The Effect of Independent Directors on Corporate Governance: Using Association Rules of Data Mining Techniques

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Abstract— *The literature on corporate governance and various codes emphasis that the Board of directors should provide direction to the company, evaluate and approve strategies, appoint and remove the chief executive officer and decide the compensation for him and other members of the top management. While an Independent Director should focus on the adequacy and effectiveness of the internal control and risk management systems, they are expected to protect the interest of non-controlling shareholders, should be watchful to identify weaknesses and should act tough only when required. Despite Enron, World Com and Satyam's Boards having many Independent Directors, their presence could not avert the major corporate disasters. The challenges of Independent Directors are many folds and growing day by day. The government expects Independent Directors to bring an independent judgment to bear on the Board's deliberations especially on the issue of strategy, performance; risk management, resources, key appointments and standards of conduct and bring an objective view in the evaluation of performance of Board and management. The public outrage in many corporate failures suggests that there is a huge expectation gap between what Independent Directors can do and what stakeholders expect to do. This gap is created because all the stakeholders have hyped the role of Independent Directors under the code of corporate governance. In order to be effective, they need to understand they can effectively protect the interest of non-controlling shareholders even when the Board is devoid of certain critical responsibilities. This paper attempts to find out "the ultimate measure of Independent Directors not where they stand in moments of comfort, but where they actually stand and should stand at the time of challenges and controversy."*

Keywords—Independent Director, Corporate overnance and Board of Directors.

I. INTRODUCTION

It is widely accepted that the presence of Independent Directors in the Boardroom improves the quality of corporate governance. Accordingly, corporate governance mechanisms all over the globe, including in India, focus on Independent Directors. The Independent Directors are expected to protect the interest of non-controlling shareholders. They should be watchful to identify weaknesses before they surface in the product market. But, they should not be over reactive. After the passing of the Companies Act, 2013 and India getting a modern Companies Act, theexpectations from all fronts are high. The history of corporate India suggests that in spite of having vested power under clause 49 of the Listing Agreement with stock exchanges enforced by market watchdog SEBI, Independent Directors were forced to act like lame ducks. The code for Independent Directors included in schedule IV to the Act, are requires a number of provisions, whichexpected to be fulfilled by the Independent Directors. The objective of the paper is to highlight the journey of the Independent Directors from its gestation period up to the enactment of Companies Act, 2013 and the change in the roleof the IDs in the changing business scenario since the year 2013.

Independent directors

An Independent director (also sometimes known as an outside director) is a director member of a board of directors who does not have a material or pecuniary relationship with company or related persons, except sitting fees. Independent Directors do not own shares in the company. Some sources state non-executive directors are different from independent ones in that non-executive director are allowed to hold shares in the firm while independent directors are not. As per Section 2(47) of the Companies Act, 2013, an Independent Director means a Director as referred to in sub-section (5) of section 149. The new Act along with the definition of ID's also provides the criteria for appointing, qualifications, tenure, remuneration and liability of ID's.Independence is a quality that can be possessed by individuals and is an essential component of professionalism and professional behaviour. It refers to the avoidance of being unduly influenced by a vested interest and to being free from any constraints that would prevent a correct course of action being taken. It is an ability to stand apart from inappropriate influences and to be free ofmanagerial capture, to be able to make the correct and uncontaminated decision on a given issue.

Key role of an independent director in a company

- Board structure and objectivity of the Board
- Protection of minorities
- To build up shareholder's confidence in the company
- To improve relations with investors
- To make coordinated strategic decisions
- To resolve conflicts
- To enhance management transparency
- To increase company's value
- Role of other stakeholders in management
- System of reporting and accountability
- Audit and internal control
- Effective supervision and enforcement by regulators
- To encourage Sustainable Development of the Company and its Stakeholders.

