**How do Individualist and Collectivist Ideals Influence Investor Say-on-Pay Votes for Companies**

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**Global Master Thesis**

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**June 5, 2019**

**TABLE OF CONTENTS**

**1. Abstract...……………………….……………………….…………………....………….....4**

**2. Introduction…………………….……………………….…………………....………….....5**

**3. Theory…………….……………………….…………………....…………………………...8**

**3.1 Theoretical Basis of CEO Pay: Agency Theory………..………………………....……..8**

**3.2 CEO-to-Worker Pay Ratio and Investor Say-on-Pay Votes…………….…………....10**

**3.3 Present Day CEO Compensation Practices and Issues…………..………………....…10**

**3.4 Effects of Individual cultural Inclinations on Investor Say-on-Pay Approval…........12**

**4. Methodology..………………....………………....…………………....…………………...16**

**4.1 Sample...………..…....…………………....…………………....…………………....…...17**

**4.2 Quasi-Experiment...………………..………………....…………………....…………....19**

**4.3 Dependent Variable….………………....……..………....…………………....…….…...21**

**4.4 Independent Variable….………………....……………......…………………....….…....22**

**4.5 Control Variables….………………....…………………..………………....……….…..22**

**5. Data Analyses….…………………………………....…………………....…………….….25**

**5.1 Descriptive Statistics….....………………....…………....…………………....………....25**

**5.2 Variable Correlations...………………..…....………........…………………....………...27**

**5.3 Chi-square Test...………………....…………………....…………..…....…………….....30**

**5.4 Logistic Regression...………………....…………………....………………..………...…32**

**5.4.1 Model 1.………………....…………………...……………....…………………............33**

**5.4.2 Model 2.………………....…………………....………...…....…………………............34**

**5.4.3 Model 3...………………....…………………....……………......……………….....…..34**

**5.4.4 Model 4...………………....…………………....……..………....……………........…...36**

**5.4.5 Model 5...………………....……………….....……..………....……………….......…...38**

**6. Conclusion...………………....………………....…………………....……………….……39**

**6.1 Discussion...………………....……………......…………………....…………………......40**

**6.2 Theoretical Applications...………………....……………......…………………....……..40**

**6.3 Implications for Practice...………………....…………………....…………..…....……..41**

**6.4 Limitations...………………....…………………....…………………....……..………....41**

**7. References...………………....…………………....…………………....……....……….....43**

**8. Appendix...………………....…………………....…………………....……....……….......51**

**1. Abstract**

CEO pay has been rising all over the world, and likewise, the ratio between the highest level of management and the average worker has grown dramatically. Now, much of the public debate surrounding CEO pay is dominated by concern of this rising inequality. It has risen so much that, many countries now require companies operating within their borders to allow a non-binding Say-on-Pay vote to allow shareholders to express their opinions of current levels of CEO compensation. In the event of a Say-on-Pay vote, what are the key driving factors that cause an investor to approve or disapprove the motion? Does cultural individualism or collectivism have an effect in reshaping the investors perception of what is an appropriate level of CEO pay? In this paper we seek to identify what key factors influence investor's perception of the fairness of CEO pay, and hence, Say-on-Pay votes.

**2. Introduction**

The topic of CEO compensation is a controversial issue among the general public, researchers, practitioners, and corporate governance activists in Western societies, especially the United States. Much of the discussion about CEO compensation centers around whether CEO pay is equitable or excessive. Many people believe that CEO pay is too high without any justification, possibly because the press commonly reports on executives that receive generous severance packages upon leaving their company, even if the company was underperforming (Cooper, 2016). Proponents of lowering CEO pay also base their arguments on the basis of social equity and fairness, and validate these arguments on the ratio of CEO pay to the wage of rank-and-file workers (Nichols & Subramaniam, 2001). In 2017, CEOs of S&P 500 Index companies received $13.94 million in total compensation on average, while America’s production and nonsupervisory workers earned only $38,613, leading to a CEO-to-worker pay ratio of 361 to 1 (AFL-CIO, 2018). Statistics suggest that when comparing CEO pay ratios between countries, the US has the highest differential of 354, while Switzerland, the runner up, has a ratio of 148 in 2014 (Statista, 2014). On the other hand, defenders state that CEO pay is equitable, arguing that market forces in the labor market dictate the appropriate level of CEO pay (Nichols & Subramaniam, 2001). These statistics raise the question of whether the CEO-to-worker pay ratio is appropriate, and have led researchers to study investors’ perceptions on executive remuneration, which, as of now, is vital in US businesses because America has adopted Say-on-Pay.

