

Voluntary Disclosure of R&D Activities: A Comparative Study of Selected IT and Pharmaceutical Companies in India.

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Abstract:

This study looks at voluntary R&D disclosure trends in the annual reports of a few Indian IT and pharmaceutical industries. A self-created R&D disclosure index has been created for the study's purposes. Secondary data provide the foundation of this investigation. The chosen IT and pharmaceutical firms' public annual reports were used to get the data. The study examines the extent of voluntary R&D disclosure both at the aggregate level and is based on a disclosure checklist comprising 52 elements of R&D information. Descriptive statistics have been utilised for the comparison of IT and pharmaceutical firms. The outcome demonstrates that, in comparison to IT businesses, pharmaceutical companies have disclosed more R&D information in annual reports in the context of total voluntary R&D disclosure.

Keywords: Research and development expenditure, Voluntary R&D disclosure, self constructed R&D disclosure.

Introduction

The world's economy has seen significant upheaval in recent decades. Due to the rapid expansion of the financial markets, investors' expectations have greatly increased, particularly in respect to problems with financial reporting. To address this new predicament, companies are recommended to increase the level of information sharing. Businesses offer a wide range of financial data, both in quantity and quality. In addition, due to the increasing acceleration of innovation in the economy's science-based sectors and the increase of intangible resources, firms are now conscious of the need of sharing knowledge about innovation. As a result, it is becoming increasingly necessary to disclose R&D information. R&D activities are a crucial component of intellectual capital, but because they are not recognised in financial statements, there is a need to improve the reporting model in order to meet the market's information needs by introducing the basic data necessary for a firm's transparency (Beattie et al., 2004). As a result, researching corporate disclosure and improving organisations' transparency regarding intellectual capital, especially R&D efforts, is a rich and fruitful research subject. Instead of alternative narrative information techniques, the current study focuses on the R&D voluntary disclosure provided in corporations' annual reports.

Literature Review

The objective of literature review is to find out the proper area of research gap. With a view to identifying the research gap, a review of literature has been made for the purpose of the study, which is furnished below.

Entwistle (1999) conducted a groundbreaking examination into Canada's disclosure environment for research and development. Zeghal et al. (2007) conducted a study to better understand R&D disclosure practises and found that the high-tech sector plans to publish more information about R&D operations than is already done in conventional financial reporting. Both the agency and signalling theories were used to support R&D voluntary disclosure. The researchers look at the association between three types of variables that were thought to have an effect on R&D voluntary disclosure and the level of R&D voluntary disclosure. Nor et al. (2010) go into greater detail about three facets of R&D disclosure, including historical and prospective, financial and non-financial, quantitative and non-quantitative. Additionally, they consider how board membership and ownership structure affect R&D voluntary disclosure. Abdelbadie and Elshandidy(2013) examine the factors that affect R&D activity disclosure voluntarily in the UK environment using a content analysis. It examines the impact of corporate features such as ownership structure, board membership, and R&D voluntary disclosure. The results of Merkle's (2014) study show that the quantity of narrative R&D disclosure is inversely connected with the performance of current profitability, and that this correlation is stronger for businesses that devote more resources to their R&D efforts and face greater competition.

Research Gap

A review of literature on R&D disclosure reveals the following research gap in Indian context: First, the number of study on corporate disclosure of R&D information is very limited. Second, very few of them have attempted to measure the extent of R&D disclosure by corporate entities. In the context of available literature review, a comparative analysis of voluntary disclosure R&D expenditure of Indian IT and Pharmaceutical Companies is undoubtedly assumes significance. Thus, it is considered as research gap.

Objective of the Study

From review of literature in Indian context following two research questions have emerged:

- i) What is the extent of overall R&D disclosure made by corporate entities in India?
- ii) To what extent companies in India addresses different categories of R&D information

On the basis of these research questions, following two objectives of this paper were set:

- i) To empirically measure and analyse the extent of R&D disclosure in annual reports of selected pharmaceutical and IT companies listed in Indian Stock Exchanges.
- ii) To empirically measure and analyse the extent of disclosure in respect of different categories human resource information in annual reports of selected pharmaceutical and IT companies.

In this background, the present study aims to measure and analyse the extent of R&D disclosure by selected pharmaceutical and IT companies in India both at overall level as well as category-wise R&D information.

Research methodology

To know the extent of disclosure of R&D in annual reports of selected pharmaceutical companies and IT companies, a disclosure checklist has been made of 52 information items relating to R&D. Here, 4

categories of information have taken to construct disclosure index. After finalising the disclosure checklist, annual report of each selected company has thoroughly examined. A score one ('1') is awarded to the concerned company if an information item is disclosed anywhere in its annual report. If an information item is found to remain undisclosed in the annual report, a score zero ('0') is awarded. When awarding of scores for all information items are over, overall disclosure of R&D information of each company is measured by an index of disclosure, called Overall Research and Development Disclosure Index (ORDDI). This index is calculated by the ratio of total score obtained by the company to maximum score attainable by the company multiply by 100.

Analysis and Findings

Table-1: Overall R&D Disclosure

Statistic	Pharmaceutical companies	IT companies
Mean	52	46
Median	45	42
Minimum	30	20
Maximum	83	81
Range	53	61
Std. Deviation	18	21

From the information presented in Table-1, we have observed following important notes in respect of overall R&D disclosure by our selected companies, (i) in case of selected pharmaceutical companies extent of R&D disclosures varies from 30% to 83% yielding a range of 53%, (ii) Mean Disclosure of 52% indicates that average level of R&D disclosure is inadequate, (iii) Minimum disclosure score of 30% is very poor, (iv) Maximum disclosure score of 83% is fairly high. However, it reveals that none of the pharmaceutical companies in our study has disclosed all the 52 R&D information items examined in our study, and (v) A wide variation is observed in the extent of overall R&D disclosure which is evident from range of 52% and standard deviation of 18%. Table-1 also shows that (i) In case of selected IT companies, extent of R&D disclosures varies from 20% to 81% yielding a range of 61%, (ii) Mean Disclosure of 46% indicates that average level of R&D disclosure is inadequate, (iii) Minimum disclosure of 20% is very poor, (iv) Maximum disclosure of 81% is fairly high. However, it reveals that none of selected IT companies in our study has disclosed all the 52 R&D information items examined in our study and (v) A wide variation is observed in the extent of overall R&D disclosure which is evident from range of 46% and standard deviation of 21%. In the next section, category wise R&D information has been analysed.

Conclusion

The study shows the evidences of low to high level of R&D disclosure by selected companies. It is observed that mean value and CV of overall R&D disclosure in pharmaceutical companies during the period of study is higher via-a-vis lower as compared to IT companies. The values of range of pharmaceutical companies indicates that average disclosure of overall R&D disclosure is insufficient for the year 2021-22; whereas the value of range of IT companies indicates that average disclosure of overall R&D disclosure is insufficient during period of study. So, we concluded that an inadequate average level of disclosure indicates shortcomings in R&D reporting practices of the companies.

Limitation Study

There are some limitations on the present study. First off, the disclosure index used in this study uses the quantity of disclosure as a stand-in for the quality. Second, while research and development disclosure can be made through a variety of channels of communications, including conference calls, press releases, and announcements, the current study only examines companies' annual reports.

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