2017 Denman Undergraduate Research Forum Accepted Student Abstracts
Business
Abstract: Living a healthy lifestyle can affect your personal relationships, mental state, and overall wellbeing. Companies are beginning to take note of this impact and implementing policies and programs to facilitate healthy living styles for their employees. Whether it's putting a workout facility in the office, offering healthier food options in the cafeteria, or outfitting desks with "stand-up" capabilities, many businesses are trying to improve their employee's health. Fortune magazine estimates that currently only around 7% of US companies have a comprehensive promotion plan to encourage employees to live a healthier lifestyle. Should this percentage be increased? The purpose of this study is to see if employer's actions promoting wellness have been paying off, what health issues should be focused on in a promotion program, and if, in general, healthier employees tend to see more success in the corporate world. The methodology I used to answer to this issue was gathering and analyzing biometric data from a fortune 100 company. This data helped to highlight the core health issues affecting employees in the workplace. Weight, blood pressure, and stress were the overwhelming risks in 77% of locations from which data was received. Along with this there seems to be a strong connection between an employee's health risk level and absentee rates. Employees that were considered "health risks" missed on average 3 more days than those with a low risk level. Overall, an estimated average of $436,314 in avoidable health costs was found at each location. Based on these findings my study helps to show that an individual's health does have a big impact on personal and corporation-wide achievement. This research can be used to support the implementation of health promotion plans.
Abstract: The fundamental question of the study is to understand why workers do not enroll in their employer sponsored retirement plans. This is very evident in the employer provided 401(k) market, where only 39% of these workers enroll in the plans. In addition workers are not saving enough for retirement. A problem in the retirement planning field is getting individuals to look beyond today. Most individuals do not realize, whether by choice or ignorance, that their future self is a real person. In fact, most people see their future self as an entirely different person. The Proteus phenomenon describes the effect of when real world individuals identify with their online avatars so much that the relationship influences their real world behaviors. The results of other research has shown participants to acquire stereotypical lifts and develop a concern for their future self. The purpose of this study is to test the Proteus Effect in an actual 401(k) retirement enrollment meeting and observe the effects on enrollment rates and saving rates. The reason this research is important is because America is facing a retirement crisis and workers are making suboptimal decisions concerning their future. This research is good place to start to make sure that the present and future self are both present and considered during retirement planning. The use of the avatars can help make-up, what lacks in the imagination of the workers.
Abstract: Many factors can affect the stock price such as fundamentals, business cycles, political situations, and behavioral reasons. However, one important element that correlates to the stock return has not been given enough attention, especially within the Chinese Stock Market, and that is hiring rate. The paper "Labor Hiring, Investment, and Stock Return Predictability in the Cross Section" found that in the cross section in the U.S. market a ten percentage point increase in the firm's hiring rate is associated with a 1.5 percentage point decrease in the firm's annual risk premium, and that is because the increase in hiring rates is informative for the company's better future performance. I decided to test whether that finding could be applied to companies in the SHSZ 300 Index. The SHSZ300 Index consists of the top 300 stocks in terms of market size and liquidity, and it also is well accepted as the best measure of the performance of the Chinese Security Market. The main hypothesis is that in the cross section of the SHSZ 300 Index, the stock return of one year will negatively correlate to the hiring rate of the previous year. I gathered stock prices, dividends, the numbers of shares outstanding, and the numbers of employees of the firms in the SHSZ 300 Index on an annual basis around December 1st from 2005 to 2016 from the Bloomberg Terminal to do the correlation test and regression analysis. The results show that it is significant that the stock return of one year and the employment growth of the previous year across all years are negatively correlated, and this validated my hypothesis.
Abstract: Consumers face a difficult decision when buying sustainable products and investments. On one hand, they are good for the environment, but on the other hand, consumers worry that sustainable goods may be less effective than their conventional alternatives. How does this trade-off play out in investment decisions around mutual funds? Does sustainability increase flows (investment) into mutual funds, suggesting that investors care about sustainable investment opportunities? Or might sustainability actually decrease investment, suggesting that investors see sustainability as a sign that the fund is not focused enough on performance? An analysis of mutual fund investment between January 2014 and September 2016 suggests that investment is, on average, about $14 million lower per month for sustainable funds than the industry average. This analysis began with research into the top 200 sustainable mutual funds printed in the October 2016 issue of Barron's, a weekly financial journal published by Dow Jones, which was then confirmed with rankings from independent mutual fund database Morningstar. Data from the entire mutual fund industry was then aggregated, and monthly asset flows were calculated from each fund’s total net assets and monthly returns. A comparison was performed across over 30,000 mutual funds to find that sustainable fund performance was significantly different than that of the industry on average. Research will continue to explore how the fund's marketing, be it focused on sustainability or not, can impact investor decision-making. Additionally, a thorough exploration will be performed to see if there is a relationship between a sustainability rating changing over time and fund performance.
Abstract: Past research has established the connections linking augmented financial literacy and numeric competencies to better-informed investment decisions. Specifically, individuals with greater financial literacy and greater numeric competencies have enhanced awareness of investing, higher risk tolerance, and more active engagement in investment activities such as in the form of stocks, bonds, mutual funds etc. However, no known research has examined the independent predictive power of numeric competencies (i.e., objective numeracy, subjective numeracy, symbolic-number mapping) and financial knowledge on investment behaviors, and it’s unclear which skills may matter most. In an online study, participants (N=235) completed a test of general mathematical ability (i.e., objective numeracy), symbolic number-mapping, financial knowledge, and indicated their perceived mathematical ability and preference for numbers (i.e., subjective numeracy). To assess investment behaviors, participants completed a retirement savings game (Koehler et al. 2015) and answered a variety of questions related to personal investment decisions (e.g., "How much do you invest in stocks?"). We hypothesize that greater financial knowledge and all three types of numeric competencies will predict greater total retirement savings in the savings game. Additionally, we predict that individuals with greater numeric competencies and financial knowledge will report more active engagement in investment activities (e.g., stocks, bonds, mutual funds). Initial results indicate significant positive associations (p
Category: Business

