chi-Square	535.223
	df	171
	Sig.	.000

**TABLE 8:**

**Communalities**

	Initial	Extraction
quick reponse on query	1.000	.641
Exact price rate quote for cement - no ambiguity	1.000	.702
Pre- Sales Technical service	1.000	.628
post- sales technical service	1.000	.759
Pre- Sales communication support/adv t/promotions & adv t	1.000	.764
post- sales customer feedback	1.000	.654
accounts reconciliation (billing & accounting)	1.000	.524
order processing and confirmation	1.000	.755
delivery process	1.000	.719
credit	1.000	.617
direct deivery from factory	1.000	.584
easily available	1.000	.752
brand faith	1.000	.754
recommendation	1.000	.689
good relationship	1.000	.777
advertisement	1.000	.669
discount	1.000	.532
more company official visit in market	1.000	.589
further improve on handling of greivances and complaints	1.000	.696

Extraction Method: Principal Component Analysis.

From communalities highest preference is for service.

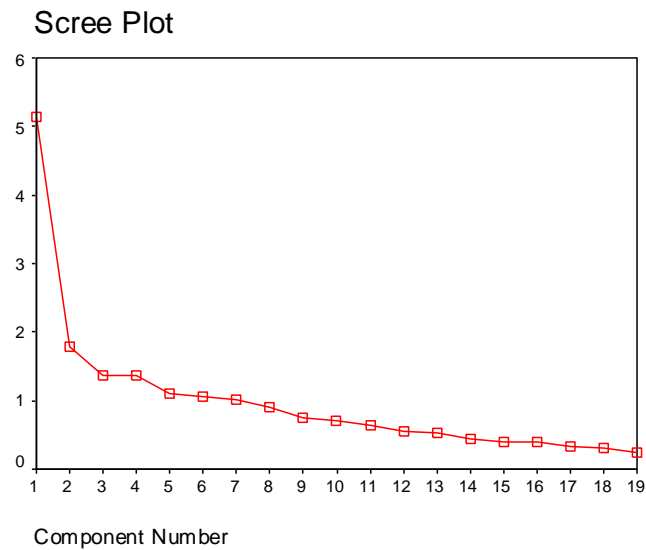
**TABLE 9:**

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.133	27.014	27.014	5.133	27.014	27.014	2.422	12.745	12.745
2	1.787	9.406	36.420	1.787	9.406	36.420	2.364	12.444	25.189
3	1.371	7.217	43.636	1.371	7.217	43.636	2.147	11.302	36.491
4	1.359	7.155	50.791	1.359	7.155	50.791	1.726	9.082	45.573
5	1.092	5.747	56.539	1.092	5.747	56.539	1.596	8.400	53.973
6	1.055	5.550	62.089	1.055	5.550	62.089	1.355	7.133	61.106
7	1.009	5.312	67.401	1.009	5.312	67.401	1.196	6.295	67.401
8	.903	4.754	72.155						
9	.759	3.994	76.149						
10	.704	3.703	79.852						
11	.637	3.355	83.207						
12	.549	2.890	86.097						
13	.533	2.808	88.905						
14	.448	2.357	91.262						
15	.402	2.118	93.380						
16	.388	2.042	95.422						
17	.336	1.767	97.189						
18	.302	1.591	98.781						
19	.232	1.219	100.000						

Extraction Method: Principal Component Analysis.

