ISSN: 2455-3085 (Online)
RESEARCH REVIEW International Journal of Multidisciplinary
www.rrjournals.com [UGC Listed Journal]

Impact of Companies Act 2013 on the levels of corporate governance in Pharmaceutical Sector

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ARTICLE DETAILS

Article History
Published Online: 10 October 2018

Keywords
Corporate Governance, Mandatory variables, Non Mandatory variables, Voluntary variables Industry specific variables, Large Cap, Mid Cap, Small Cap

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ABSTRACT

The paper is perhaps the first effort to measure the levels of corporate governance during the pre-Companies Act 2013 and post-Companies Act 2013 phases and to understand if the Act has resulted in an improvement in the levels of corporate governance or not. Two separate indices have been formed, one is primarily based on the SEBI clause 49 as prevailing immediately before the introduction of the Companies Act and the other on the basis of the SEBI (LODR) 2015. The indices have also taken into account the Voluntary guidelines on corporate governance 2009. Four categories of variables have been identified namely –Mandatory variables (based on SEBI-LODR), Non Mandatory variables (based on SEBI-LODR), Voluntary variables (based on Voluntary Corporate governance guidelines 2009) and Industry specific variables (based on literature).

The study has taken a sample of 30 pharmaceutical companies. The sample is sub divided into Large Cap companies (12), Mid Cap (6) and Small Cap (12). The corporate governance score is tested on two-way factorial ANOVA. The results prove that a significant variation in the levels can be observed during the two periods of study.

1. Introduction

Corporate Governance has attracted a lot of attention in the last two decades, all over the world. 'The interest in corporate governance has been truly interdisciplinary, with much work being undertaken by researchers not only from economics and finance but also from law, management and accounting' (Bebchuk and Welsbach, 2010. The passage of the Companies Act 2013 and its implementation since 2015 with a clear focus on corporate governance has renewed the interest of the business and academicians to the issue of Corporate Governance and has thrown a plethora of issues to be discussed and deliberated upon.

2. Pharmaceutical Sector in India and need for Corporate Governance

The Indian Pharmaceutical sector which was almost 'non-existent' in the 70s has come to acquire a significant position not only in the Indian economy but also in the world. The sector is growing at about 8% to 9% annually and is currently estimated to be worth $4.5 billion. The sector comprises of about 20,000 registered units with approximately 250 large units and 8000 small units and 5 Public Sector Undertakings. The sector is characterized by severe price competition and government price control. It is one of the sectors in which 100% foreign equity participation and duty free imports on all inputs and products are permitted.

'Indian pharmaceutical sector is estimated to account for 3.1 – 3.6 per cent of the global pharmaceutical industry in value terms and 10 per cent in volume terms. It is expected to grow to US$100 billion by 2025'.(Indian Brand Equity Foundation 2017)

The sector recorded a robust growth in terms of exports, during April – September 2017, India exported pharmaceutical products worth Rs. 411.3 billion (US$ 6.4 billion). During April – October 2017, India exported pharmaceutical products worth Rs. 478.3 billion (US$ 7.4 billion).

It is expected that skilled scientists would be given key roles in organization structures in strategic processes both as decision makers and stockholders (Lacetra 2000). The Pharmaceutical corporates also need to invest heavily in R&D because there exists a strong and positive relationship between R&D costs and profitability of Pharmaceutical companies (Hajiheydari, Dastgir&Sultani 2011).Corporate Governance happens to be a 'key element' in R&D investment (Hillier, Pindado, Queiroz&Torre 2011).

3. Objectives of the Study

1. To develop separate indices for the two periods i.e. before the Companies Act 2013 and the period after the Act, for measuring the levels of corporate governance
2. To evaluate if the introduction of the Companies Act has led to an improvement in the standards of corporate governance in pharmaceutical companies during the post Companies Act 2013 phase over the earlier phase.

4. Literature Review

Literature relating to Corporate Governance and rating methodology

A lot of literature has accumulated on several aspects of corporate governance during the last two decades. Srinivasan, P., and Srinivasan, V. (2011) have concluded that top five themes that emerge in international journals on Corporate Governance in India are performance, corporate social responsibility, governance origins and models, disclosure, regulatory mechanism and reforms.