Title: CEO gender effect on company performance

Student Presenter: Annie Gu

Faculty Advisor: Birru, Justin

Abstract: As of 2016, women hold 4.2% of CEO positions at S&P 500 companies. This underrepresentation indicates that a barrier still exists for women in leadership. However, several female CEOs have paved the way for further advancements, which led me to wonder: How does the gender of CEOs affect company performance? This question will be examined in two ways: (1) by looking at the initial stock market reaction; and (2) by examining the stock market performance during the time of her tenure. The sample of firms includes around 100 women CEOs that have held office from 2000 to present for public companies that trade on the NYSE, NASDAQ, or American Stock Exchange. Stock returns for the day before, day of and day after the announcement date of a new, female CEO were examined. This measurement shows the change in a stock's value and reflects the market's initial reaction to the announcement. Based on the results gathered, there was a slight negative return of -0.51% which indicates that the market was pessimistic about the company performance. This value, however, is not significant enough to draw the conclusion that gender has an effect. Further analysis will be conducted to see effects in other dimensions such as return on assets, leverage, book to market value of the companies. These measurements will reflect additional ways of how the market is valuing the company as well as the actual performance during the time of a female CEO. If the results also reflect that there is no effect based on gender, the question raised is why there is a lack of female CEOs.
Category: Business

Title: Through the lens of investment anomalies: profitable investment strategies throughout business cycles