**Figure 2:**



**TABLE 10:**

**Rotated Component Matrix**

	Component						
	1	2	3	4	5	6	7
quick reponse on query	.729	.137	.193	-8.88E-02	2.705E-03	.188	.102
Exact price rate quote for cement - no ambiguity	.323	.357	.613	-.245	2.343E-02	6.335E-02	.172
Pre- Sales Technical service	.386	.428	.110	.247	-.158	.325	-.304
post- sales technical service	8.314E-02	4.105E-02	3.130E-02	.121	-2.15E-02	1.464E-02	.857
Pre- Sales communication support/adv t/promotions & adv t	.106	8.302E-02	5.776E-02	-.122	8.992E-02	.844	-8.05E-02
post- sales customer feedback	-4.18E-02	.163	-8.15E-02	.767	4.582E-02	-4.45E-02	.164
accounts reconciliation (billing & accounting)	8.642E-02	.274	.431	-.123	.468	-.136	-5.12E-02
order processing and confirmation	.145	3.974E-02	.801	.296	2.378E-02	4.237E-02	-2.94E-02
deliv ery process	.347	.668	.221	.216	.240	-1.01E-02	2.195E-02
credit	-2.87E-02	.623	.306	6.422E-02	.157	.323	4.704E-02
direct deivery from factory	-5.50E-03	8.798E-03	-3.66E-02	.180	-2.33E-02	.582	.460
easily available	1.440E-02	.582	.545	-.244	.198	5.083E-02	.121
brand faith	.240	.820	-3.84E-02	.123	7.488E-02	-4.92E-02	-7.49E-03
recommendation	.148	.139	.449	-3.07E-02	.646	8.759E-02	-.138
good relationship	.207	.119	-8.15E-02	.203	.811	9.450E-02	7.495E-02
advertisement	3.882E-02	1.997E-02	.141	.801	5.707E-02	3.253E-02	1.472E-02
discount	.632	.175	-3.55E-02	-7.62E-02	.279	-8.23E-02	.102
more company official visit in market	.531	8.688E-02	.446	.148	.219	5.256E-02	-.167
further improve on handling of greivances and complaints	.814	8.845E-02	.111	7.911E-02	8.432E-02	1.585E-02	-2.07E-02

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.  
a. Rotation converged in 16 iterations.

**TABLE 11:**

**Component Transformation Matrix**

Component	1	2	3	4	5	6	7
1	.530	.556	.496	.111	.349	.169	.022
2	-.029	.069	-.265	.895	-.067	.151	.310
3	.789	-.298	-.387	-.140	-.247	.237	.043
4	-.272	.234	.062	-.295	-.325	.713	.408
5	.032	-.163	-.106	-.213	.494	-.237	.785
6	-.035	-.711	.494	.173	.242	.396	-.064
7	-.137	.102	-.524	-.073	.636	.414	-.339

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

For the purpose of naming the factor, factor 1 was designated as most preferred complaint handling and similarly factor 2 as delivery, factor 3 as price, factor 4 Advertisement, factor 5 recommendations, factor 6 sales communication and factor 7 defines as technical services.

**IV. SUMMARY OF MAJOR FINDINGS: FACTOR ANALYSIS**

There are **major factors derived from factor analysis** that influence the selection decision of retailer, namely

a. **Product features:** The properties of cement like fineness, strength, and curing time play a major role in choosing cement.

b. **Service needed:** the company's sales and marketing actions like availability, advertisement, customer service, pricing, quick response to query, handling of complaints and pre and post sales technical service comes out to be an important factor.



The above defined factors are the highest need features which a company has to take care. It is observed that factor such as service parameter and price are of prime importance to get the product stable and to become market leader.

#### 4.1 MAJOR FINDINGS: RETAILER INSIGHT

Based on the exploratory survey it is found that factor such as quality of service level is very poor compared to other attributes. Quality of service level expected from company official is that complain related to product, exact price rate at various places, settlement of claims, settlement of product complaints and even promptness and accuracy with respect to documents are not favorable. The company should focus on improving quality of service level based on customer insights.

After data reduction and summarization, strategic options are to comply with the specific service need of the various segment of customer. It is found that there is a necessity of further improvement of services provided.

#### V. LIMITATIONS AND SUGGESTION FOR FURTHER RESEARCH

##### LIMITATIONS OF THIS STUDY:

The quality of information totally dependent on respondent knowledge.

The limitation of this study is that the field research was conducted only in West Bengal. A more extended geographical sample may show greater differences in perceptions. Since there always remains a possibility of changing retailer expectation so to cater and fulfill the need, the service quality standards shall be reviewed and modified periodically to meet the changing retailer expectations. There may be change in view of respondent when comes in terms of Company official.

**SUGGESTION FOR FURTHER RESEARCH:** More in-depth study is need to be conducted for analysis and derive an advanced design framework is required in respect of marketing strategy.

#### VI. CONCLUSION

The factors that appeared to be the most decisive are:

- Quality of the cement: that is approval by the engineers, and sometimes good feedback from the market and the field. It is the first and major criteria to consider the cement.
- Although brands are a major factor for retailer, mass marketing helps them associate brands to an image.
- When the suppliers are already known, the quality of the delivery based on former experience is definitely one of the most decisive factors.

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