Schnyder (2012), opines that adopting measures with a few variables (parsimony) in the various measures may be of crucial importance but it is necessary to exercise discretion while applying such measures. Aguilera and Desender (2012) have extensively studied the various academic and corporate indices by highlighting their strengths and limitations. Sarkar, J., Subrata, S., and Sen,(2012), constructed a Corporate Governance Index for 500 listed firm for the period from 2003 to 2008. The index concentrated on four important corporate governance factors Board of Directors, ownership structure, audit committee, and external auditorIn a similar study but covering a different period, (2008 to 2011), Haldar, Arunima& Rao, (2013) studied the levels of corporate governance in large listed firms. They constructed an index for six factors. Vintila and Gherghira (2012) examined the relationship between Corporate Governance ratings and firm performance. The research found a negative relationship between Corporate Governance sub-indices and firm performance. Bagchi (2012) found that no abnormal returns were earned by different portfolios constructed on the basis of Corporate Governance Index. Bhagat, S., Bolton, B., &Romano.R. (2008), conducted a study to evaluate if corporate governance indices could be used as a tool to predict corporate performance and to see if they have any implications for public policy. They concluded that there is no one best measure of corporate governance. They opine that 'the most effective governance system depends on context and on firms', specific circumstances'.

Mukhopadhyay, Mallik and Dhamodiwala (2012),constructed an index which consisted of four sets of variables – mandatory, non-mandatory, voluntary and beyond corporate governance containing 82 variables in all. The study revealed that corporate governance leads to improved financial performance. Shamimul Hasan and Normah Omar (2015), found that a significant positive relation existed between board independence and market capitalization. Aggarwal, Reena, Schloetzer, Jason D. and Williamson, Rohan (2015), studied the long term impact of revised corporate governance listing standards on firm value and corporate culture. It was revealed that the post mandate period was marked by a reduction in the 'value gap' as compared to the earlier period.

Research in the field of Corporate Governance has by and large made use of indexes to measure the extent of corporate governance. The indexes are built on various assumptions and dimensions of corporate governance. A study of the literature reveals that no index can be used in all situations. For every study, index needs to be built taking into account the particular needs of the study.

Literature relating to Corporate Governance and Pharmaceutical industry

Baysinger et al. (1991)in their study examined the influence on R&D spending by factors such as percentage of outside directors on a company's board, the concentration of equity ownership and the roles of institutional stockholders. The study found that high insider representation on a Board and a concentration of equity among institutional investors positively affected corporate R&D spending. Casper and Matraves (1997)assess how the leading German and UK pharmaceutical firms are adapting to changes in their competitive environment. The results show that firm competencies created in order to compete globally may still originate within national economies because the generation of R&D remains 'relatively national'. Lacetra (2001) has highlighted the increasing importance being placed in the pharmaceutical industry on biotechnology and life sciences which has led to emphasis being placed on innovative activity. The author suggests a role for organizational practices on Corporate Governance and an influence of different governance arrangements on innovative activity. The paper proposes industry specific variables for pharmaceuticals including internal settings as well as relations with external actors. Gray and Skogsvik (2004) empirically investigate voluntary disclosure practices of a few selected Swedish and UK Pharmaceutical companies.

Work on Corporate Governance has undergone both a quantitative and qualitative improvement over the last 20 years or so. Research has been undertaken on a number of variables such as the impact of market efficiency, insider information, environmental performance, risk disclosures, equity holding pattern, R&D spending, human resource practices, etc. on Corporate Governance levels of companies. Most of the research has been undertaken in US and UK, some of the research is of cross national nature, few researches have been conducted in Indian conditions covering Indian regulatory framework. Even few researches have been conducted in industry specific conditions. It is widely recognized that there is need for more empirical research in Indian context which explore the institutional contextual realities of India (Padmini Srinivasan 2011).

5. Research Gap and Need of the Study

The present study is an attempt to address the question, whether the introduction of the Indian Companies Act 2013 has led to improvement in the level of corporate governance or not and to what extent. This makes it a unique study since no such study has been made so far. Another feature of the study is the use of two separate indexes, one for the period before the Companies Act 2013 and one for the period after the implementation of the Act The study is not confined to the Corporate Governance Report in the Annual Report only rather various other sections such as Directors Report, Auditor's Report, and Financial Report etc have also been searched to effectively quantify the data. The study is clearly focused on Pharmaceutical companies in view of its strategic importance to the Indian economy. It also touches on industry specific variables such as R&D spending, appointment of scientists on Board of Directors and formation of innovation committees.