Student Presenter: Merrina Guitteau

Faculty Advisor: Hou, Kewei

Abstract: Market efficiency is a topic that has been thoroughly questioned and explored by various economists and market strategists. Market efficiency has been challenged, as anomaly research has exposed its limitations within the investment process. Economists and researchers continue to study the puzzling nature of asset pricing anomalies and examine various factors' predictive power. The purpose of this study is to further evaluate asset pricing anomalies, the development of investment strategies, and the success of each strategy throughout economic upward and downward trends. The methodology includes identifying anomaly factors, testing each factor across a sample of individual firms, and analyzing the relationship between the anomaly signal and the firm’s overall return over time. I will be examining a set of anomaly variables including: momentum, value-versus-growth, investment, profitability, intangibles, and trading frictions, across three definitive time periods: pre-financial crisis (2000-2006), the financial crisis (2007-2008), and post financial crisis (2009-2014). I have collected individual, monthly data for all firms listed on the NYSE, and will be creating portfolios representing the factors listed above. After having created these unique portfolios, I will calculate the return of each over this fifteen-year period, which included a significant amount of economic volatility. I will then be able to draw conclusions as it relates to each investment strategy, these strategies' strengths and weaknesses, and ultimately identify points of market inefficiencies. The understanding of anomalies and those factors that influence them are important to investors, as they seek to generate positive returns on their assets. More importantly, the ability to comprehend how markets function, anticipate market outcomes, and formulate fruitful investment strategies is powerful for not only investors, but also for the economic systems across the globe.
Abstract: According to Bloomberg, fourteen percent of large firms in the restaurant industry (market cap greater than $100mm) have activist shareholders. These investors' main goal is to drive shareholder value, but are their methods of reaching this goal effective? The purpose of my research is to determine whether activist investors create lasting value in the restaurant industry by streamlining organizational efficiency or whether they ultimately destroy shareholder value through cost cutting and firm restructurings. The methodology used involved examining stock return data from ten public firms in the restaurant industry that have been targeted or taken over by activists and comparing these returns to the returns of the industry overall. The stock prices from each company were analyzed over four different time horizons including: (1) a year before the announcement of activist involvement; (2) around the time of activist involvement; (3) a year after the announcement: and (4) up to present day. This methodology allows us to see how effective these activist investors have been at creating value. If they have done well, the stock price will have gone up when compared to the overall industry. If they have failed, the stock price will be down. The results indicate that four of the ten firms analyzed showed higher long-term returns than the overall restaurant industry index, and these firms that have outperformed the index have done so by an average of forty percent. However, forty-five percent of companies have seen negative returns since an activist's involvement was announced. This data suggests that activist shareholder's methods are creating mixed results with some big hits and a fair amount of misses. This research provides a framework for observing the impact of activists in other industries and adds to the current debate regarding the value added versus destroyed by activist investors in the financial markets.
Category: Business

Title: The effect of structure on ACO performance

Student Presenter: Jacob Kirk

Faculty Advisor: Boyer, Ken

Abstract: In 2011 the Obama administration set forth guidelines on the formation of Accountable Care Organizations (ACOs). A response to rising healthcare costs, these organizations would consist of physicians and hospitals that agree to meet the healthcare needs of at least 5,000 Medicare beneficiaries for three years. Providers that meet pre-determined quality and cost benchmarks receive a share of the resulting savings from Medicare. In theory, this structure places the responsibility for effective care on both providers and payers, increasing the incentive to cooperate and moderate costs. Key to the program's success would be providers' ability to coordinate care for populations. By extension, this ability to coordinate will depend on the structure of the ACO. For example, an ACO could be led by a hospital or by a group of physicians and vary in size and sophistication. The resulting research question is how does the structure of an ACO affect its performance? To examine this question, data has been collected on 433 Medicare Shared Savings ACOs and includes their structure, performance, and other metrics. This information on structure is combined with other publicly available data related to ACO performance including adherence to quality benchmarks, experience, and patient risk. The data is currently being analyzed, and the resulting trends will allow for the effects of an ACO's structure on its patient population to be known. This analysis will provide a fresh view on ACO success factors that can be used to inform effective care delivery.
Title: Crimson Cup, Columbus: examining discrepancies in employee attitudes towards sustainability and suggestions for promoting values alignment

Student Presenter: Hallie Klieman

Faculty Advisor: Drobny, Neil

Abstract: Crimson Cup Coffee and Tea is a popular Columbus based coffee shop with locations in Clintonville and Upper Arlington. From September to November 2016, the company underwent a waste audit in preparation for a new corporate sustainability program. During the waste audit, a clear discrepancy in employee attitudes toward the new program was observed between the two locations. The purpose of this study is to examine how demographic, environmental, and individual factors may play a role in this discrepancy. A Qualtrics survey will be conducted among Crimson Cup employees at both locations with full analysis of survey results due to be completed by February 15th. Survey questions inquire about personal values, work environment, and perceptions of Crimson Cup with regard to sustainability. Employees are also asked to indicate their age, gender, education level, number of years with the company, and whether or not they are a manager. Lastly, employees are asked to indicate if they were present during the waste audit and give their opinion on the project. Final survey results will be compared by location using regression analysis when appropriate. Our preliminary findings suggest that differences in the attitudes or beliefs of the store manager at each location may provide a strong indicator for how the remainder of the team responds to a new sustainability initiative. Such findings raise broader implications for companies and the challenges they may face when implementing new sustainable business practices across multiple store locations, namely when management lacks consensus. We conclude by suggesting several ways companies can promote uniform leadership and better align employee values around sustainability.
Category: Business

