

A study on Factor Analysis and Managerial Effectiveness of Managers in Banking Sector of West Bengal

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Abstract

In order to find out some factors that has an impact for evaluation of managerial effectiveness of the managers in both public and private sector banks of West Bengal. In this study, an attempt has been made to find out some relevant factors out of 45 variables using Factor Analysis. The sample consisted of 566 bank managers from three public (State Bank of India, Allahabad Bank, and United Bank of India) and three private (ICICI, HDFC, and AXIS) sector banks of West Bengal. The stratified random sampling is used for collection of data. The standard structure questionnaire named "Managerial Effectiveness Scale" was developed by Prof. S. Gupta (1996) was administered. The results indicated a statistically significant difference between managerial effectiveness and factors affecting managerial effectiveness of managers. The results revealed that the 45 variables used in measuring managerial effectiveness has been reduced to 3 (three) relevant factors - i). Goal Achievement ii) Effective Communication and Conflict Resolution, and iii) Participative Management - by using factor analysis, which will be useful in understanding and evaluating Managerial Effectiveness.

Keywords: *Managerial Effectiveness, Managers, Banks, Factor Analysis.*

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I. Introduction

At the beginning of the 21st century, the banking industries in the world have become complex financial organizations. The biggest banks in the industrial world offer a wide range of services to international markets and control billions of dollars in cash and assets. Supported by the latest technology, banks have continued operations to identify new business niches, to develop customized services, to implement innovative strategies and to explore and capture new market opportunities for growth. Banks are working with further globalization, consolidation, deregulation and diversification of the financial industry making the banking sector even more complex.

In India, after implementation of new economic policy, banking industry has been changed drastically. In India banking sector reforms has been strived to increase the efficiency and profitability of the banking industry and in the process, banking institutions isnow compatible toface the global competition in the era of global process. Different types of banks are performing their functions in different ways in terms of operations, efficiency, productivity, profitability and credit efficiency. In case of Financial System, banking sector is considered as most important constituent to strengthen the financial services all over the world. Hence, without a sound and effective banking system, India cannot be considered as a healthy economy.

Managerial effectiveness is a crucial element of an organization. Managerial effectiveness is defined in terms of output which measured in terms of results and three factors are responsible for the results that an organization achieves through its managers. These are:

1. The efforts and ability of the managers.
2. The environment in which the manager and the organization operates
3. The effort and ability of the subordinates.

Managerial Effectiveness focused on the managerial ability of managing self like personality and stress, managing subordinates and relationship, (communication and interpersonal effectiveness, delegation and team leadership), managing change and decision making (understanding change and change management, decision making process and technique). Managerial effectiveness is a leader's ability to achieve desired results where results are influenced by the organization's culture.

Effective management is about doing the right things at the right time. In the face of downsizing, mergers, etc., bank needs manager who are not only efficient but also effective. Efficient manager do things right where as an effective manager does the right thing. Effective managers are both effective and efficient.

In the edge of competitive market it is necessary to discuss to relevancy of managerial effectiveness in banks. Globalization, Liberalization, and Privatization have affected in banks. To sustain in the arena of

cutthroat competitive market in banking sector and rapidly changing government policies, the traditional management is not compatible in banks. Now, it is time for all types of public and private sector banks to think about managerial effectiveness because effective managers prepare plans after taking into account the knowledge and information, effective manager know where there time goes and how it is spent, effective managers focus on results that can be achieved rather than the tools or techniques to be used.

The bank manager has to be not only effective leader but also an effective manager. Manager has to try the best of his level for managerial effectiveness that will lead to organizational effectiveness and excellence.

Objective of the Study

To determine factors that impact managerial effectiveness of managers in public and private sector banks.

Hypotheses

There is a significant difference between factors affecting managerial effectiveness.

Methodology of the Study

Methodology includes sample, measures / test or adaptation of tools, and administration of tests for collection of data.