Corporate Governance

Corporate governance is the system of rules, practices and process by which a company is directed and controlled. Corporate governance essentially involves by balancing the interests of company's many stakeholders, such as shareholders, management, customers, suppliers, financiers, government and the community. Since corporate governance also provides the framework for attaining a company's objectives.it encompasses practically every sphere of management, from action plans and internal controls to performance measurement and corporate disclosure. Governance refers specially to the set of rules, controls, policies and resolutions put in place to dictate corporate behavior. Proxy advisors and shareholders are important stakeholders who indirectly affect governance, but these are not examples of governance itself. The board of directors is pivotal in governance, and it can have major consequence for equity evaluation.

The Board of Directors

The board of directors is the primary direct stakeholder influencing corporate governance. Directors are elected by shareholders or appointed by other board members and they represent shareholders of the company. The board is tasked with making important decisions, such as corporate officer appointments, executive compensation and dividend policy. In some instances, board obligations stretch beyond financial optimization, when shareholder resolutions call for certainsocial or environmental concerns to be prioritized. Boards are often comprised of inside and independent members. Insiders are major shareholders, founders and executives. Independent directors do not share the ties of the insiders, but they are chosen because of their experience managing or directing other large companies. Independents are considered helpful for governance, because they dilute the concentration of power and help align shareholder interest with those of the insiders.

About the study

The study has been conducted to identifying the major role of Independent Directors through our three category of the questionnaire. Current level of Independent Director and Corporate Governance work related aspects, whichneeds to be improved for the purpose of bankruptcy of the firms. The present research will help Independent Director to highlight the areas for improvement in Corporate Governance. The results of the research will help to give specific recommendations to the company regarding Role of the Independent Director which areas to pay more attention. The Corporate Governance brought about a paradigm shift in the Indian watch market when it introduced its futuristic complemented by international styling.

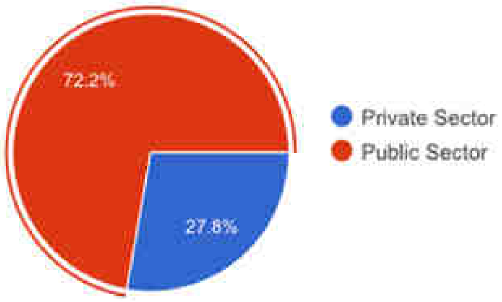
II. RESEARCH METHODOLOGY

The sample size for this research is 68.Questionnaire is used as the tool fordata collection. Questionnaire is a self-report data collection instrument that each research participant fills out as a part of a research study. Primary and Secondary both sources are used for data collection in this study. The aim of this article is to find the association and its impact in Independent Director and Corporate Governance. Here the major parameters have been taken with twenty questions. The questions are designed for the questionnaire survey form Independent Directors of different private and public companies. The questionnairewe have designed in three major categories, i) Innovation and Contributions, ii) Policy and Corporate Governance of the Company and iii) Performance monitoring. We got response from 68 Independent Directors of Private and Public Sectors. Here we used these data for analysis in Association Rules of Data Mining Techniques.

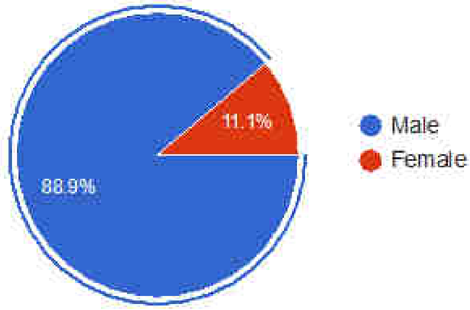
Analysis and Observations

The Sample Size: 68, the following pie chart shown response of our few questions.