Title: Factors associated with graduating undergraduates' perception of degree value at Ohio State

Student Presenter: Lauren Knauss

Faculty Advisor: Montalto, Catherine

Abstract: The rising cost of pursuing a college degree and the over $1 trillion of student loan debt have come to the forefront of conversations surrounding higher education in the United States. Many are assessing if benefits of college outweigh financial costs. At The Ohio State University (OSU) the rising cost of college is of interest due to the university's focus on affordability. What remains unknown is how students at OSU feel about the benefits of receiving an education relative to the costs. The purpose of this study is to examine what drives a graduating undergraduate student at OSU to perceive that the benefits he or she has received from attending OSU were worth the financial costs. This study used secondary data from the 2015-2016 Graduation Survey, a survey administered by the Center for the Study of Student Life at OSU. By using one question from the survey to represent the value of the degree, this study looked at the factors associated with student perceived value of the college degree. Using SPSS to analyze the data, preliminary analysis has shown that satisfaction with one’s overall OSU experience and for employed graduating students, how well OSU prepared the student for the job market, had strong relationships with perceived value of the degree. Demographics, plans after graduation, and knowledge gained through the General Education program had weak relationships with perceived value. Discovering the driving factors that contribute to students perceiving the benefits they have received from attending OSU as worth the financial costs will be beneficial to university officials. This information could allow OSU to offer support or services targeted to improve the student experience. Students are making large financial investments into their futures so it is important to understand if they perceive their investment as worth the cost.
Title: Does an individualist mental orientation lead to more charitable donations?

