

V. CONCLUSIONS

This study focused on whether conducting earnings management by manipulating R&D expenses in South Africa has a significant effect on debt cost. This study collected data from 2011 to 2018 from S&P Capital IQ database. All 67 listed enterprises are included, for a total of 339 samples. The empirical results suggest that the listed firms in South Africa that manipulate through R&D expenses has a negative effect on the cost of debt (non-significant). The results show that the cost of debt are lower when firms manipulating R&D expenses and funds suppliers (creditors) have adjusted their required minimum return of funds with firms that indulge in this earnings management behavior. The results also show that earnings management through adjust Research and development expenditures for South Africa listed firms has a non-negatively relationship with debt costs and the signs and magnitudes of the cost of debt variable coefficients were not difference among high; medium-high; medium; medium low and low Research and development expenditures firms.

The results provide critical implications for managers, creditors, researchers, and regulators. Managers of listed firms in South Africa that manipulate R&D expenses to obtain funds cost benefits (i.e., decreased cost of debt) because creditors may not identify this earnings manipulating behavior is a price risk factor, thereby causing creditors to calculate an decreased risk premium. In other words, creditors may have not understood the negative effects of real earnings management by firms seeking to obtain fund cost and misled by REM, thus they trust real earnings through real activities management. For researchers, researchers should analyzed discretionary R&D serve as opportunistic earnings management and exploit creditors' wealth for the short-term benefits or not.

For regulators, especially in taxation authorities. Some listed enterprises may adjusted their R&D expenses for tax deductions. Therefore, to decrease the lower limits of manipulated their R&D expenses, they may tracked the R&D activity of listed enterprises, inspected budget reports for source documents and expenses related to R&D activity, verified R&D activity based on intellectual property rights certificates, and established a comprehensive taxation management system for R&D expenditure, wherein R&D spending represents the true level of investment in R&D or innovation.

This study has three limitations. First, the findings cannot be generalized to non-listed firms. Second, the applicability of the proposed R&D expenditure model used to measure earnings manipulation may not apply to listed enterprises among different nations because different nations have different environment such as intention of innovation, innovation ability, government subsidy, laws, tax system etc. Third, firm's manipulated earnings models through R&D expenditures, hence the other researchers may not be considered equivalent Future studies can also explore different conditions. First, our proxies for cost of debt were interest expense of next year divided into the average debts for next year and an alternative approach to measure the cost of debt or explore the long and short- term debt or different creditors such as banks, bond holders Second, whether listed firms face incentives to manage earnings by reducing or increasing R&D expenses and the potential effect of real earnings management on debt cost or not. Third, firms can be divided into high; medium-high; medium; medium low and low research and development

expenditures firms based on their R&D intensity, thus whether business environments and strategies, management styles, governance systems, shareholding structures, and risk preferences by for these firms moderate the relationship with manipulating R&D expenditure to obtain debt capital is a potential topic for future research.

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