6. Research Methodology

The present study has drawn inspiration from a number of studies, such as Sarkar, Sarkar, Subrata& Sen, (2012), Haldar, Arunima& Rao, (2013) and Mukhopadhyay, Mallik &Dhamodiwala. (2012). A four year period taking two years (2013 and 2014) before the introduction of the Companies Act 2013 and two years (2015 and 2016) after the introduction of the Act has been taken. Separate Indexes for the two periods called pre CG index and post CG index have been used to quantitatively measure the levels of corporate governance during these periods. For the pre corporate governance index (Pre CGI) the SEBI Clause 49, Voluntary guidelines and industry related literature has been used and 90 variables have been identified. Similarly for the post corporate governance index (Post CGI), SEBI (LODR) along with voluntary corporate governance guidelines 2009 and industry related literature has been used. This index makes use of 118 variables. Four sets of variables have been grouped into sub parts in both these indexes. These are:

- **Set 1.Mandatory variables.** Every listed company is required to abide by certain guidelines as specified by the listing requirements specified by SEBI which have been subject to amendments from time to time. SEBI has powers to de list companies which do not adhere to the corporate governance norms and also penalize them. SEBI circular CIR/CFD/POLICY CELL/2/2014 dated April 17.
- **Set 2. Non mandatory variables.** The clause 49 has included non-mandatory guidelines which are not compulsory provisions but it is desirable on the part of the companies to comply with these norms. SEBI circular CIR/CFD/POLICY CELL/2/2014 dated April 17, 2014,
- **Set 3. Voluntary variables.** These variables have been identified from the Voluntary Corporate governance guidelines framed by Ministry of corporate affairs in 2009.
- **Set 4. Industry specific variables**. Pharmaceutical industry has matured in a short time. From being virtually non-existent in the 1970's, Indian pharmaceutical ranks high in world rankings. While conducting research on pharmaceutical industry it becomes necessary to go beyond regulations and identify industry specific corporate governance variables. Such variables have been identified on the basis of literature cited above.
- **Scoring:** Each of the variables within the sets have been evaluated on a five point scale. Studies such as Mukhopadhyay, Mallik &Dhamodiwala. (2012) have used a two point (Yes or No) scale. But, such a methodology suffers from the drawback that the scale is quantitative rather in qualitative.

Since Anita I. Anand (2004) suggests that firms tend to observe mandatory variables more than other sets of variables, it becomes necessary to compare this aspect. Bhasin and Sheikh (2013) hold that 'corporations are following less than 50 percent of the items of CG disclosure index.'

There were a total of 163 listed pharmaceutical companies on Bombay Stock Exchange on 14th October 2016. 30 listed Pharmaceutical companies have been selected on the basis of stratified random sampling. 'Stratified random sampling is a method of sampling that involves the division of a population into smaller groups known as strata. In stratified random sampling, or stratification, the strata are formed based on members' shared attributes or characteristics'. Investopedia.

These have been categorized on the basis of capitalization into large cap (12 companies), mid cap (6 companies) and small cap (12 companies). Comparison has been made for large cap, mid cap and small cap companies since earlier studies hold that small cap and mid cap companies desist from bringing corporate governance reforms considering the cost of compliance. Lorne N. Switzer and Mingjun Tang (2009), Reddy, K., Locke, S., Scimgeour, F. and Gunasekarage, A. (2008).

Overall corporate governance Indices along with those for each category of variables have been found for each of the sampled companies for the pre Companies Act 2013 period (two years 2013 and 2014) Similarly the indices have been found for the post Companies Act 2013 period (two years 2015 and 2016). Annual Reports of these companies have been obtained from www.reportjunction.com. Content Analysis technique has been used to study the corporate governance reports contained in the annual reports to check the observance of mandatory and non-mandatory variables. The final result has been obtained in the form of corporate governance score. The scores of each of the four sets of variables have been averaged in order to compare the relative importance placed by the companies to each of the variables. These have been shown as weighted average of variables.