Student Presenter: Danielle Kuzma

Faculty Advisor: Smith, Robert

Abstract: Despite the growing amount of research on charitable giving, researchers still do not agree on why people donate. Do they donate for selfish incentives, such as to feel good about themselves, or for purely altruistic reasons associated with improving the world? Literature has discussed the theory of impure altruism, that is to say, a donor's intentions for giving cannot be purely altruistic because of the "warm-glow" they experience. This warm-glow is an individualist reward for giving, rather than the traditional thoughts that giving is done simply to help those in need. The goal of this study is to understand whether people will donate more time and/or money to a charitable organization when they are in an individualist mindset, rather than a collectivist mindset. The experiment takes the form of a 2 (prime: collectivist vs. individualist) by 2 (question: money-ask first vs. time-ask first) survey design. Consistent with past research experiments, participants were randomly primed to adopt either a collectivistic mental orientation by reading a paragraph and circling pronouns like "we" and "us", or to adopt an individualistic mental orientation by reading a similar paragraph and circling pronouns like "I" and "me." Preliminary results show that there is a statistically significant difference between the two conditions. Those primed in the individualist condition were significantly more willing to donate to the charity than those primed in the collectivist condition. This finding shows that perhaps the leading factor for charitable donations has to do with people trying to fulfill their own needs to feel good about themselves. Findings from this study will improve general understanding of the incentives for nonprofit giving. It will also be of value to nonprofit organizations to understand how to target their message to potential donors, as nonprofit organizations cite that soliciting donations is their most challenging objective.
Abstract: On March 23, 2010, President Obama signed the Patient Protection and Affordable Care Act, also known as the Affordable Care Act (ACA) or Obamacare, into law to reduce the cost of health insurance premiums. A part of the provisions removed the cost-sharing requirements for a list of preventive services. Prior research has demonstrated that more people are covered by health insurance after the implementation of the ACA. Therefore, I seek to understand whether the ACA has affected racial disparities on the use of preventive services. I used data from the 2007 to 2014 Medical Expenditure Panel Survey, which is the most complete data source on health care in the U.S. I followed the United States Preventive Services Task Force guidelines and examined recommended blood pressure check, routine checkup, flu shot, pap smear, mammogram and breast exam, colonoscopy, and sigmoidoscopy. I studied the non-elderly population aged 18 to 64 and categorized the population into Whites, Blacks, Asians, and other races. I compared the use of preventive services during the pre-ACA period (2007 - 2010) and post-ACA period (2011 - 2014) for each racial group. I further analyzed the racial disparities during the pre-ACA and post-ACA periods for each preventive service to determine any significant changes. My preliminary analysis revealed that there were significant increases in the use of routine health checkup and flu shot for all the racial groups in the post-ACA period. I identified a decreasing trend in pap smear. I found the racial disparities varied across services. Despite the zero co-pay requirement for preventive services, the use of some services remains unchanged or even decreases. Furthermore, racial disparities still exist in the post-ACA period. In order to promote the use of clinically recommended preventive services, other methods that target specific racial groups could be considered.
Abstract: In 2013, the National Center for Education Statistics estimated that approximately 80 percent of college students change their undergraduate major at least once. These major changes can have a significant impact on a student's ability to graduate on time, retain a high grade-point average (GPA), and find career success following college. As a result, selection of an appropriate college major early in a student's undergraduate career should and is a top priority of any university. By attempting to understand the individual talents that separate an outstanding student from those that struggle in a particular course of study, university staff can provide better guidance to those students struggling to find a curriculum they are passionate about. A survey was used to determine whether a student had changed their major and what those changes were. In order to quantify the talents of each survey respondent, the mobile application Knack was used. Knack consists of three games that test specific areas of an individual's talents such as emotional intelligence and decision making. These scores are produced by comparing an individual's decisions in the games with those made by others who have played them. Preliminary results found that 70 percent of respondents who changed their majors had the same talent scores as students who were excelling in those majors. Furthermore, those students who changed their major to better reflect their own talents had higher GPAs, on average, than those who stayed in a major that did not reflect their individual talents. These results coincide with the original hypothesis that gamified applications, such as Knack, can be more predictive of a student's talents and career preferences than the student due to a lack of self-awareness. University advisors can leverage these findings to better assist students in deciding their area of study.
Category: Business

Title: Microfinancing as a method to alleviate poverty: Evaluating international social performance

Student Presenter: Rhea Malhotra

Faculty Advisor: Chen, Joyce

Abstract: Microfinance has been acclaimed for being the first field to fuse profit and social impact by offering financial services to the poor who wouldn't otherwise qualify for standard bank loans. Opponents state that these institutions have strayed from their social purpose and are becoming primarily profit-driven. Published research further emphasizes this point by primarily measuring the economic returns of microloans, but failing to examine their advancements to society. Although the lack of social drive is apparent, little has been done to rejuvenate the importance of returning to the original mission of social impact. Through quantitative case studies on individual countries, which receive large amounts of funding (i.e., Nepal, India and Mexico) and thorough exploration of key social performance indicators, actionable insights will be presented in this research to revamp the current path of the microfinance industry. As microfinance institutions continue to pour capital into developing countries, the fundamental mission must be to alleviate poverty. Key findings demonstrate a lack of reporting on social goals, therefore de-incentivizing institutions to perform to their highest social capacity. Findings also reveal a high percent of microfinance institutions providing inadequate education on product offerings and few financial services available for clients. This is significant because the microfinance sector is expected to grow rapidly over the next few decades. Thus, understanding and implementing principles that stress social performance is imperative for a world free of poverty.
Category: Business

