

EXPLORING UNDERLYING FACTORS GOVERNING THE PROTECTION OF STAKEHOLDERS' INTEREST: STATUTORY AUDITORS' ROLE IN THE BACKDROP OF CORPORATE ACCOUNTING CORRUPTION

Prof. (Dr.) Siddhartha Sankar Saha*
Dr. Mukund Chandra Mehta**

ABSTRACT

Business enterprise develops and attains its maturity within the society with the help of stakeholders. The main motive of business operation is to earn profit and create value for the stakeholders. If the management fails to attain this end, stakeholders would terminate their financial relationship with the company leading to its demise. So, in order to keep the stakeholders, management of some businesses often resort to some malpractices. Manipulating financial reports to show a strong accounting profit and good balance sheet position is one such bad practice. Stakeholders based on the impressive result continue to increase their financial relationship with the company until the huge deviation between actual and reported result is revealed. Against this backdrop, the study explores the underlying factors governing the protection of stakeholders' interest in the backdrop of corporate accounting corruption.

KEYWORDS: *Protection of Stakeholders' Interest, Stakeholders, Corporate Accounting Corruption, Factor Analysis.*

Introduction

Stakeholders including shareholders, debtors, creditors, lenders, employees, government and others are those groups without whose support the organisation would cease to exist (Freeman et. al. 1983). Business enterprise develops and attains its maturity within the society with the help of stakeholders. The main motive of business operation is to earn profit and create value for the stakeholders. If the management fails to attain this end, stakeholders would terminate their financial relationship with the company leading to its demise. So, in order to keep the stakeholders, management of some businesses often resort to some malpractices (Reazee, 2009). Manipulating financial reports to show a strong accounting profit and good balance sheet position is one such bad practice. Stakeholders who otherwise do not have any access to the day-to-day affair of the business have to depend upon the financial reports prepared by the company management using the loopholes of accounting regulations (Alexander et. al. 2004). Stakeholders based on the impressive result continue to increase their financial relationship with the company until the huge deviation between actual and reported result is revealed. Company with a long practice of financial manipulation fails to continue their operation as a going concern entity and end up being taken over by another company or being liquidated by the judiciary. Thus, a corporate accounting corruption would lead to huge loss to the entire stakeholder community of the concerned business, which in turn creates problem in the overall economy (Winkler, 2004). A scam also leaves a black mark over the regulatory environment of the country, which even sometimes deter

* Professor of Commerce, and Former Head, P.G. Department of Commerce, University of Calcutta, Kolkata, West Bengal, India.

** Associate Professor of Commerce, University Department of Commerce and Business Management, Ranchi University, Ranchi, India.

new industrial project to enter the country impacting national economy (Rockness et. al. 2005). In this backdrop, corporate governance comes into place in protecting stakeholders' interest (Tippgos et. al. 2004).

Past Studies and Research Gap

Carillo (2008) in his study 'Disgorgement plans under the fair funds provision of the SOX Act, 2002' conducts an independent judicial review of disgorgement plan proposed by recent SOX Act, 2002 and their impact on protection of stakeholders' interest. Chakraborty (2004) in his study 'Corporate governance and changing role of auditors' admits the increased importance of auditors in corporate governance structure. As many stakeholders take their financial decision based on audit opinion, manifold development of auditing profession is necessary to curb fraudulent activities and increase transparency in financial reporting. Garg (2001) in his study 'Corporate Governance – implication for accountants' gives a brief idea on the corporate governance. Accounting and audit procedures according to GAAP and responsibility of auditors and directors in the corporate governance structure to protect interest of the stakeholders are also discussed in his study. Gerotra & Bajjal (2002) in their study 'Prominent peer review practices around the globe – ensuring quality audit' discuss the importance of peer review mechanism in protecting stakeholders' interest. Lomax (2003) in his study 'Cooking the books' compares fraudulent measures taken up by companies for falsifying financial results and deduces that lack of checks and balance is the main reason behind financial fraud. Prentice (2003) in his study 'Enron: A brief behavioural autopsy' draws some relation between law, economics, business ethics and behavioural science.