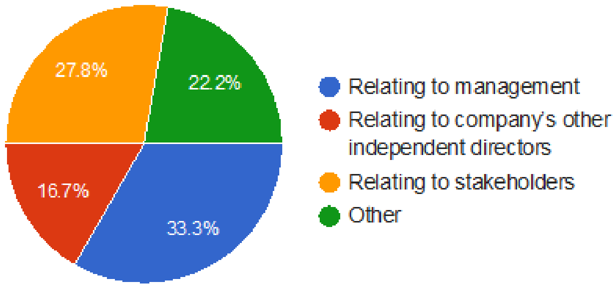
Total Response



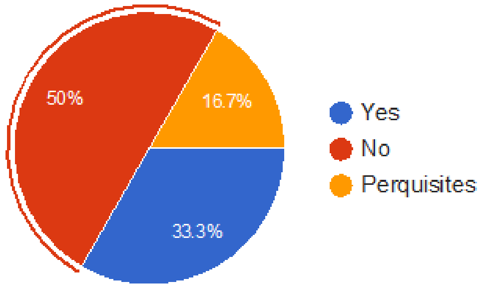
Gender



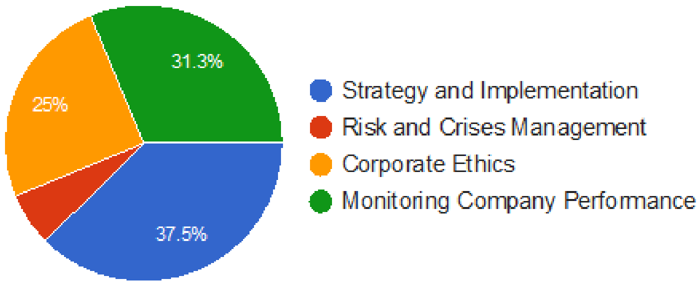
Major challenge faced CG fees



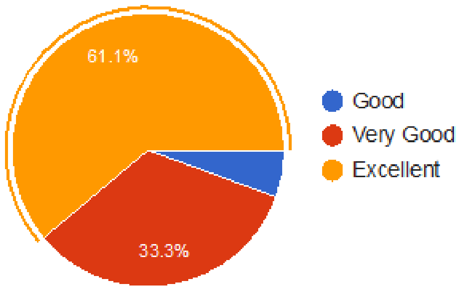
Remunerated in terms of sitting



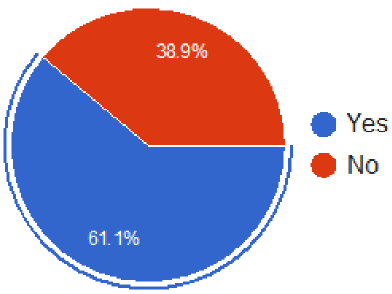
Most essential feature for board effectiveness



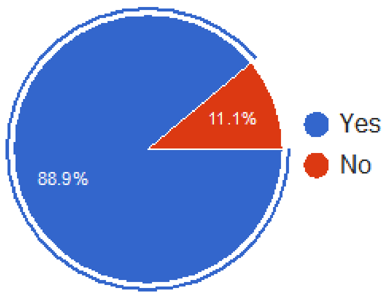
Work experience of ID



Separate discussion/meeting with other Independent directors.



Suggestions from other experts



Association Rules

Association rule is a procedure, which is looking for a relationship among an item with other items. Association rule is usually used "if" and "then" such as "if A then B and C", this shows if A then B and C. To determine the Association's rules, it needs to be specified the support and confidence to restrict whether the rule is interesting or not.

Support: A measure that indicates how much the level of dominance of an item or item set of the overall transaction

The rule X ⇒ Y holds with support s if s% of transactions in D contains X □□ Y. Rules that have as greater than a user-specified support is said to have minimum support.

$$Support = \frac{number\ of\ transactions\ that\ contain\ antecedents}{total\ number\ of\ transaction}$$

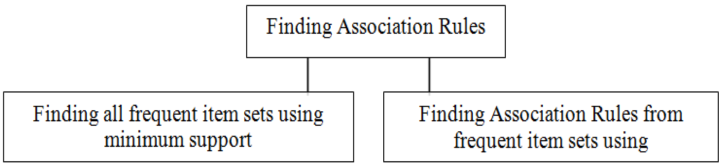
Confidence: A measure that shows the relationship between items in a conditional (e.g. how frequently purchased item B if theperson buying the item A).