Title: Utilizing six sigma techniques to improve hospital pre-transplant process

Student Presenter: Sarah McKinnell

Faculty Advisor: Gadkari, Mrinalini

Abstract: Typically, one expects to wait at a hospital or doctor's appointment. However, if patient wait times are associated with inefficient clinical processes which in turn result in slower clinic throughput rates, both the patient and employee grow frustrated. The pre-transplant patient process at the Comprehensive Transplant Center at The Ohio State University Medical Center has been identified as a candidate for process improvement to increase both patient and employee satisfaction. Before the Comprehensive Transplant Center can perform kidney, liver, and pancreas transplants in the abdominal transplant clinic, the patient must complete a pre-transplant process. Potential transplant patients meet individually with a team of medical professionals including a doctor, nurse, social worker, dietician, and financial representative. This study seeks to understand the existing pre-transplant process while identifying improvements to streamline and standardize procedures. The ultimate goal is achieving improved patient throughput rates while maintaining high patient satisfaction levels. The pre-transplant process research was conducted primarily through observation. This included gathering process flow information as well as step completion times (including wait times between steps). Additionally, focus groups comprised of the aforementioned pre-transplant medical team were conducted to solicit process improvement suggestions. Utilizing the focus group suggestions and process step timing data, improvement recommendations will be generated. The recommendations are developed and supported by a series of Lean and Six Sigma tools including Value Stream Mapping, SWOT analyses, and process mapping. With the captured process knowledge providing the motivation for the implementation of improvement recommendations, the lasting impact of this project is improved clinic patient flow, which will ultimately allow the clinic to improve efficiencies and patient satisfaction.
Abstract: A renewable portfolio standard (RPS) is a regulatory mandate that forces state utilities to sell a percentage of their electricity that comes from renewable energy. This results in an immediate to medium term increase in energy prices. Currently, only 29 states and Washington D.C. have adopted RPS. Furthermore, raising electricity costs will be passed on to the consumer, and state level utilities will be threatened by renewable energy. The purpose of this study is to assess the costs and benefits of issuing an RPS in Florida and other states. The methodology is to calculate the rising electricity costs in deploying renewable energy and to find a monetary value for the benefits in savings carbon dioxide emissions (CO2). A complex financial model was created based off the current and future (35 year projection) of energy sources in the state of Florida. The incremental cost per unit of renewable energy was derived from the obligated percentage of renewable energy as stated in the hypothetical RPS. This number was estimated from a cost-benefit analysis of 11 states. Using the social cost of carbon provided by the EPA times per metric ton of CO2 saved was used to find a monetary value. My findings show a net present value in benefits of $92 billion in carbon dioxide savings and $51 billion in increasing electricity costs. Additionally, an RPS can have different levels of renewable energy consumption. Further scenario analysis will be conducted using levels of 15%, 20%, and 25% to show the different effects of increasing costs and savings in CO2. Lastly, the financial model will incorporate renewable energy credits and the potential revenue it can bring through interstate trading. In conclusion, this study is to show implementing an RPS is cost effective and policymakers can use the methodology across the nation.
Title: Are an individual's physical health and financial health correlated? The relationship between physical and financial well-being and underlying predictors

Student Presenter: Zoe Spornhauer

Faculty Advisor: Matta, Shashi

Abstract: Individuals' physical health and financial health are both important to researchers and policy makers, and have been studied extensively in their own separate domains. However, few researchers have examined the impact of one on the other. There is some initial evidence of a relationship. For instance, a study of young adults found that people with high debt have a greater propensity to report poorer mental and physical health (Sweet 2010). Similarly, an Ohio-based study found debt-to-income ratio and debt-related stress to be associated with worse self-reported health (Drentea and Lavrakas 2000). However, there is still much to understand about the relationship between physical and financial health. This research attempts to fill the gap. Study 1 (N= 390 college students), examined respondents' self-reported physical and financial health, satisfaction with their physical and financial health, behaviors in domains, and various predictors including goal setting, self-efficacy and self-control. Key findings from this study include, 1) cautious behavior in one domain (e.g., personal saving orientation) predicted cautious behavior in the other (e.g., restrained eating); 2) whereas both self control and self efficacy predicted financial health, only self control predicted physical health; and 3) physical and financial health were correlated among those who had poor financial health, whereas no such correlation was found for those who had strong financial health. Study 2 is designed to further this research and test for causation - does an improvement in one's physical health result in an improvement in one's financial health, and vice versa? This study is designed as a longitudinal experiment over eight weeks, from February 15 to April 15. Taken together, these two studies contribute to a richer understanding of the relationship between individuals' physical and financial well-being and inform research and policy on positively affecting both.
Title: The "healthy" hoax: how consumers' levels of health-consciousness influence preferences for healthy and indulgent foods based on advertising claims