A Say-on-Pay vote is an opportunity for the shareholders of a firm to see the compensation package of the CEO, and then vote to approve or reject it (Krause et al., 2014). Initially introduced in the UK in 2002, it mandates an advisory shareholder vote on executive remuneration proposed by the board of directors (Stathopoulos & Voulgaris, 2016). A number of countries have followed the UK with the introduction of similar legislation, including the US, Australia, the Netherlands, Norway, Switzerland, and Sweden (Stathopoulos & Voulgaris, 2016). This mechanism aims to promote transparency by providing a new means of expression of shareholder voice, and hence improves corporate governance efficiency (Conyon & Sadler, 2010).

Evidence suggests that perceptions of pay could be dependent on culture. In this paper, we will specifically explore how individualist and collectivist cultural dimensions influence the relationship between CEO pay ratio and investor Say-on-Pay votes to build upon previous research. Individualism was chosen as previous studies, such as Tosi & Greckhamer (2004), discovered a positive correlation between individualism and overall levels of CEO pay as opposed to Hofstede’s other three dimensions, and between tournament-like compensation structures, commonly found in firms within individualistic countries. Additionally, we also see that in collectivist societies, executive remuneration tends to be much lower than in highly individualist cultures. For example, US CEOs are paid 17 times more than their Chinese counterparts in terms of cash compensation. This figure rises to 42 times more when considering stock options and equity compensation (Conyon & He, 2011). This correlation between individualism and overall CEO pay, as well as the large disparity in CEO pay ratio between countries, led us to study how individualism and collectivism, specifically, affect investor Say-on-Pay votes.

We will conduct further research about CEO pay ratios and cultural orientations in order to understand this unique phenomenon; and thus, our research questions are: *How does CEO to average employee pay ratio affect investor Say-on-Pay votes? And how do individualist and collectivist ideals of the investor influence this relationship?* To answer these questions, we will perform a deductive analysis using quantitative data gathered from our experiment. We will have MBA students from different cultures as participants to gather a relevant sample of the population with differing cultural ideals. We will then conduct an experiment where respondents are randomly assigned into two groups, each receiving a scenario in which the only manipulation is the CEO to average employee pay ratio. All the respondents have to vote on whether they will approve or disapprove the CEO pay under this particular pay ratio. Then we will measure the investors individualist/collectivist orientation through a survey. In this experiment, we are particularly interested in discovering if Say-on-Pay approval changes between investors with collectivist and investors with individualist ideals.

Our research is important for investors and managers. As companies become more globally interconnected, they could attract more international investors and knowing how they are likely to judge CEO pay is important to gather international investment. In addition, the impact of cultural dimensions on CEO to average employee pay gap has broad implications for future corporate governance strategies across the globe, especially for companies in Asia, as they begin to explore methods to attract international investors and expand their brands globally. In the early stages of economic reforms, Chinese socialism constrained the salaries of CEOs (Firth, Fung, & Rui, 2006). The salary of an executive was about three times that of an unskilled worker (Huang & Zhang, 1998). Since the economic reforms in 1978, Chinese companies have begun adopting similar guidelines on corporate governance of the US and other capitalist countries (Gao, 2004). The results from our study will show how investors from different cultural backgrounds deem appropriate the pay gap of American CEOs. These pay ratios may be very different between cultures, therefore knowing how an individual will likely vote in a cultural setting can help shareholders determine a fair compensation package for the CEO. Furthermore, the investor base of many firms are becoming more global thus, there is more variance in the cultural background of investor bases. Our study specifically explains the implications of this phenomenon, such as how these investors perceive business practices, which is relevant in understanding how to gain their support. This paper contributes to existing literature of cultural influence on Say-on-Pay approvals by filling the gap between the individualist/collectivist cultural dimension on an individual level and their effects on Say-on-Pay, where previous research has only been conducted on the national level. Our findings could help boards planning to enter a new market, with a different cultural background, decide fairly the compensation for the CEOs at their companies.