The rule X ⇒ Y holds with confidence c if c% of the transactions in D that contain X also contain Y. Rules that have a c greater than a user-specified confidence is said to have minimum confidence.

$$Confidence = \frac{support\ (X \cup Y)}{support\ (X)}$$

Basic Architecture

1) Input Data: Giving the existing data set
2) Training the data: The algorithm will learn about the data
3) Building the Model: based on that knowledge the model will be build.
4) Knowledge: Obtain rules form the model
5)



6) Generating Association Rules
7) Decision making: Take decisions based on the rules

Association Rules generated using Data mining tools.

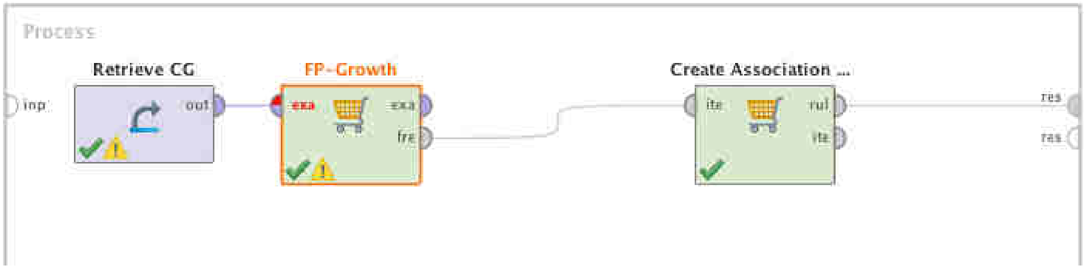
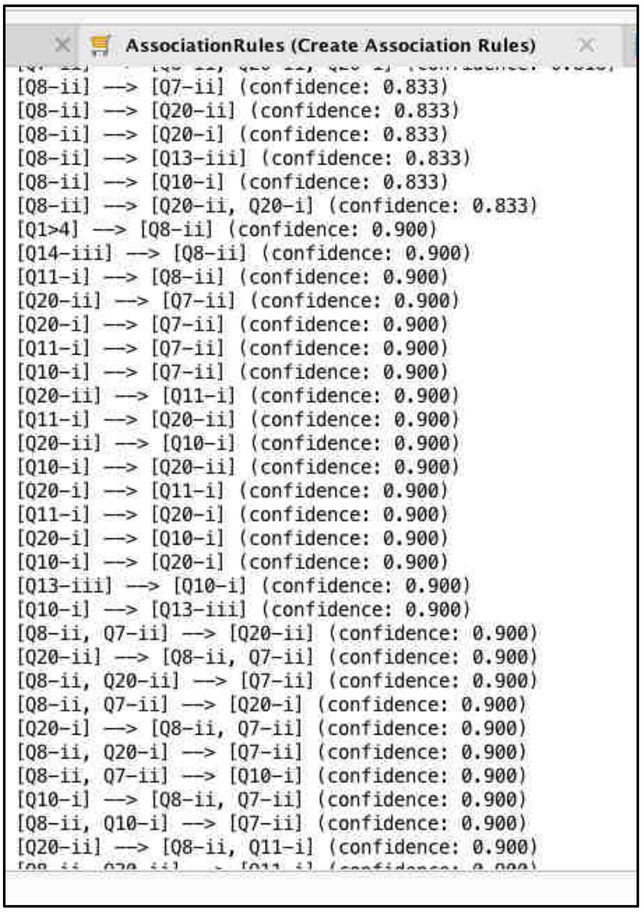


Fig.1: Main Process to create Association Rules


AssociationRules (Create Association Rules)

