



CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Sean Cai	Project Number S0407
Project Title Analyzing Stratified Ethical Behavior at Executive Levels Using Shareholder Regression Models and Firm Value	
<p style="text-align: center;">Abstract</p> <p>Objectives Objective: This experiment seeks to examine firm value drops in offending companies and suppliers as well as examine the role of gender diversity in anti-corruption measures using a variety of stock market indicator measures.</p> <p>Methods Used the Wharton Research Database Services (Eventus Query) and Scrappy Computer Program for Web Crawling Data from Stock Market Sites Downloaded for scrapy.org and modified for use in examining the experiment's selected websites for data collection. SAS File Viewers and Converters were used for data analysis of Databases of Company Trade Dealings in International Regions as well as their Suppliers (~125 Companies Needed), Databases of Company female executives, gender employee distributions, news reports of announcements of company corruption Insider Trading database of most prominent corrupt countries as defined by results , and CSMAR database between 2010 and 2013 Shenzhen & Shanghai Stock Exchange Universal Access was required to access this data.</p> <p>Results Results: Offending Companies see no significant long term decrease in growth, but an average of 4% growth rates at the one year analysis. Suppliers of those companies experience the opposite firm value effects, at every time interval. Stagnation in growth is seen through control companies, but no decrease in firm value. Female presence in the workplace dampens corruption as only 12% of corruption cases involve females while they make up 16% of the workplace in the companies in the regions where corruption cases mounted highest. Males were 5.8 times more likely to commit corruption and Male opportunistic insider trading values for sales and purchases were 169% of those of women. Regression models indicate that there exists a significant relationship between female representation in a company and unethical behavior.</p> <p>Conclusions Conclusion: Female presence in the workplace in executive positions was inversely correlated to corruption. Firm value drops as a result of shareholder perceptions only caused company growth rates to stagnate in both offending and supplier companies, corruption was not deterred. The presence of females in companies moderated behaviors leading to corruption. Companies with widespread corruption or executive level corruption similarly saw worse ratings in the perceptions of shareholders and more growth stagnancy.</p>	
Summary Statement I showed that current anti-Corruption law does not dissuade unethical behavior in companies, and provide results that show gender diversification has a significant impact in reducing company corruption through moderating unethical behavior.	
Help Received I designed all regression models and analyzed all database data from myself, along with all the control variables. I obtained governmental data from the University of San Diego. Professor Phil Zhu of USD also reviewed my regression analysis for validity.	