However, a few representative literatures on protection of stakeholders' interest in the backdrop of recent corporate accounting scams have been presented. But number of empirical studies based on perception of respondents is really small on this particular issue and even in those studies, application of advanced statistical analysis to infer scientific conclusion is really rare. With a view to covering up this gap, an empirical study based on perception of respondents on statutory auditors' role and protection of stakeholders' interest in the backdrop of corporate accounting corruption has been conducted with the following objective.

Objective of the Study

- The major objective of the study is to explore underlying factors governing protection of stakeholders' interest in the backdrop of corporate accounting corruption.

Research Methodology

The present study is exploratory in nature. The methodology, as adopted in pursuing the study, has been presented here:

- **Sample Design:** Primary data for the study has been collected from different categories of respondents having adequate knowledge and experience in the related field. Both male and female respondents with age ranging from 20 to 80 have contributed their opinion in the field survey. The geographical area where the survey is conducted is Kolkata district in the state of West Bengal, India. As population size is infinite, convenience sampling method has been used. At the beginning, total respondents have been grouped into three categories: Academic, Professional and Other Group. (a) Academicians and (b) Students have come under the 'Academic Group'. 'Professional Group' comprises (a) Chartered Accountants (CAs) and (b) Cost and Management Accountants (CMAs) both in practice and in service in Kolkata. Finally, the 'Other Group' includes (a) Senior Functionaries of the institutionalized investing companies and (b) individual investors.
- **Demographic Profile of the Respondents:** The Population size under each aforesaid category is infinite and indeterminable. Thus, an initial representative sample of 150 respondents has been selected for each subcategory under 'Academic and Professional Group' and an initial sample of 100 respondents has been selected for 'Other Group' based on convenience sampling technique. Actually, out of 150 initial sample set for academicians, CAs, CMAs and students, 111 valid responses are collected from academicians, 101 valid responses are collected from CAs, 94 valid responses are collected from CMAs and 118 valid responses are collected from students. An initial sample of 100 was set for investors category. Only 53 valid responses were collected from them. Hence, total sample size was 700 respondents initially, while we have collected questionnaire from 477 respondents finally.

- **Collection of Data:** The enquiry has been made after going through primary data from the field survey, which have been collected from the aforesaid respondents in a pre-tested, close-ended, structured questionnaire containing total 12 statements mentioned under the Formulation of the Problem section. The questionnaire for the aforesaid theme is designed in a 'Likert' 5-point scale (5 representing 'Strongly Agree' (SA), 4 representing 'Agree' (A), 3 representing 'Neutral' (N), 2 representing 'Disagree' (D), 1 representing 'Strongly Disagree' (SD)). Initially, a pilot survey was conducted with close-ended structured questionnaire in Kolkata region, while a modified version of questionnaire has been developed subsequently. After that, each of the respondents from the sample size has been contacted over phone or in person to take an appointment with them. Subsequently, they have been visited in their convenient time and place and their opinions have been incorporated in the questionnaire.
- **Statistical Tools used for the Interpretation of Data:** An attempt has been made to analyze statistically these data with the help of statistical package (SPSS 17.0). From all the questions (i.e. variables) considered under the main theme of the study mentioned under the Formulation of the Problem section, underlying factors influencing the theme of the study under consideration have been identified separately with the help of Principle Component Analysis under Exploratory Factor Analysis. Fitness of the factor analysis model has also been tested statistically. Before conducting factor analysis, reliability analysis with the selected variables is conducted and Chronbach's alpha (Peterson, 1994) is calculated to measure the internal consistency reliability of the summated scale. The fitness of the factor model is also tested.

Analysis of Responses and Discussion

Following steps are adopted to conduct the Factor Analysis systematically in order to explore underlying factors governing protection of stakeholders' interest in the backdrop of corporate accounting corruption:

Formulation of the Problem

Theme of the current study is based on exploration of underlying factors governing the protection of stakeholders' interest in the backdrop of corporate accounting corruption. To represent this theme, 12 statements representing variables (selected based on existing review of literature) are considered in the close-ended structured questionnaire on Likert 5-point scale in order to obtain opinions of respondents as follows:

No. of Variables	Statements/ Variables
V ₁	Corporate Accounting Scam (CAS) has no impact on stakeholders' interest.
V ₂	Statutory auditors' involvement in insider trading.
V ₃	Notable accounting scam impaired protection of stakeholders' interest.
V ₄	Strengthening audit committee.
V ₅	Rotation of auditor.
V ₆	Effectiveness of Prohibition of Fraudulent and Unfair Trade Practices Law introduced by the SEBI.
V ₇	Amendment in Company law in line with Sarbanes Oxley Act, 2002.
V ₈	Effectiveness of peer review committee.
V ₉	More lucidity in audit report.
V ₁₀	Establishment of oversight authority in line with Public Company Accounting Oversight Board (PCAOB).
V ₁₁	Importance of ethics and values to play ethical role by Statutory Auditors (SAs).
V ₁₂	Importance of forensic investigation.

Measuring Reliability of Scale

In an internally consistent reliable scale, all the scale items would convey the same meaning as that of the scale. Chronbach's α is used to measure internal consistency reliability. If the value of this α is more than 0.6, it can be reasonably concluded that the scale is internally consistent and reliable. In the present study, Chronbach's α calculated for a scale containing 12 items is 0.669 more than threshold limit of 0.6. Hence, it can be concluded that the scale representing 'Protection of Stakeholders' Interest' are internally consistent and reliable.

Assessing Appropriateness of Factor Analysis

Factor analysis is appropriate for a given dataset if the number of respondents is 4 or 5 times the number of observations or variables (Basilevsky, 1994). In this current dataset, number of observations are 12 and the number of respondents is 477 exceeding required limits. Hence, factor analysis can be done based on given criteria. However, appropriateness of factor analysis can be assessed using following tests:

- **Bartlett's Test of Sphericity**

Another approach of assessing applicability of factor analysis is Bartlett's Test of Sphericity. This test also analyses correlations between the variables involved. The test statistics is based on Chi-Square transformation of matrix determinant. At 5% level of significance, there is a high value of the test statistics (708.265) and significance (.000) less than the 0.05, H_0 is rejected. It can be inferred that variables are correlated with each other and correlation matrix is not an identity matrix.

- **Kaiser Meyer Olkin (KMO) Measure of Sample Adequacy (MSA)**

KMO is an index comparing magnitude of observed correlations with potential correlations and decides whether one pair of correlation can be explained by other variables. In case of factor analysis, KMO index should be more than 0.5 in a particular situation. In the study, KMO is calculated at 0.751. Hence, KMO for this given dataset is excellent and factor analysis can be easily conducted.

- **Selecting the Number of Factors**

Considering Principle Component Analysis of method of Exploratory Factor Analysis, all the variables should be represented by as minimum factors as possible keeping in mind Eigen value method for deciding on the number of factors. Number of factors with Eigen value more than 1 should be retained. Based on Eigen value cut off at 1, 4 factors are identified (Table 1). Eigen values for each component obtained from Table 'Total Variance Explained' (Table 1).

Table 1

Component	Total Variance Explained									
	Initial Eigenvalues			Reliability coefficient (α)	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.829	23.579	23.579	0.620	2.829	23.579	23.579	1.908	15.897	15.897
2	1.339	11.155	34.734	0.550	1.339	11.155	34.734	1.731	14.424	30.322
3	1.251	10.421	45.155	0.447	1.251	10.421	45.155	1.591	13.257	43.578
4	1.016	8.463	53.617	-0.270	1.016	8.463	53.617	1.205	10.039	53.617
5	.916	7.633	61.250							
6	.814	6.782	68.032							
7	.773	6.442	74.474							
8	.732	6.104	80.578							
9	.685	5.710	86.288							
10	.653	5.445	91.733							
11	.533	4.438	96.170							
12	.460	3.830	100.000							

Extraction Method: Principal Component Analysis.