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[Q8-ii] --> [Q7-ii] (confidence: 0.833)
[Q8-ii] --> [Q20-ii] (confidence: 0.833)
[Q8-ii] --> [Q20-i] (confidence: 0.833)
[Q8-ii] --> [Q13-iii] (confidence: 0.833)
[Q8-ii] --> [Q10-i] (confidence: 0.833)
[Q8-ii] --> [Q20-ii, Q20-i] (confidence: 0.833)
[Q1>4] --> [Q8-ii] (confidence: 0.900)
[Q14-iii] --> [Q8-ii] (confidence: 0.900)
[Q11-i] --> [Q8-ii] (confidence: 0.900)
[Q20-ii] --> [Q7-ii] (confidence: 0.900)
[Q20-i] --> [Q7-ii] (confidence: 0.900)
[Q11-i] --> [Q7-ii] (confidence: 0.900)
[Q10-i] --> [Q7-ii] (confidence: 0.900)
[Q20-ii] --> [Q11-i] (confidence: 0.900)
[Q11-i] --> [Q20-ii] (confidence: 0.900)
[Q20-ii] --> [Q10-i] (confidence: 0.900)
[Q10-i] --> [Q20-ii] (confidence: 0.900)
[Q20-i] --> [Q11-i] (confidence: 0.900)
[Q11-i] --> [Q20-i] (confidence: 0.900)
[Q20-i] --> [Q10-i] (confidence: 0.900)
[Q10-i] --> [Q20-i] (confidence: 0.900)
[Q13-iii] --> [Q10-i] (confidence: 0.900)
[Q10-i] --> [Q13-iii] (confidence: 0.900)
[Q8-ii, Q7-ii] --> [Q20-ii] (confidence: 0.900)
[Q20-ii] --> [Q8-ii, Q7-ii] (confidence: 0.900)
[Q8-ii, Q20-ii] --> [Q7-ii] (confidence: 0.900)
[Q8-ii, Q7-ii] --> [Q20-i] (confidence: 0.900)
[Q20-i] --> [Q8-ii, Q7-ii] (confidence: 0.900)
[Q8-ii, Q20-i] --> [Q7-ii] (confidence: 0.900)
[Q8-ii, Q7-ii] --> [Q10-i] (confidence: 0.900)
[Q10-i] --> [Q8-ii, Q7-ii] (confidence: 0.900)
[Q8-ii, Q10-i] --> [Q7-ii] (confidence: 0.900)
[Q20-ii] --> [Q8-ii, Q11-i] (confidence: 0.900)
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Fig.2: Association Rules