Population and Sample:

The population of the study consists of managers in different categories like branch manager, customer manager, credit manager, service manager and the like, of a particular branch in both public and private sector banks. The sampling procedure used is stratified random sampling under probability sampling technique. The sample consisted of 566 managers consisting of 487 managers for the Public sector banks (SBI = 255, UBI = 92 and AB =140) and 79 managers for Private sector banks (HDFC = 28, ICICI = 26 and AXIS = 25) working at various positions of management. The managers were chosen from 20 districts keeping the representativeness of all districts of West Bengal. The public sector banks including SBI, UBI, and AB and private sector banks including HDFC, ICICI, and AXIS banks, have been considered having highest number of branches in West Bengal, according to the sources of RBI Kolkata. Total number of branches of both public and private sector banks under study in West Bengal are 3255. Out of which 2675 branches are in public sector banks and 580 branches are from private sector banks. The population of the sample for the study is 11,316 out of which public bank managers are 9,750 and private bank managers are 1566. The researcher has taken 5% managers from total number of bank managers i.e. 566. The 5 % of total number of public and private banks are 487 and 79 respectively.

Measures / Tests:

The study attempted to find out the relationship between managerial effectiveness as the dependent variable and managerial effectiveness factors as the independent variables.

The data has been collected with the help of standardized tests such as Managerial Effectiveness test developed by Prof. S. Gupta (1996).

Test Administration:

The study is based mainly on primary data and supported by secondary data. The primary data is collected from the managers to assess the managerial effectiveness. There are two ways of administering of questionnaires: self-administering of questionnaires and mailing the questionnaires. This research was done by administering the questionnaires face to face in order to get a valid response on the scale managerial effectiveness.

The hypothesis formulated with respect to the objectives stated above and were tested with appropriate statistical techniques through Statistical Package for Social Sciences (SPSS version 20).

II. Results and Discussions

Attempt has been made to find out some relevant factors out of 45 variables using Factor Analysis applying SPSS which is more important for evaluation of managerial effectiveness of the managers of both public and private banking sectors of West Bengal.

Table - 1: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.909
Bartlett's Test of Sphericity	Approx. Chi-Square	9203.178
	df	990
	Sig.	.000

Source: Author's own estimate.

SPSS shows several important parts of the output:

The Kaiser-Meyer-Olkin (KMO) measures the all sampling adequacy and Bartlett's test measures of Sphericity. The KMO statistic varies between 0 and 1. A value of 0 indicates that the sum of partial correlations is large relative to the sum of correlations, indicates diffusion in the pattern of correlations i. e. factor analysis is likely to be in appropriate. A value close to 1 indicates that patterns of correlations are relatively compact. Values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb. For these data the value is 0.909, which falls into the range of being superb; so, it is clear that factor analysis is appropriate for these data.

Bartlett's test is another indication of the strength of the relationship among variables. This tests the null hypothesis that the correlation matrix is an identity matrix and all correlation coefficients would be zero. Therefore, this test is applied to show significant value less than 0.05. A significant test tells that the R-Matrix is not an identity matrix and there are some relationships between the variables. From the Table - 1, it is seen that the Bartlett's Test of Sphericity is highly significant ($p < 0.001$), and reject the null hypothesis. Therefore factor analysis is appropriate for these data.

Table - 2: Communalities

Communalities		
	Initial	Extraction
VAR00001	1.000	.417
VAR00002	1.000	.561
VAR00003	1.000	.467
VAR00004	1.000	.567
VAR00005	1.000	.645
VAR00006	1.000	.467
VAR00007	1.000	.509
VAR00008	1.000	.454
VAR00009	1.000	.509
VAR00010	1.000	.604
VAR00011	1.000	.563
VAR00012	1.000	.489
VAR00013	1.000	.544
VAR00014	1.000	.544
VAR00015	1.000	.536
VAR00016	1.000	.541
VAR00017	1.000	.493
VAR00018	1.000	.464
VAR00019	1.000	.553
VAR00020	1.000	.512
VAR00021	1.000	.591
VAR00022	1.000	.531
VAR00023	1.000	.511
VAR00024	1.000	.556
VAR00025	1.000	.565
VAR00026	1.000	.571
VAR00027	1.000	.535
VAR00028	1.000	.477

VAR00029	1.000	.600
VAR00030	1.000	.601
VAR00031	1.000	.617
VAR00032	1.000	.514
VAR00033	1.000	.588
VAR00034	1.000	.570
VAR00035	1.000	.567
VAR00036	1.000	.589
VAR00037	1.000	.546
VAR00038	1.000	.595
VAR00039	1.000	.433
VAR00040	1.000	.535
VAR00041	1.000	.629
VAR00042	1.000	.573
VAR00043	1.000	.572
VAR00044	1.000	.438
VAR00045	1.000	.402
Extraction Method: Principal Component Analysis.		