**3. Theory**

**3.1 Theoretical Basis of CEO Pay: Agency Theory**

Differences in CEO pay of management and owner controlled companies can be explained by agency theory, which relies on the assumption that managers and shareholders pursue their own interests (Eisenhardt, 1989; Jensen & Meckling, 1976; Tosi & Gomez, 1989). The interests of managers are related to maximizing their own compensation, increasing the short-term profits of the company, and keeping risk low to avoid being fired; while the interests of shareholder are related to increasing profits and market share of the company in the long term, minimizing costs, and encouraging risk taking of the managers (Eisenhardt, 1989). According to agency theory, owners (the principals) contract with, and depend on the actions of the manager (the agents) (Tosi & Gomez, 1989). As a result, this relationship has the potential to produce so-called agency costs which arise from managers pursuing their own interests at shareholder’s expense, in addition to the cost of monitoring the activities of the agents (Tosi & Gomez, 1989). In order to avoid this, it is necessary to provide incentive in an attempt to align interests to the principal (Holmstrom, 1979). Additional compensation can also be used to motivate CEOs, and therefore, indirectly increases shareholder value (Fama & Jensen, 1983; Jensen & Murphy, 1990).

Overall, we see that compensation serves a general purpose of influencing the behavior of a manager in the business context. Compensation is also necessary for encouraging risk-taking behaviors in managers since their risks are tied to a single firm, as opposed to shareholders, so managers are likely to be risk averse. Jafri et al (2014) demonstrated that there is strong evidence to support the notion that incentives in pay promote risk taking in CEOs. Without risk-taking, a firm is not likely to achieve increased levels of success, as there is a positive relationship between increased risk-taking and corporate asset growth (Peng, 2015).

Although compensation serves to encourage risk taking in firms, managers will always prefer less monitoring and lower risks in the compensation structure (Harris & Raviv, 1979). Moreover, in management controlled firms, CEOs are likely to set their own compensation (Tosi & Gomez, 1989). Thanks to their position, CEOs have power at all levels of the organization, and could influence the executives and even the compensation committee during their decisions. (Williams, 1985, p. 66-67).

Agency theory is therefore considered by shareholders when expressing their vote on CEO and executives compensations. This study could possibly explain how the individualist/collectivist inclinations of the shareholders base influence the application of Agency Theory principles during the Say-On-Pay procedure and how the relationships between managers and shareholders is influenced by those factors.

**3.2 CEO-to-Worker Pay Ratio and Investor Say-on-Pay Votes**

CEO compensation has benefits as it is a mechanism to resolve agency problems. Theory and research have led researchers to the conclusion that CEO pay, when tied to firm performance, minimizes agency costs (Grossman and Hart, 1983; Holmstrom, 1979; Lazear & Rosen, 1981; Mirrlees, 1976; Murphy, 1986). However, when high compensation levels do not significantly affect firm performance, high CEO pay, especially when compared to average employee pay, becomes an agency problem itself (Boivie et al., 2011). For this reason, the mechanism of Say-on-Pay votes were created. Say-on-Pay voting is an annual agency mechanism that allows the shareholders of a company to express their opinions regarding executive compensation (White, 2010b).Within publicly traded US firms, it is required to offer a Say-on-Pay vote to the shareholders during annual proxy meetings (White, 2010a). While White (2010b) notes that Say-on-Pay votes are non-binding, they provide an avenue through which shareholders can voice their concerns about the compensation package. It is also important to keep in mind that, shareholders elect the board, whom also form the compensation committee that comes up with proposals for the CEO compensation packages. If shareholder concerns are not taken into account during the Say-on-Pay vote, they could force a change through by voting in new directors. Thus, there are incentives for directors to avoid unfavorable outcomes on these advisory votes.

**3.3 Present Day CEO Compensation Practices and Issues**

CEO pay in the United States has ballooned since the 1980s (Abowd & Bognanno, n.d.). One explanation for the sharp rise in CEO pay is the widespread adoption of equity incentives since the 1980’s (Abowd & Bognanno, n.d.). Moreover, studies by Holmstrom and Kaplan (2001; 2003) link the surge in CEO pay to the increase in equity-based compensation after the “leveraged buyout revolution” in the 1980s.