Two factorial Anova has been applied to compare the results for

a. Large, mid and small cap companies during the Pre Companies Act era
b. Large, mid and small cap companies during the Post Companies Act era
c. Large cap companies during Pre and Post eras
d. Mid Cap companies during Pre and Post eras
e. Small Cap companies during Pre and Post eras
f. All sampled companies during Pre and Post eras

7. Discussion and Findings

Hypothesis formation

It is hypothesized that there is no statistically significant difference between the means of CG Index of various cap sizes of pharmaceutical companies during the pre and post eras.

There is also no statistically significant difference between the means of the various variables of corporate governance during the pre and post eras.

There is no statistically significant difference in the means of the interaction.

Two factor ANOVA is applied to derive conclusions.

a) Comparison of Large, mid and small cap companies during the Pre Companies Act era.

A comparison the various cap sizes of companies during the Pre Companies Act era is calculated in Table 1

Table-1

Variables	Large Cap		Mid Cap		Small Cap		Average: Variables	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mandatory variables	0.6831	0.0125	0.6952	0.0046	0.6468	0.0057	**0.6750**	**0.0078**
Non Mandatory variables	0.4517	0.0165	0.4233	0.0189	0.3900	0.0165	**0.4217**	**0.0167**
Voluntary variables	0.4128	0.0259	0.3789	0.0079	0.3350	0.0024	**0.3756**	**0.0119**
Industry specific variables	0.3917	0.0039	0.2722	0.0079	0.2722	0.0000	**0.3120**	**0.0037**
Average: Cap Size	**0.4848**	**0.1252**	**0.4424**	**0.1669**	**0.4110**	**0.1523**		
Sources of Variation	**F-ratio**	**C.D.**	**sig.**					
Cap Size	68.31	0.0138	0.01					
Variables	945.64	0.0159	0.01					
CS x V	9.87	0.0276	0.01					

Source; *Author's calculations*

Since p values are ≤ 0.05 i.e. 95% confidence level, null hypothesis is rejected for all the three parameters. Thus, the different means are not statistically different which shows that there is variation in the extent of observance of corporate governance standards among the various cap sized companies during the Pre Companies Act 2013 era.

b) Comparison of Large, mid and small cap companies during the Post Companies Act era as shown in

Table 2: Comparison of Large, mid and small cap companies during the Post Companies Act era

Variables	Large Cap		Mid Cap		Small Cap		Average: Variables	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mandatory variables	0.7042	0.0098	0.6663	0.0373	0.6549	0.0242	**0.6751**	**0.0241**
Non Mandatory variables	0.4917	0.0071	0.3533	0.0660	0.4300	0.0000	**0.4250**	**0.0246**
Voluntary variables	0.6071	0.0101	0.3988	0.0522	0.4851	0.0059	**0.4970**	**0.0229**
Industry specific variables	0.4417	0.0196	0.2833	0.0079	0.2611	0.0000	**0.3287**	**0.0089**
Average: Cap Sizes	**0.5612**	**0.1095**	**0.4254**	**0.1589**	**0.4578**	**0.1506**		
Sources of Variation	**F-ratio**	**C.D.**	**sig.**					
Cap Size	49.29	0.0311	0.01					
Variables	157.62	0.0359	0.01					
Cap Size x Variables	4.92	0.0622	0.05					

Source*; Author's calculations*

Null hypothesis is rejected at 95% confidence level. Thus, means of the various cap sized companies, variables and interaction are not statistically significant.

c) Comparison of Large cap companies during Pre and Post Companies Act era

Table 3Comparison of large cap companies during Pre and Post eras

Variables	Pre-CG		Post CG		Average: Variables	
	Mean	SD	Mean	SD	Mean	SD
Mandatory variables	0.6831	0.0125	0.7042	0.0098	**0.6936**	**0.0114**
Non Mandatory variables	0.4517	0.0165	0.4917	0.0071	**0.4717**	**0.0119**
Voluntary variables	0.4128	0.0259	0.6071	0.0101	**0.5100**	**0.0178**
Industry specific variables	0.3917	0.0039	0.4417	0.0196	**0.4167**	**0.0121**
Average: Pre/Post	**0.4848**	**0.1252**	**0.5612**	**0.1095**		
Sources of Variation	**F-ratio**	**C.D.**	**sig.**			

Pre vs Post	106.53	0.0171	0.01			
Variables	263.16	0.0241	0.01			
Pre/post x Variables	28.91	0.0341	0.01			