Communalities: Communalities is the proportion of each variable’s variance that can be explained by the factors. The communality value should be more than 0.5 which has to be considered for further analysis.

Initial: With principal factor axis factoring, the initial values on the diagonal of the correlation matrix are determined by the squared multiple correlation of the variable with the other variables.

Extraction: The values in this column indicate the proportion of each variable’s variance that can be explained by the retained factors. Variables with high values are well represented in the common factors space, while variables with low values are not well represented. 64.5% of the variance in (Var 00005) is accounted for, while 40.2 % of the variance in (Var 000045) is accounted for (Table - 2).

Table - 3: Total Variance Explained

Total Variance Explained									
Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.944	19.875	19.875	8.944	19.875	19.875	5.280	11.732	11.732
2	5.307	11.793	31.668	5.307	11.793	31.668	4.794	10.653	22.385
3	2.797	6.215	37.884	2.797	6.215	37.884	2.787	6.194	28.579
4	1.960	4.355	42.238	1.960	4.355	42.238	2.665	5.922	34.501
5	1.565	3.479	45.717	1.565	3.479	45.717	2.439	5.420	39.921
6	1.440	3.199	48.916	1.440	3.199	48.916	2.384	5.298	45.219
7	1.122	2.494	51.411	1.122	2.494	51.411	2.185	4.856	50.075
8	1.011	2.248	53.658	1.011	2.248	53.658	1.613	3.583	53.658
9	.952	2.117	55.775						
10	.911	2.024	57.799						

11	.895	1.990	59.789						
12	.823	1.829	61.618						
13	.804	1.787	63.405						
14	.804	1.786	65.191						
15	.746	1.658	66.849						
16	.742	1.648	68.497						
17	.715	1.588	70.086						
18	.701	1.557	71.643						
19	.681	1.512	73.155						
20	.663	1.473	74.628						
21	.644	1.431	76.059						
22	.628	1.395	77.454						
23	.604	1.343	78.797						
24	.587	1.305	80.102						
25	.575	1.279	81.381						
26	.560	1.246	82.626						
27	.531	1.180	83.806						
28	.512	1.137	84.943						
29	.508	1.129	86.072						
30	.496	1.101	87.173						
31	.470	1.044	88.217						
32	.467	1.038	89.255						
33	.456	1.013	90.268						
34	.443	.985	91.253						
35	.435	.967	92.220						
36	.426	.946	93.165						
37	.417	.926	94.091						
38	.395	.879	94.969						
39	.358	.795	95.764						
40	.354	.786	96.550						
41	.343	.763	97.313						
42	.330	.734	98.047						
43	.310	.690	98.736						
44	.301	.668	99.404						
45	.268	.596	100.000						
Extraction Method: Principal Component Analysis.									

Total Variance Explained:

Eigen value actually reflects the number of extracted factors whose sum should be equal to number of items which are subjected to factor analysis. The Eigen value table has been divided into three sub-sections, i. e. Initial Eigen Value, Extracted Sum of Squared Loading and Rotation of Sums of Squared Loading. For the purpose of analysis and interpretation were only concerned with Extracted Sums of Squared Loadings.

Component: As can be seen in the communalities Table - 2, there are 45 components shown in column 1.

Total: This column contains the Eigen values. The first factor is account for the most variance (and hence we

have the highest Eigen value) and the next factor is account for as much of the left-over variance as it can, and so on. Hence, each successive factor is an account for less and less variance.

% of Variance: This column contains the percent of total variance accounted for by each factor.

Cumulative %: This column contains the cumulative percentage of variance accounted for by the current and all preceding factors. The 8th row shows a value of 53.658. This means that the first eight factors together account for 53.658 of the total variances.

Extraction Sums of Squared Loadings:

The number of rows in this panel of the table corresponds to the number of factors retained. Table shows that eight factors are to be retained, so there are eight rows, one for each retained factor. The values in this panel of the table are calculated in the same way as the values in the left panel, except that here the values are based on the common variance. The values in this panel of the table are lower than the values in the left panel of the table, because they are based on the common variance, which is always smaller than the total variance.