With the significant increase in CEO pay, CEO to average employee pay gap has become a controversial social equity topic (Abowd & Bognanno, n.d.). The ratio between CEO and average employee pay in large publicly listed firms has risen steadily over the past two decades, from 125:1 in 1992 up to 380:1 in 2016 (Mishel & Sabadish, 2012; Sahadi, 2007). Across 26 developed countries, CEO compensation had increased sharply while average minimum wage increased slightly at 0.7% in 2010 and decreased by 0.6% in 2011 (International Labour Organization, 2013; Morgenson, 2013).

Pay dispersion has important implications for employees and the company (Heyman, 2005; Winter-Ebmer & Zweimuller, 1999). Much of the research on pay dispersion is grounded in Tournament theory as an explanation for the large variance in pay levels within an organization. Tournament theorists propose that employees within firms compete to secure a higher paying position in the hierarchy (Lazear & Rosen, 1981). Some research has found that pay dispersion increases employee productivity and thus firm performance due to increased competition between individuals (Heyman, 2005; Main et al., 1993). However, research that draws from equity theory has found opposite effects. Proponents of equity theory argue that employees see pay as a measure of fairness of rewards and that perceived unfair pay dispersion generates sentiments of inequity and injustice, leading to lower morale and productivity (Finkelstein et al., 2009). Additionally, Peter Drucker, “the management guru”, suggested that exceeding a 20:1 ratio would increase employee resentment and decrease morale (McGregor, 2013).

The effects of CEO to average employee pay gap can be intricate, but one thing is certain: Agency Theory scholars shows that shareholders will always prefer CEO pay to be as low as possible while maintaining CEO motivation and reasonable risk taking (Krause et al., 2014). This indicates that under general circumstances, shareholders favor low CEO to average employee pay ratio. Thus, they are more likely to approve Say-on-Pay votes when the pay gap is small. This indication has already been tested by several studies across multiple countries that have adopted Say-on-Pay. As mentioned, the United Kingdom was one of first to legislate Say-on-Pay (Palmon, 2017). Research suggests that among the largest UK firms from 2002 to 2012, shareholders are more likely to vote against the remuneration report resolution when overall CEO pay is high (Alissa, 2015). Another study has also found that in the US, as the level of pay ratio increases, Say-on-Pay voting dissent, measured as the fraction of votes cast against approval of executive compensation, increases tremendously (Crawford, Nelson, & Rountree, 2018). In the experiment the author conducts, firms with a pay ratio in the top decile of the sample experience disproportionately greater shareholder dissatisfaction, with voting dissent that is 5-9% higher on average (Crawford, Nelson, & Rountree, 2018). Based on the above supposition, our first, and baseline hypothesis, is:

*Hypothesis 1: CEO to average employee pay ratio is negatively correlated with investor Say-on-Pay approval.*

**3.4 Effects of Individual Cultural Inclinations on Investor Say-on-Pay Approval**

Past research has also examined cultural dimensions and concluded that there are variations interculturally. We would like to build upon previous research and discover what connection there is between individualist and collectivist ideals of investors, given the same point of reference.

Culture, as described by Geert Hofstede, is the "programming of the mind" that differentiates societies from one another (Hofstede, 1984). Due to the increased interconnectedness of the planet from globalization, managing differences in culture is extremely important. Hofstede notes that not a single activity in management is culture-free (Hofstede, 1984). Additionally, he states that the management style within a specific society is shaped by its cultural context (Hofstede, 1984). Given this, a firm wishing to internationalize has the potential to run into problems by violating the cultural norms in another country (society). Hofstede discovered that management techniques, that are considered appropriate or normal in one culture, may not be in others (Hofstede, 1984). In 1984, Hofstede published his research of statistical analysis on answers given by people in 67 countries and revealed that there were four cultural dimensions that differentiated cultures: *Individualism vs. Collectivism, Power Distance, Uncertainty Avoidance, and Masculinity vs. Femininity* (Hofstede, 1984). Of the four, the one dimension that we will look into in this paper is *Individualism vs. Collectivism*. In fact, according to the Social Orientation Hypothesis about the origin of cross cultural differences in decision-making, all currently existing cultures can be compared with one another against the collectivism/individualism scale (Varnum, 2010).