Source: Compilation of Field Survey Data using SPSS 17.0

- **Selecting Method of Rotation of Factor Matrix and Communalities**

After the number of factors is decided, factor loading for each variable against each of these factors are calculated and shown under factor matrix (Table 2). Factor loading is simple correlation between factor and underlying variables. Based on factor loadings, variables are grouped under one factor. But under factor matrix there is a possibility that non-zero, significant loading grouped under more than one factor. It hampers interpretability of factors (Malhotra, 2003). Thus, assuming extracted factors are uncorrelated, orthogonal rotational technique with varimax procedure is selected for rotating factor matrix (Kaiser, 1958). Rotated factor matrix is shown in Table 2 and communalities are shown in Table 3:

Table 2

Rotated Component Matrix ^a				
	Component			
	1	2	3	4
V ₁	.095	.036	-.065	-.833
V ₂	.139	-.041	.703	.078
V ₃	.131	.014	.482	.404
V ₄	.722	.078	.269	.074
V ₅	.386	.329	-.086	.462
V ₆	.627	.349	-.058	-.041
V ₇	.128	.829	.034	.021
V ₈	.639	-.023	.082	-.067
V ₉	.522	.026	.394	.148
V ₁₀	.128	.761	.078	-.016
V ₁₁	-.219	.426	.423	.190
V ₁₂	.194	.205	.654	-.240

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

Source: Compilation of Field Survey Data using SPSS 17.0

Table 3

Communalities		
	Initial	Extraction
V ₁	1.000	.709
V ₂	1.000	.522
V ₃	1.000	.413
V ₄	1.000	.605
V ₅	1.000	.478
V ₆	1.000	.520
V ₇	1.000	.705
V ₈	1.000	.420
V ₉	1.000	.449
V ₁₀	1.000	.602
V ₁₁	1.000	.444
V ₁₂	1.000	.565

Extraction Method: Principal Component Analysis.

Source: Compilation of Field Survey Data using SPSS 17.0

Inferences (based on Table 1, 2 and 3)

- F₁: Effectiveness of Corporate Governance Issues**

It is observed that F₁ having Eigen value 2.829 explains 23.579% of the total variance along with reliability coefficient 0.620 (more than the threshold 0.6). Hence, variables grouped under this factor are reliable and internally consistent. 'Strengthening audit committee (V₄)', 'Effectiveness of Prohibition of Fraudulent and Unfair Trade Practices Law introduced by the SEBI (V₆)', 'Effectiveness of peer review committee (V₈)' and 'More lucidity in audit report (V₉)' are grouped into this factor with rotated factor loading .722, .627, .639 and .522 respectively. F₁ is named as '**Effectiveness of Corporate Governance Issues**'. From the extracted communality column under Table 3, it is observed that percentage of variance explained by extracted factors for V₄, V₆, V₈ and V₉ are 60.5%, 52%, 42% and 44.9% respectively. This result shows both in terms of rotated factor loading and extracted communality 'Strengthening audit committee' is the most important variable under F₁. Naturally, it should be treated as surrogate variable for further statistical analysis.

- F₂: Regulatory and Ethical Issues to Improve Audit Independence**

This factor comprising Eigen value 1.339 explains 11.155% of the total variance along with reliability coefficient 0.550 which is slightly less than the threshold 0.6. Hence, this factor is not completely reliable and internally consistent. 'Amendment in Company law in line with Sarbanes Oxley Act, 2002 (V₇)', 'Establishment of oversight authority in line with Public Company Accounting Oversight Board (PCAOB) (V₁₀)', and 'Importance of ethics and values to play ethical role by Statutory Auditors (SAs) (V₁₁)' are grouped into F₂ with rotated factor loading .829, .761, and .426 respectively. This factor

can be justifiably named as '**Regulatory and Ethical Issues to Improve Audit Independence**'. From the extracted communality column, it is observed that percentage of variance explained by extracted factors for V_7 , V_{10} and V_{11} are 70.5%, 60.2%, and 44.4% respectively. This result shows both in terms of rotated factor loading and extracted communality 'Amendment in Company law in line with Sarbanes Oxley Act, 2002' is the most important variable under F_2 . Naturally, it should be treated as surrogate variable for further statistical analysis.

- **F₃: Investigative Issues**

The Eigen value of F_3 is 1.251 and it explains 10.421% of the total variance with reliability coefficient 0.447 which is less than the threshold 0.6. F_3 is not completely reliable and internally consistent. 'Statutory auditors' involvement in insider trading (V_2), 'Notable accounting scam impaired protection of stakeholders' interest (V_3), and 'Importance of forensic investigation (V_{12})' are grouped into this factor with rotated factor loading .703, .482 and .654 respectively and '**Investigation Issues**' is an appropriate name for this factor. It is observed that percentage of variance explained by extracted factors for V_2 , V_3 and V_{12} are 52.2%, 41.3%, and 56.5% respectively. Among the variables grouped under this factor V_2 has highest loading while V_{12} has highest extracted communality. Keeping in mind the nature of variable grouped under the factor, V_{12} i.e. 'Importance of forensic investigation' is considered to be a surrogate variable for further statistical analysis.