Rotation Sums of Squared Loadings: The values in this panel of the table represent the distribution of the variance after the variance rotation. Variance rotation tries to maximize the variance of each of the factors, so the total amount of variance accounted for is redistributed over the eight extracted factors.

Extraction Sums of Squared Loadings Total: Total variance after extraction.

Extraction Sums of Squared Loadings % of Variance: The present of variance attributable to each factor after extraction. This value is of significance thousand therefore we determine in this step that they are eight factors which contribute towards why would someone by a particular item.

Extraction Sums of Squared Cumulative %: Cumulative variance of the factor when added to the previous factors after extraction.

Rotation of Sums of Squared Loadings Total: Total variance after rotation.

Rotation of Sums of Squared Loadings % of Variance: The percent of variance attributable to each factor after rotation.

Rotation of Sums of Squared Loadings Cumulative %: Cumulative variance of the factor when added to the previous factors.

Table - 3 shows the actual factors that were extracted. In this case, there are eight factors with eigen values greater than 1. SPSS always extracts as many as factors initially as there are variables in the data set, but the rest of these did not make the grade.

SPSS output 3 lists the eigen values associated with each linear component / factor before extraction, after extraction and after rotation. Before extraction, SPSS has identified 45 linear components within the data set (it is known that there should be as many eigen vectors as there are variable and so there will be as many factors as variables). The eigen values associated with each factor represent the variance explained by that particular linear component and SPSS also displays the eigen value in terms of the percentage of variance explained i.e. factor1explains19.875 % of total variance. Table 3 shows that the first 8 factors explain relatively large amounts of variance whereas subsequent factors explainonly small amount of variance. The eigen values associated with these factors are again displayed (and the % of variance explained) in the columns labeled extraction Sums of Squared Loadings. The values in this part of the table are the same as the values before extraction, except that the values for the discarded factors are ignored (hence, the table is blank after the eight factors).

In the final part of the table (labeled Rotation Sums of Squared Loadings), the eigenvalues of the factors after rotation are displayed. Rotation has the effect of optimizing the factor structure and one consequence for these data is that the relative importance of the eight factors is equalized. Before rotation, factor 1 accounted for considerably more variance than the remaining seven (19.875 % compared to 11.793, 6.215, 4.353, 3.479, 3.199, 2.494 and 2. 248 %), however after extraction it accounts for only 11.732 % of variance (compared to 10.653, 6.194, 5.922, 5.420, 5.298, 4.856 and 3.583 respectively).

Table - 4: Component Matrix

Component Matrix ^a								
	Component							
	1	2	3	4	5	6	7	8
VAR00034	.714	-.164	.058	-.091	-.078	.119	-.038	.001
VAR00036	.694	-.186	.081	-.098	-.120	.182	-.099	.016
VAR00031	.690	-.056	-.103	-.125	.180	-.170	-.219	.048
VAR00026	.686	-.161	.174	.087	-.153	-.070	.079	.037