In order to research the effectindividualism and collectivism have on perceptions of CEO compensation, it is important to first define them explicitly. As stated by Hofstede, 'individualism' is the preference of a loose social framework, whereas 'collectivism' is the opposite; the preference of a tight social framework (Hofstede, 1984). Also important to note, individualism and collectivism are inverses of each other on a scale; on which, one end is individualism, and the other is collectivism. An easy metaphor to understand this is in the family context. People in individualist societies are expected to only care for themselves and close family (Hofstede, 1984). People in collectivist societies are cared for by their family, relatives, and potentially their whole "in-group" and are expected to be loyal in return (Hofstede, 1984).

In organizational settings, people value meritocracy in individualist culture, which is defined as the idea that those who rise to the top deserve to be rewarded accordingly (Hofstede, 1980). Employees in individualist societies associate personal success with financial status (Hofstede, 1980). The outcomes of which have created huge compensation packages for CEOs that intend to lower agency costs, but have been questioned by many as excessive. Since investors are widely viewed as primary stakeholders in companies, their perception of whether CEO compensation is equitable is important since they are the most interested group in optimizing a company’s ROI. Moreover, drawing from agency theory and managerial capitalism, we expect that minority investors are likely to impose compensation limits on executives (Tosi & Greckhamer, 2004). In addition, research shows that CEO compensation is lower when there is higher equity dispersion divided among minority shareholders (Hambrick & Finkelstein, 1995; Tosi & Gomez-Mejia, 1989).

The implications that the individualism dimension has on business cannot be understated. As an example, the relationship between employer and employee has a different dynamic between individualist and collectivist cultures. Hofstede explains that in collectivist cultures employers are expected to protect their employee in return for loyalty from their employee (Hofstede, 1984). This is a drastic difference from individualist cultures, in which the relationship is based on mutual advantage (Hofstede, 1984). Of course, the individualism dimension only causes part of the difference in these relationships; there are other factors present according to Hofstede (1984). Through his research, Hofstede discovered that, in general, developing and Eastern countries tend to be more collectivist than developed ones, and as such there would be a culture gap (for the individualism dimension) if a firm from a more developed country were to bring its management techniques to a developing country such as these (Hofstede, 1984). Essentially, Hofstede's conclusion is that management philosophies need to conform to the local culture (Hofstede, 1984). "There is a need for the application of anthropological concepts to the field of management in order to help in the development of locally effective ways of management and planning." (Hofstede, 1984).

Hofstede’s research has been the gold standard for describing and analyzing national culture for the past 30 years. His cultural dimensions are revered for their accuracy in describing culture and it has allowed researchers, like himself, to classify and compare different cultures (countries) with one another. But there are limitations. While Hofstede’s cultural dimensions have, in the past, been excellent for studying the national level, in managerial situations, it is far more important to study the dimensions at an individual level (Kamakura & Mazzon, 1991; Kamakura & Novak, 1992; Yoo et al., 2011).

Most studies focus on comparing national cultures and the differences in remuneration practices between them. One study conducted by Tosi & Greckhamer (2004) related Hofstede’s cultural dimensions directly to CEO pay. In this case, our research fills an important gap that has yet to be explored; that different cultures perceive equitable executive pay practices differently according to their cultural dimension orientation outlined by Hofstede. Moreover, our focus is on the individual culture level of the investors, not the national culture level.

We plan to study individuals and test for the influence that individualism and collectivism has on how CEO compensation is judged. In the paper of Yoo et al. (2011), they note that blindly applying the known national culture to individuals may not be accurate, especially if within that country there is a heterogeneous population, and likewise, different cultural backgrounds. Additionally, they state that within any country, there always is immense diversity due to increased heterogeneity of societies and the mobility of individuals (Yoo et al., 2011). Many studies in the past have lumped all people within a country into the same culture category, such as Aaker and Lee’s study (2001) in which they classified all Americans as individualist and all Chinese as collectivist. Our approach will be different by recognizing the variation and differences between individuals pertaining to the same culture or country.

Hofstede notes that the individualism dimension focuses on how much interdependence there is in a society, or in other words, the perception of 'I' and 'We' (Hofstede, 1984). The fact that people act in the interests of the group and not necessarily for themselves lets us suppose that investors with collectivist ideals prefer a more equal distribution of salaries within their firm. We base our second hypothesis on this supposition:

*Hypothesis 2: Individualist ideals negatively moderate the relationship between CEO pay ratio and Say-on-Pay approval.*

**4. Methodology**

The goal of the present study is to answer the questions derived from these theoretical considerations. In this paper, we conduct a quasi-experiment to test our hypotheses. We have surveyed respondents from three different continents: America, Europe and Asia, permitting us to have a wide range of cultural differences in our sample regarding collectivist/individualist ideals.