Source; *Author's calculations*

Since p values for various cap sized companies, various variables and interaction are ≤ 0.05, the null hypothesis is not accepted. It is concluded that no statistically significant difference exists which indicates that there is variation in the observance corporate governance levels.

d) Comparison of Mid Cap companies during Pre vs Post periods

Table 4: Comparison of Mid cap companies during the Pre and post phases

Variables	**Pre-CG**		**Post CG**		**Average: Variables**	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Mandatory variables	0.6952	0.0046	0.6663	0.0373	**0.6807**	**0.0211**
Non Mandatory variables	0.4233	0.0189	0.3533	0.0660	**0.3883**	**0.0421**
Voluntary variables	0.3789	0.0079	0.3988	0.0522	**0.3888**	**0.0298**
Industry specific variables	0.2722	0.0079	0.2833	0.0079	**0.2778**	**0.0081**
Average: Pre/Post	**0.4424**	**0.1669**	**0.4254**	**0.1589**		
Sources of Variation	**F-ratio**	**C.D.**	**sig.**			
Pre vs Post	1.02	NA	NS			
Variables	105.57	0.0548	0.01			
Pre/post x V	1.51	NA	NS			

Source; *Author's calculations*

Applying two ways factorial ANOVA, it is revealed that p values are ≤ 0.05 i.e. 95% confidence level, therefore the null hypothesis is rejected for variables, however for the pre post comparison the hypothesis for various cap sized companies cannot be rejected, similarly it cannot be rejected for interaction. Thus, the different means are not statistically different which shows that there is variation in the extent of observance of corporate governance standards among the mid cap sized companies during the two periods.

e) Comparison of small cap companies during Pre vs. Post era

Table 5

Variables	**Pre-CG**		**Post CG**		**Average: Variables**	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Mandatory variables	0.6468	0.0057	0.6549	0.0242	**0.6509**	**0.0147**
Non Mandatory variables	0.3900	0.0165	0.4300	0.0000	**0.4100**	**0.0079**
Voluntary variables	0.3350	0.0024	0.4851	0.0059	**0.4101**	**0.0043**
Industry specific variables	0.2722	0.0000	0.2611	0.0000	**0.2667**	**0.0000**
Average: Pre/Post	**0.4110**	**0.1523**	**0.4578**	**0.1506**		
Sources of Variation	**F-ratio**	**C.D.**	**sig.**			
Pre vs. Post	75.34	0.0124	0.01			
Variables	873.65	0.0176	0.01			
Pre/post x Variables	44.63	0.0249	0.01			

Source; *Author's calculations*

Table 4 reveals that that p values are ≤ 0.05 i.e. 95% confidence level, therefore the null hypothesis is rejected for all the three parameters. Thus, the different means are not statistically different which shows that there is variation in the extent of observance of corporate governance standards among the Small cap sized companies during the two periods.

f) Comparison of all sampled companies during Pre vs. Post era

Table 6

Variables	Pre-CG		Post CG		Average: Variables	
	Mean	SD	Mean	SD	Mean	SD
Mandatory variables	0.6750	0.0078	0.6751	0.0241	**0.6751**	**0.0114**
Non Mandatory variables	0.4217	0.0167	0.4250	0.0246	**0.4233**	**0.0119**
Voluntary variables	0.3756	0.0119	0.4970	0.0229	**0.4363**	**0.0178**
Industry specific variables	0.3120	0.0037	0.3287	0.0089	**0.3204**	**0.0121**
Average: Pre/Post	**0.4461**	**0.0104**	**0.4815**	**0.0203**		
Sources of Variation	**F-ratio**	**C.D.**	**sig.**			
Pre vs Post	30.80	0.0132	0.01			
Variables	171.20	0.0322	0.01			
Pre/post x Variables	10.78	0.0456	0.01			

Source Author's calculations

Applying two way factorial ANOVA it is revealed that p values are ≤ 0.05 i.e. 95% confidence level, as shown in table 8 above. Therefore the null hypothesis is rejected for all the three parameters. Thus, the different means are not statistically different which shows that there is variation in the extent of observance of corporate governance standards among the sampled companies during the two periods.