VAR00035	.670	-.121	-.067	-.247	.151	-.116	.045	.010
VAR00032	.664	-.106	.085	-.003	-.162	.067	-.155	.014
VAR00029	.646	-.120	-.053	-.049	.209	-.161	-.289	.098
VAR00024	.633	-.144	.209	.137	-.185	-.182	-.035	-.058
VAR00038	.632	-.213	.070	-.286	-.060	.239	-.008	.054
VAR00021	.610	-.077	-.244	.232	.205	.095	-.208	.067
VAR00040	.605	-.062	.015	-.338	-.120	.170	.075	.048
VAR00042	.584	-.100	.038	-.386	-.106	.201	.128	.059
VAR00041	.574	-.119	.030	-.416	.056	.027	.289	.154
VAR00020	.567	-.135	.196	.253	-.051	-.224	-.131	.003
VAR00043	.567	-.206	.053	-.381	.041	-.018	.240	.001
VAR00007	.547	-.069	-.270	.311	-.109	-.149	-.009	-.038
VAR00016	.547	-.111	.244	.306	.032	-.225	-.032	.152
VAR00015	.532	-.073	-.370	.250	.129	.074	.132	.096
VAR00001	.516	-.036	-.187	.302	-.104	-.063	-.050	.076
VAR00003	.508	-.110	-.284	.260	-.133	.064	.072	.146
VAR00013	.481	-.073	-.315	.334	.093	.006	.154	-.252
VAR00008	.452	.006	.314	.269	.199	.159	-.069	-.099
VAR00002	.400	-.160	.170	.272	.288	.150	.163	-.375
VAR00044	.307	.302	.072	-.069	-.274	.259	-.245	-.200
VAR00023	.127	.601	-.191	-.106	.061	.180	-.220	.037
VAR00027	.168	.582	-.189	-.046	.222	-.035	-.283	-.006
VAR00025	.158	.545	-.218	-.055	.228	.264	-.267	-.009
VAR00019	.106	.538	-.308	.110	.085	.370	.001	.027
VAR00033	.283	.532	-.093	-.260	.155	-.341	-.013	-.089
VAR00005	.216	.516	-.246	.110	-.289	.035	.185	.375
VAR00017	.098	.510	-.323	.047	.167	.143	.259	-.031
VAR00039	.240	.500	-.036	-.204	.085	-.219	-.004	-.164
VAR00011	.098	.493	-.408	.173	-.198	-.032	.258	.086
VAR00037	.176	.493	-.109	-.218	.123	-.363	.068	-.248
VAR00022	.205	.488	.360	.148	-.200	-.224	.024	-.096
VAR00012	.074	.484	.432	.066	.076	-.009	.138	.182
VAR00010	.040	.480	.429	.083	.310	.118	.149	.220
VAR00030	.268	.478	.186	-.043	-.268	.275	-.018	-.341
VAR00028	.189	.464	.311	.000	-.268	.086	.046	-.219
VAR00009	.192	.463	-.356	.069	-.277	-.146	.159	-.051
VAR00006	-.001	.400	.368	.121	.339	.089	.053	.177
VAR00014	.071	.449	.487	.075	-.035	.040	-.125	.277
VAR00018	.102	.398	.445	.155	-.258	-.083	.022	-.001
VAR00004	.386	-.118	.258	.145	.399	.096	.345	-.168
VAR00045	.276	.361	-.032	-.214	.077	-.374	.019	.040

Extraction Method: Principal Component Analysis.
a. 8componentsextracted.

Power (Variable 45) is included in Factor

Component Matrix: The Table - 4 shows the loadings (extracted values of each item under three variables) of the 45 variables on the three factors extracted. The higher the absolute value of the loading, the more the factor contributes to the variable. The result shows in Table - 4, that the influence of VAR 0004, VAR 00044 and VAR 00045 are very minimum (i. e. less than equal 40 %).

From the Table - 4, considering the influence of the variable (greater than equal 40 %) the researcher has obtained three factors which includes all the variables (42 variables). 42 items are divided into three factors according to most important items with similar responses in component 1 and simultaneously in 2, and 3). Three factors are shown in Table - 5.

