## THE RELATIONSHIPS OF ADVERTISING, AND RESEARCH AND DEVELOPMENT WITH CAPITAL MARKET RISK: DO FIRMS WITH HIGHER RISK TO HAVE DIFFERENT RELATIONSHIP WITH THESE RISK?

Miao-Ling Chen, National Sun Yat-sen University, Kaohsiung, Taiwan Chi-Lu Peng, National Sun Yat-sen University, Kaohsiung, Taiwan

## ABSTRACT

In this study, we examine how a firm's advertising and R&D affects the firm's  $\beta$ -risk and idiosyncratic risk, which are metrics of interest to both finance executives and senior management. Due to the existence of non-normal finance data and heteroscedasticity, this study uses quantile regression to analyze the sample in order to avoid estimation bias. We generate six empirical generalizations. (1) Advertising is significantly associated with lower $\beta$ -risk for firms with lower, median and higher  $\beta$ -risk. (2) R&D is significantly higher  $\beta$ -risk for firms with median and higher  $\beta$ -risk for firms with lower idiosyncratic risk for firms with higher idiosyncratic risk. (4) R&D is significantly associated with higher idiosyncratic risk for firms with median and higher idiosyncratic risk for firms with avertising and R&D have a stronger effect on firms with higher  $\beta$ -risk (idiosyncratic risk) than on those with lower  $\beta$ -risk (idiosyncratic risk). (6) Moreover, our evidence suggests that advertising and R&D tests resoundingly support our hypothesis that the coefficients vary across the quantiles.

References available upon request