8. Findings

The above discussion shows that large cap pharmaceutical companies display a higher level of corporate governance as compared to mid-cap and small cap companies both during the pre-companies Act 2013 phase and post companies Act 2013 phase. Large cap companies display a better performance during the post-companies act 2013 era, but the same cannot be said about mid cap companies. However a positive change in voluntary and industry specific variables can be observed for such companies. Small Cap companies also reflect an improvement in performance during the two phases. It is also observed that taking all the 30 pharmaceutical companies as a unit the corporate governance levels during the post phase display better compliance towards corporate governance as compared to the pre phase.

Among the variables, mandatory variables carry the largest values across all the studies. Non mandatory and voluntary variables have similar observance whereas industry specific variables come last across all dimensions. It is observed that mandatory variables are given maximum importance by the companies.

The study reveals that the developments during the post phase has ushered in an era of better compliance among the pharmaceutical firms generally. The Large cap companies and small cap have been more explicit in presenting the information relevant to observance of corporate governance in their annual reports as compared to mid-cap companies (Table 1, 2, and 3). All the companies have been more forthcoming in revealing the mandatory variables as compared to other variables. During the post phase the number of non-mandatory variables has come down as some of such variables have been shifted to the category of mandatory variables but this does not seem to have increased the inclination of companies to ensure better disclosure of non-mandatory variables to a significant extent. Among the voluntary variables the provision of nomination committee has been made a mandatory requirement during the post companies act phase. Other variables remain more or less the same. The sampled companies have ensured better disclosure during the post phase but not as significantly as desired. The industry relevant variables are only three in number, extent of R&D spending, appointment of directors on board of directors and industry specific committees. The large cap companies have shown a greater inclination to reveal such information. They have also progressed during the post phase. But the small and mid-cap companies have not shown any significant inclination to disclose such issues .Although when all cap sized companies are taken collectively; they have progressed in disclosure on this front during the post phase.

9. Limitations and Implications for Future Research

Although the objective of the study has been to measure and understand to what extent the pharmaceutical companies have progressed in revealing their corporate governance information during the post phase, the sample size of 30 pharmaceutical companies listed on BSE is too small. There were 163 pharmaceutical companies, listed on BSE on 14th October 2016. The sample size is only about 18 % of the universe. The study can be extended to cover a larger sample. Similarly two years before the introduction of the Companies Act 2013 and two years after, have been taken to make comparisons. This can be extended to a larger period.

The study has focused on Pharmaceutical sector only because the sector is important for the growth of the country on account of its export potential. 'India accounts for 20 percent of global exports in generics. In FY16, India exported pharmaceutical products worth USD 16.89 billion, with the number expected to reach USD40 billion by 2020', IBEF study (2017). The study concludes that as far as a large cap company is concerned their performance w.r.t. corporate governance is better as compared to the other cap sized companies. All companies have shown a greater inclination to disclose mandatory variables. All companies have not been forthcoming in disclosure of industry specific variables which are very significant for the sector. Better performance of Industry specific variables is desired in order to integrate the sector with global best practices. The study is only a tip of the ice berg and more elaborate research needs to be made in order to give guidelines to the sector.

10. Conclusion

The primary aim of the study is to analyze the extent of improvement in corporate governance levels of pharmaceutical companies during the pre-companies Act phase and the post companies Act phase. The introduction of the Companies Act 2013 is perceived as a path breaking development in the field of corporate governance. Various new provisions specifically designed to bring about a change in how companies are governed have been incorporated in the Act. Subsequent developments such as the SEBI (LODR) have also been directed to improve the level of corporate governance. The present study has tried to study the extent of improvement in these corporate governance levels in the post Companies Act 2013 period. The significance of the study is that it has divided the sampled companies into large cap, mid cap and small cap companies and two separate indexes for the pre and post phases have been devised to make comparisons. In a significant departure from previous studies. The study has made use of four sets of variables – mandatory, non-mandatory, voluntary and industry specific variables for the construction of the two indexes. It has also relied on equal weights and unequal weights. Two way factorial Anova has proved that that there is a difference in the means, indicating that there is a significant difference in the pre and post phases. This shows that the sampled companies have seen a significant positive improvement during the post period for the large, small and all sampled companies. But the companies seem to be more forthcoming in the disclosures relating to mandatory variable as compared to the other three. This leaves a lot of room for further improvement.

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