Table - 5: Factor Formulation

Factor - I	Factor - II	Factor - III
VAR000 34 I tolerate mistakes and use them as learning opportunities	VAR000 23 Interact with my colleagues and use tact to develop effective working relations with them	VAR 000 11 I success fully resolve interpersonal conflicts Between subordinates
VAR000 36 I feel it is not very rewarding to foster a spirit of Collaboration and Team works in subordinates.	VAR000 27 Suggestions from "Clients" are not welcomed by me.	VAR000 12 It is necessary to consult subordinates on ethical issues
VAR000 31 I believe in fair allocation of work to my subordinates	VAR000 25 I communicate frankly with my immediate superiors	VAR000 10 I delegate responsibilities and authority
VAR000 26 I understand the nature of the organization's input and product markets, competition and Technological environment.	VAR000 19 I share any important development/information to build up the subordinate's confidence in future.	VAR000 14 I try to communicate with all those outsiders who matter to the organization
VAR000 35 It is not important to be easily accessible	VAR000 33 My subordinates trust me and depend on me for support	
VAR000 32 I encourage subordinates to decide on their own	VAR000 05 I keep my colleagues satisfied	
VAR000 29 I am concerned about the welfare of my people	VAR000 17 I help subordinates with their personal development plans	
VAR000 24 I like discussing rum ours, hearsay and grape vine	VAR000 39 I try to get cooperation and consensus between conflicting parties	
VAR000 38 I hesitate to boost morale and Satisfaction of works	VAR000 37 Persistent lopy, incompetent, or unethical behavior of subordinates needs to be disciplined	
VAR000 21 I do not believe in conveying appreciations, compliments, etc. openly	VAR000 22 I am action oriented	
VAR000 40 Setting a personal example for integrity and conscientiousness Is not needed.	VAR000 30 I believe in providing support to subordinates	
VAR000 42 I meet the expectations of my boss	VAR000 28 I contribute to building up the image of my area / whole organization	
VAR000 41 I understand the needs and goals of colleagues and encourage them to achieve them	VAR000 09 Smooth running of work does not necessarily require co-coordinating the activities of each subordinate	
VAR000 20 I create conditions for the subjects so that they enjoy the Work they do.	VAR000 06 I am required to interact with outsiders (PR, customers, suppliers, vendors, external meetings and community service activities)	
VAR000 43 I am not very keen about face-to-face communications	VAR000 18 I do not believe in resolving conflicts between subordinates and self.	
VAR000 07 I am able to procure scarce financial, human, technical Resources for my area / organization		

VAR00016	I devise proper controls for Monitoring the performance of staff members				
VAR00015	I involve other people in order to finish a job				
VAR00001	I like to take challenge in assignments and ensure their Successful completion				
VAR00003	My subordinates cannot work as team in my absence.				
VAR00013	I try to motivate and inspire staff for any excellent Performance.				
VAR00008	While assigning tasks I do not care whether they match the competencies of my subordinates				
VAR00002	I structure the work so that people can know what to expect				

The three factors are:

i. Factor I = I structure the work, take challenges, discuss rumors and hesitation, tolerate mistakes, understand the organization’s input and goals of the colleagues, control and monitoring the staff members, motivate and inspired subordinates to decide their own and engage other people for successful completion of the work through fair allocation of the job. And believe that conveying appreciation, complement, boosting morale, setting personal example, easily accessible is not so important.

ii. Factor - II = I think it is important to emphasize on the colleagues or subordinates’ satisfaction, belief and trust, confidence and image building, disciplined environment, frankly communicate, share important information, help, and take suggestion from outsiders (PR, customer, vendor) if necessary, stop conflicts.

iii. Factor - III = Ethically, it is important to provide delegation of responsibility and authority to the subordinates for resolving interpersonal conflict within organization and communicate with associate outsiders.

Factor I includes the variables VAR00001, VAR00002, VAR00003, VAR00007, VAR00008, VAR00013, VAR00015, VAR00016, VAR00020, VAR00021, VAR00024, VAR00026, VAR00029, VAR00031, VAR00032, VAR00034, VAR00035, VAR00036, VAR00038, VAR00040, VAR00041, VAR00042, and VAR00043.

Factor II includes the variables VAR00005, VAR00006, VAR00009, VAR00017, VAR00018, VAR00019, VAR00022, VAR 00023, VAR00025, VAR00027, VAR00028, VAR00030, VAR00033, VAR00037, and VAR00039.

Factor III includes the variables VAR00010, VAR00011, VAR00012, and VAR00014.

From the Table 5, it can be said that the **three factors** can be renamed as i) **Goal Achievement** for Factor –I, ii) **Effective Communication and Conflict Resolution** for factor – II, and **Participative Management** for factor-III respectively.

Hence above three factors are relevant factors out of 45 variables derived from Factor Analysis (applying SPSS) which is significant for evaluation of managerial effectiveness of both public and private banking sectors of West Bengal.

Conclusion

Factor analysis reveals that three factors are extracted from the 45 variables. The 45 items are reduced to three relevant factors and these three factors are named as **i) Goal Achievement, ii) Effective Communication and Conflict Resolution and iii) Participative Management**, which become significant for the measurement and evaluation of managerial effectiveness.

The three factors – Goal Achievement, Effectiveness Communication and Conflict Resolution, and Participative Management derived from 45 variables using factor analysis are relevant factors for understanding and evaluation of managerial effectiveness.

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