ABSTRACT

THESIS: Determining the Relation between the Mergers and Acquisitions of Firms with the Announced Total Value: A Bi-variate Generalized Poisson Regression Approach

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Mergers and Acquisitions($M\&A$) are major strategic initiatives undertaken by many organisations.The choice of payment type in ($M\&A$) – Cash, Stock Debt, or a combination of these – can have a substantial impact on the successful completion of the transaction. In this thesis, we provide an empirical investigation into the determinants of the Number of Mergers by introducing the Announced Total Value (ATV) according to the payment type investment characteristics of the companies involved as additional variables which have not been considered in previous studies.We considered the payment types and TVA of a particular payment type of the companies involved in ($M\&A$) to explore their effects on the number of Mergers completed in given year.

It is generally regarded to be preferable by shareholders of the target company to receive a Cash payment rather than shares of the bidding company as we can see 67.33% of the total Mergers were completed by Cash. We have focused on how the number of Mergers depends on ATV in between the bidding companies. From the univariate analysis of total number of Mergers, number of Mergers by Cash and number of Mergers by Stock on the Mean, Median and the Standard Deviation of the ATV, we have found that Negative binomial regression model performs better than the Poisson regression model and all of these three response variables have positive weak but significant association with the standard deviation of the ATV. So we can recommend that the Standard Deviation of the ATV can be treated as significant predictor to model the number of Mergers in a given year.

The Bi-variate Poisson regression model shows the positive effect of the mean ATV for Mergers by Stock on the joint distribution of the number of Mergers by Cash and Stock, which is statistically significant. After the Adjustment of Overdispersion Parameters for the Mergers by Cash($\phi_1 = 0.08267357$) and the Number of Mergers by Stock ($\phi_2 = 0.08267357$) respectively, the negative impact of the standard deviation of ATV by Stock on their joint distribution of the number of Mergers by Cash and Stock becomes statistically significant. Here we have found that, the standard deviation of ATV by Stock influence the joint distribution of the number of Mergers by Cash and Stock in the presence of overdispersion. The research can be further extended in particular at how mixed offers of the payment types is determined by considering investment characteristics such as the target growth rate, relative size of the company, debt ratio, investment portfolio, tax effects and budget constraints etc.