Student Presenter: Sarah Stewart

Faculty Advisor: Reczek, Rebecca

Abstract: More than 2/3rds of the U.S. population is considered either overweight or obese. Previous research has investigated the effects that food health claims have on consumers' food perceptions and choices. However, due to differences in consumers' values and interests, these claims do not affect all individuals equally. We extend existing research by exploring how consumers' level of health-consciousness (HC) interacts with food health claims to affect preferences for healthy and indulgent food items. Specifically, we propose that consumers with low levels of HC will be less influenced by healthy claims for conventionally healthy foods, but, notably, will have stronger preferences for healthy foods that are advertised using indulgent claims. Alternatively, we propose that consumers with high levels of HC will be more influenced by healthy food claims for conventionally healthy foods. Participants saw a dessert menu that highlighted a healthy or indulgent item (fruit parfait or cookie), which was described with either a healthy or indulgent claim ("antioxidant-rich" or "decadent"). Analysis revealed that among individuals high in HC, they had a directionally greater willingness-to-pay (WTP) for a fruit parfait when it was described as antioxidant-rich (M=4.77) versus decadent (M=3.96; F(1,84)=1.10, p=0.29). Notably, among individuals low in HC, the decadent claim (M=4.83) led to an increased WTP for the fruit parfait compared to the antioxidant-rich claim (M=3.61; F(1,84)=4.50, p=0.04). For the cookie, regardless of level of HC, the antioxidant-rich claim decreased participants' WTP (M=3.14) compared to the decadent claim (M=4.40; F(1,82)=2.99, p=.09). A second study directionally replicated these results using claims on product packaging (low HC participants responded favorably to healthy foods with indulgent claims). These findings suggest that food claims interact with consumers' levels of HC, and most interestingly suggests that marketing healthy foods with indulgent claims could influence consumers with low levels of HC to make healthier food decisions.
Abstract: As the width and breadth of space travel expands and evolves, so do the associated risks. From the perspective of risk management, it is important for insurance companies to have a good understanding of the current and future state of the space industry, and to devise an appropriate process for creating insurance products meant for space travel. With the recent attempts by private organizations to send civilians into space, insurance companies must account for the different variables that impact risk. The primary issue faced by these underwriters is the lack of substantial historical data to reference when designing their insurance packages. The challenge posed to space insurance underwriters is the limited number of manned and unmanned launches since the beginning of modern space exploration. With the clear limitations in relevant data, underwriters likely must look to the most relatable forms of insurance as a means of setting some standard upon which they will build the foundation for the space insurance market. The research conducted seeks to use data from the National Transportation Safety Board's (NTSB) Aviation Accident Reports on manned aviation and aerospace accidents over the past six decades. These reports include information about the nature of each accident as well as the NTSB's conclusions as to the probable causes of the incidents. Cross examining each incident with its probable causes and resulting damages allows for a better understanding of the primary factors involved in aviation and aerospace accidents. As the data shows, several commonalities existed amongst the accidents; including pilot error, aircraft malfunctions, inadequate company and compliance standards, and deficiencies in FAA regulations. Extrapolating these findings in the context of space travel serves to illustrate how insurance underwriters would go about assessing the risks associated with manned space exploration, and the inputs they would use to develop policies.
Category: Business