- **F₄: Audit Independence in CAS**

This factor comprising Eigen value equal to 1.016 explains 8.463% of the total variance. F_4 having reliability coefficient -0.270. Variables included in F_4 are negatively correlated with each other. 'Corporate Accounting Scam (CAS) has no impact on stakeholders' interest (V_1)', and Rotation of auditor (V_5)', are grouped into this factor with rotated factor loading -.833 and .462 respectively. Thus, '**Audit Independence in CAS**' is a justified name for this factor. It is evident that percentage of variance explained by extracted factors for V_1 and V_5 are 70.9% and 47.8% respectively. This result shows both in terms of rotated factor loading and extracted communality, 'Corporate Accounting Scam (CAS) has no impact on stakeholders' interest' is the most important variable under F_4 . Hence, it should be treated as surrogate variable for further statistical analysis.

From the percentage of variance explained, it can be stated that '**Effectiveness of Corporate Governance Issues**' (F_1) is the most important factor governing protection of stakeholders' interest. All the extracted factors together explain 53.617% of the total variance of variables included under this theme which less than 60% threshold required for social science research.

- **Development of Factor Model**

Factor models are developed for calculation of factor scores of each individual factor. Unlike variable scores, factors scores are likely to be uncorrelated. Factors score for an individual factor is a function of variable scores multiplied by factor score coefficient (Table 4). In the present study, factor scores for each factor are obtained from following regression equations (Table-5):

Table 4

Component Score Coefficient Matrix				
	Component			
	1	2	3	4
V_1	.074	.055	.037	-.715
V_2	-.044	-.108	.486	-.022
V_3	-.017	-.070	.278	.286
V_4	.390	-.089	.043	.019
V_5	.204	.136	-.224	.391
V_6	.351	.133	-.187	-.051
V_7	-.058	.514	-.068	-.029
V_8	.392	-.120	-.054	-.073
V_9	.247	-.105	.169	.072
V_{10}	-.056	.469	-.026	-.063
V_{11}	-.290	.269	.297	.091
V_{12}	-.036	.062	.460	-.303

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

Source: Compilation of Field Survey Data using SPSS 17.0

Table 5: Factor Model Interpretations

Factor Name	Regression Equations	Interpretations
(Factor-1) Effectiveness of Corporate Governance Issues (F ₁)	$F_1 = .074V_1 - .044V_2 - .017V_3 + .390V_4 + .204V_5 + .351V_6 - .058V_7 + .392V_8 + .247V_9 - .056V_{10} - .290V_{11} - .036V_{12}$	- In terms of factor score coefficient from the regression equation, it is observed that variables V₄, V₆, V₈ and V₉ are strongly positively related to F₁ (i.e. these variables have strong influence in calculating factor scores). - This deduction is also supported by the inference made from Table 2 where these variables only grouped under F₁ for having high factor loading with the stated factor.
(Factor-2) Regulatory and Ethical Issues to Improve Audit Independence (F ₂)	$F_2 = .055V_1 - .108V_2 - .070V_3 - .089V_4 + .136V_5 + .133V_6 + .514V_7 - .120V_8 - .105V_9 + .469V_{10} + .269V_{11} + .062V_{12}$	- Variables V₇, V₁₀ and V₁₁ are strongly positively related to F₂ (i.e. these variables have strong influence in calculating factor scores). - The inference made from Table 2 where these variables having high factor loading with the stated factor only grouped under F₂ support this deduction.
(Factor-3) Investigation Issues (F ₃)	$F_3 = .037V_1 + .486V_2 + .278V_3 + .043V_4 - .224V_5 - .187V_6 - .068V_7 - .054V_8 + .169V_9 - .026V_{10} + .297V_{11} + .460V_{12}$	- Variables V₂, V₃ and V₁₂ have strong influence in calculating factor scores and are strongly positively related to F₃. - This is also sustained by the inference made from Table 2 where these variables having high factor loading with the stated factor only grouped under F₃.
(Factor-4) Audit Independence in CAS (F ₄)	$F_4 = -.715V_1 - .022V_2 + .286V_3 + .019V_4 + .391V_5 - .051V_6 - .029V_7 - .073V_8 + .072V_9 - .063V_{10} + .091V_{11} - .303V_{12}$	- V₁ has strong negative coefficient with F₄ while V₅ has strong positive coefficient with F₄. - These 2 variables have strong influence in calculating factor scores. This is also ratified by the inference made from Table 2 where these variables only grouped under F₄.