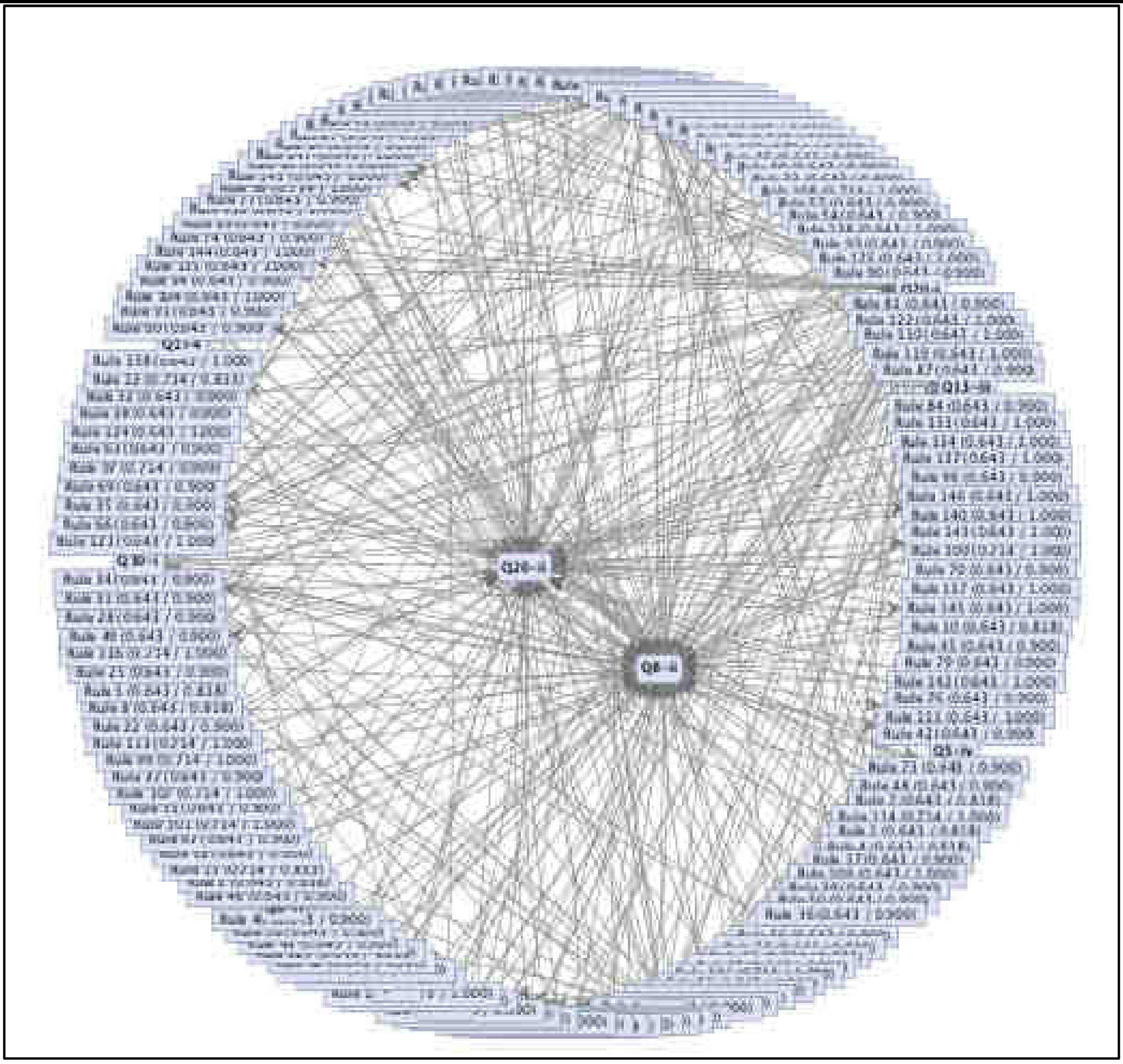

Fig.3: Node graph of Association rules for ID and CG

The above graph shows that, the most associated with Q8: (The Independent Directors (ID) are faced major challenge in Corporate Governance (CG)) and also agree with Q20: (They feel adequately remunerated in terms of sitting fees/perquisites). Some of the Independent directors are agree with other questions like Q7 (Contributed towards improving the performance of the company in terms of profitability and Q13strongly recommend for enhancing Corporate Governance of the Company).

III. CONCLUSION

This article is basically for individual Role of Independent Director of Corporate Governance. We have observed that The Role of Independent Director in Corporate Governance differences exist but we found through our analysis that both are associate in major challenging parameters out of our other parameters. We also found that the parameter seeking readiness for accepting major challenges is strongly associated in all types of environment. Having such a sample gives credibility to the results knowing that the findings came from individual question and environment where these results could be similarly applied. In the survey, data were collected from 68 Independent Directors form different private and public companies. The above analysis result shows that our question (Q8. The Independent Directors are faced major challenge in corporate governance is strongly associated in Q20: they feel adequately remunerated in terms of sitting fees/perquisites). Shedding light on role of independent directors gives organizations the knowledge to better understand their current responsibility and make the safe from bankruptcy and for all better productive for the companies.

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