Title: Financial literacy and investors' underreactions to earnings surprise

Student Presenter: CAN XU

Faculty Advisor: Birru, Justin

Abstract: Financial literacy refers to an individual's abilities and skills to manage financial problems and make informed decisions that benefit his or her personal financial well-being, including retirement, investing, and loans, etc. It has been studied by many institutions from various aspects. Researchers have also attempted to identify relationships between financial literacy and a variety of financial decisions such as planning for retirement, paying for colleges, and purchasing a house. However, few papers address impacts that financial literacy has on national stock markets. Would investors in stock markets behave more rationally if they have enough knowledge about the fundamentals of finance? The objective of this research project, therefore, is to test whether a higher level of financial education would ease investors' sensitivity to news. To assess the correlation, this report focuses on companies' earnings surprise, which occurs when companies announce better- or worse-than-expected earnings. The methodology of this project is empirical test. By selecting 300 companies from 15 countries that have different financial literacy scores, this project regressed the magnitude of underreaction to earnings surprises on the level of financial literacy. Major finding of this project is that the level of financial literacy has a negative correlation with underreaction to earnings surprise. It means that as people in a country are more financially literate, underreaction to earnings surprise would become smaller. As many complex financial products are accessible to the general public, making thoughtful decisions is of importance. The result suggests the importance of better financial education across the world. This research, however, has some limitations as well. For example, due to the limited amount of data on earnings surprise, the pattern might not represent the overall population if adding more companies and countries.
Abstract: Recently as China performing its anti-corruption campaign, the problem of corruption has attracted increasing attention to the public again. The World Bank estimates that there is more than $1 trillion in bribe exchanges every year, and it is increasing still. Many foreign companies report having to pay bribes to win business. This is especially true for developing countries. However this type of behavior is not only confined to the business world in China, but also happens in the classroom, with teachers asking students’ parents for gifts to ensure their children are taught fairly. This research focuses on understanding how the intensity of competition and the form of gifts (cash or other) makes a difference to people’s behaviors. Data is currently collecting from OSU’s students from the international business course and Amazon’s Mechanical Turk. Participants are randomly assigned to four different groups, which are low competition with monetary incentives, high competition with monetary incentives, low competition with non-monetary incentives and high competition with non-monetary incentives respectively. The main method that I use in this study is the ANOVA analysis. By fixing the other factors such as age, major and form of the gift. I predict that high level of competition will increase the frequency of offering behaviors and similarly, by holding competition level fixed the form of gift card will also increase the frequency. Therefore, the experiment helps other researchers to further study the effects of social factors on offering unofficial incentives behaviors.
Abstract: Since the 2008 economic recession, there has been an increase in shareholder activism across various industries and geographic regions. Due to a large volume of cash flowing into the sector and less fiduciary obligations compared to other institutional investors, hedge funds have recently had the sizable financial capital and incentive to take activist positions in target firms and then change business strategies perceived as sources of underperformance. Past research studying the impact of hedge fund activism has focused on corporate governance, and shareholder returns; neglecting the impact on employment. The purpose of this paper is to study the impact of hedge fund activism on employees in target firms. More specifically, the number of employees before and after the intervention of hedge fund activists in U.S. spanning the time period between 2008-2016 are the focus of this study. The employee data were extracted from the Wharton Research Data Services (WRDS) and the hedge fund and target firms were recognized through a screening process in Factivia. The preliminary analysis has shown that overall there is a marginally-significant -0.02 correlation of the intervention of hedge fund activists and number of employees. This suggests that activist intervention reduces number of people in target firms. Both healthcare and services sectors exhibit the highest negative correlation of -0.05 (marginally significant) and -0.08 (significant) respectively. Other sectors, including: technology, energy, retail, food and restaurant, materials and goods, either don't show negative correlation or the correlations are not significant enough. Future research should examine hedge fund activism's impact upon economics over a longer time-span, more geographic regions and business sectors.
Abstract: Corporate social responsibility, often abbreviated "CSR," is a company's practices and initiatives to take responsibility for the benefit of society. The purpose of this study is to examine the impact of corporate social responsibility on the stock returns of U.S. publicly-traded companies that constitute S&P Composite 1500 Index, based on the stock performances during 2000-2014. Following a disaggregate measure as well as conducting cross-sectional one-year lagged regression analyses, the study assesses the effect of three corporate social responsibility indicators from the KLD STATS database, including: (1) Environmental Performance; (2) Corporate Governance Performance; and (3) Social Performance indicators. All three variables are compared with an aggregated CSR rating score, measured as the KLD indicator. This analysis indicates a significant negative correlation between the overall aggregated CSR rating score and stock returns. Corporate Governance is the only indicator found to be statistically significant and inversely correlated with stock returns. Environmental performance has a stronger, though statistically non-significant, negative impact on stock returns compared to Social and Corporate Governance performance scores. Based on four cross-sectional models, the analyses in this study indicate that taking the CSR initiatives will in fact have negative effect on the stock performance as well as the development of the company.