• Determination of Model Fit

Final step of factor analysis is the determination of model fit. Basically, this is done based on estimated correlation between variables and common factors. However, difference between comparable items in initial correlation matrix and reproduced correlation matrix is plotted under Residual correlation matrix. Conceptually, if proportion of number of large residuals (residuals more than .05) to total number of residuals is more than 50%, factor analysis model does not provide a good fit to the data and should be reconsidered. In the present study, there are only 46 (69%) non-redundant residuals with absolute value more than .05. Hence, it can be inferred that factor analysis does not provide a good fit to the data.

Conclusion

In the beginning of our study, we have seen there are 12 variables representing 'Protection of Stakeholders' Interest'. These variables are internally consistent to the scale. Respondents' opinions on these variables are collected. But the said theme cannot be represented well with so many variables. In order to reduce and summarise the dataset and increase its interpretability, Exploratory Factor Analysis (EFA) is conducted to explore 4 factors. It is evident that each factor represents different dimensions influencing 'Protection of Stakeholders' Interest'. Corporate governance issues, regulatory and ethical reforms to improve audit and governance procedure, investigative issues and audit independence, are the dimensions identified under the current study for representing the stated theme. The model developed for conducting factor analysis is also found to provide an unsatisfactory fit to the given dataset.

References

- Alexander, D., & Britton, A. (2004). *Financial Reporting*. London: Cengage Learning EMEA.
- Basilevsky, A. (1994). *Statistical Factor Analysis & Related Methods: Theory and Applications*. New York: John Wiley.
- Carillo, D. (2008). Disgorgement Plans under the Fair Funds Provision of the SOX Act, 2002. *De Paul Business & Commercial Law Journal*, 6(2), 15-345

4. Chakraborty, P. (2004, September). Corporate Governance and Changing Role of Auditors. *Chartered Accountant*, 53(3), 269-272
5. Freeman, R., & Reed, D. (1983). Stockholders and Stakeholders: A New Perspective on Corporate Governance. *California Management Review*, 25(3), 88-106.
6. Gerotra, S. & Bajjal, M. (2002, July). Prominent Peer Review Practice around the Globe – Ensuring Quality Audit. *Chartered Accountant*, 51(1), 76-83.
7. Kaiser, H. (1958). The Varimax Criterion for Analytic Rotation in Factor Analysis. *Psychometrika*, 23, 187-200.
8. Lomax, S. (2003). Cooking the Books. *Business and Economic Review*, 49(3), 3.
9. Malhotra, N. (2003). *Marketing Research: An Applied Orientation*. Noida: Pearson Education.
10. Prentice, R. (2003). Enron: A Brief Behavioural Autopsy. *American Business Law Journal*, 40, 417-443.
11. Peterson, R. (1994, September). A Meta-Analysis of Chronbach's Co-Efficient Alpha. *Journal of Consumer Research*, 21, 381-391.
12. Reazee, Z. (2009). *Corporate Governance and Ethics*. New Jersey: John Wiley & Sons Inc.
13. Rockness, H., & Rockness, J. (2005). Legislated Ethics: From Enron to Sarbanes-Oxley, the Impact on Corporate America. *Journal of Business Ethics*, 57, 31-54
14. Tipgos, M., & Keefe, T. (2004). A Comprehensive Structure of Corporate Governance in Post-Enron Corporate America. *The CPA Journal*.
15. Winkler, A. (2004). Corporate Law or Law of Business? Stakeholders and Corporate Governance at the end of History. *Law and Contemporary Problems*, 67(4), 109-133.

