

Research Proposal

Title: Impact of Research & Development Expenditure on Firm's Profitability:

Evidence from Indian Pharmaceutical Companies

Statement of Problem: According to the Report of Research and Development Statistics (2017-18), India accounts for 2.7% share in world's gross expenditure on R&D during 2014-15 to 2016-17" Gross Expenditure on R&D is driven by the Central Government, State Governments, higher education and industrial sector. During 2014-15, the public sector Industries accounted for 5.5%, with and private sector industries contributed for 38.1%. The expenditure on Research and Development (R & D) is always characterized by high reward with great uncertainty. It creates a burden on the present profit in anticipation of huge profits in future. But the firms making huge investments in R&D have to accept the possibility of massive failure. The current precarious scenario adds on the difficulty to predict the impact of investments made in R & D activities over the profitability of the companies. In this context the proposed study intends to analyze the impact of R&D expenditure on the profitability of Indian pharmaceutical companies.

Need of the Study: R & D activities carry great deal of- investments in terms of material, salaries to highly educated research team, infrastructure. The efforts to create an intangible asset to generate future profit may bring marvellous success to the organization but at the flip side the activities may turn into complete failure. The success (failure) of the R& D activities depend upon many factors like size, industry nature, rival's activities market conditions etc. Xu and Zhang (2004) found that there are long term implications of R&D activities to the industries but no remarkable difference between high-technology and low- technology industries was observed. Feng and Rong (2007) examined the relationships among profitability efficiency, innovation capacity and firm value. The study investigated Japanese Electricity machinery industry for the period 2000 – 05. The results reveal that R&D intensity is negatively related with firm's value, however a positive relationship has been observed in the long run between firm's value and cumulative R&D intensity. Chadha and Oriani (2009) assessed the relation between stock market valuation and R & D investments of domestic as well as foreign firms traded at the Bombay Stock Exchange, India. The study concluded positive relation between firm's R&D investment and stock market values. Ayaydin and Karaaslan (2014) obtained contradictory results for manufacturing firms in Turkey. The results indicated that the intensity of R&D have no effect on the performance of companies. Similarly, Zied (2016) reported absence of any relation between R&D and firm performance. Jung and Kwak (2018) found that the increment in firm's size and innovation capacity may reverse the negative influence of uncertainty on R&D investment into positive impact. The empirical results revealed that firm's size and innovation capacity positively moderate the negative relationship between uncertainty

and R&D investment. Thus there is hybrid result in context to the relationship between R & D activities and firm's performance and profitability. In this context, the proposed study intends to analyze the implications of R&D activities over their profitability of Indian companies with special reference to pharmaceutical industry because this industry makes huge investment in R & D activities.

Objective of the Study

The proposed study attempts to explore the impact of R & D expenditure over the profitability of pharmaceutical companies listed in Indian Stock exchanges.

Research Methodology

The proposed study will explore the impact of R & D expenditure over the company's profitability. Since in India R & D investment expenditure by private sector has always been dominated by pharmaceutical industry, the study will investigate the impact of R & D investments on profitability of pharmaceutical companies. Secondary data will be collected for listed Indian companies for a period of 10 years. Based on the previous research work return on equity (ROE), return on assets (ROA) and earnings per share (EPS) will be considered for dependent variable as a proxy to profitability. Similarly, company specific variables will be taken as independent variables representing the R & D activities of the firm. The data will be collected either from Capital line or CMIE prowess because both are reliable databases to provide extensive information for Indian companies and have been widely used by Indian researchers. The data will be analyzed through regression analysis. The null hypotheses to be examined are:

- H_{01} : R & D does not have any impact on the profitability of listed Indian pharmaceutical companies as measured by ROE.
- H_{02} : R & D does not have any impact on the profitability of listed Indian pharmaceutical companies as measured by ROA.
- H_{03} : R & D does not have any impact on the profitability of listed Indian pharmaceutical companies as measured by EPS.

The results will be interpreted on the basis of 5% level of significance.

Implications of the Study

The pharmaceutical companies incur heavy expenditure on various Research & Development activities concerning with drugs and vaccines. The R & D investment has significant impact on firm's financial position due to the involvement of huge cost. It creates a charge on current profit in anticipation of future earnings. Since R & D activities are always full of uncertainties,

the companies sometimes become reluctant to engage heavy funds for such activities which may throw them out from the competition. In this context, the results of this study are expected to provide significant inputs to Indian pharmaceutical companies as well as market regulators and investors.

References

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