The purpose of this quasi-experiment is to gain a better understanding of the effect that individualist and collectivist dimensions have on decision processes of investors in evaluating CEO compensations. We use a quasi-experiment mainly based on the consideration that we have to approach people of various nationalities from three different continents. Harris et al. (2006) notes that quasi-experiments are regularly used when it is not practical or feasible to administer a controlled experiment. In a situation like ours, a quasi-experiment provides us with an appropriate tool to gather convincing data with low cost, as opposed to interviews or performing an archival study. Interviews are difficult to arrange since we aim to have over 100 respondents, many of whom reside in other countries, and this method is limited by both time and space. Archival study, on the other hand, cannot provide us with first-hand information and data needed for the analysis. Due to this, a survey provides us with the most efficient and straightforward method to solicit and collect data for our research.

**4.1 Sample**

To analyze investor Say-on-Pay votes on CEO compensation, we use a non-probability sampling strategy including only MBA students, both current students and alumni, since they are business-savvy, are able to read financial statements, and are small-level investors as well. Given this, we plan to only analyze answers from MBA students because they can be compared to an investor in terms of knowledge and business attitude. These respondents are asked questions regarding their willingness to approve a certain amount of CEO pay under two different scenarios of pay equality.

For a long time, similar business studies like ours have used students in place of investors (Bhawuk & Brislin, 1992; Bigelow et al., 2014; Krause et al., 2014; Thaler et al., 1997). Students have been proven to be reliable proxies for investors, as studies show that MBA students can represent an adequate sample of the general population and possess the relative sophistication to make shareholder decisions (Bigelow et al., 2014; Krause et al., 2014). In another study, the author also uses MBA students as participants to study cultural sensitivity under individualist and collectivist cultures (Bhawuk & Brislin, 1992). We are confident that MBA students already have the required knowledge of financial statements and Say-on-Pay, and for redundancy, we also provide an explanation of Say-on-Pay at the beginning of our survey.

We reached out to MBA students across multiple countries and universities, via a contact person, alumni networks and personal connections. We followed a convenient sampling strategy contacting the MBA students of the universities were we are currently studying or were we had previous academic experiences, as well as by contacting personal connections who were MBA students or alumni. It is difficult to know the exact number of students and alumni we reached out to, but we estimate the number to be around 300-400 students and recent alumni. Our data was remarkably clean, even before the cleaning process, as we preselected the demographic of MBA students and alumni, a demographic not expected to feign a quick survey. We only removed our test runs and those respondents who had response times of less than 2 minutes, of which there were 3. In total, we had respondents from 13 universities, plus those who did not identify a school. However, when looking at our data, 77 of our 106 respondents (73%) were current students at either Darden School of Business in University of Virginia, Lingnan College in Sun Yat-sen University, or ESADE Business School. Each of these 3 main schools is based on a different continent, enabling us to have a significant sample population from different cultures, and hence, different inclinations relative to the individualist/collectivist cultural dimension. Additional characteristics of the sample population are listed and studied in the descriptives section of the paper.

**4.2 Quasi-experiment**

To carry out the quasi-experiment, we first design two survey scenarios. These two surveys are the same in every way, except for the CEO to average employee pay ratio. In one scenario, the firm has a higher than average CEO to worker pay ratio. In the other, the pay ratio is lower than the average. Firm performance is held constant for both scenarios, which is measured by several financial metrics including stock price, price/earnings, dividend yield, earning/share, market capitalization, EBITDA, price/sales, and annual return (Investopedia, 2018; “S&P 500 Companies”, n.d.). The company is an American shipping company included in the S&P 500 and CEO compensation is taken from the average number in these companies, the pay ratio is calculated by taking the fraction of average CEO to worker pay that is 361:1 (AFL-CIO, 2018). In the high and low scenarios, the pay ratios are calculated by adding and subtracting 20% from the average ratio respectively. We decided upon the value of plus or minus 20%, as this would be a large enough difference to be noticeable by respondents, but not so great that there would be a massively significant difference in our CEO pay ratios. This led to pay ratios of 289:1 and 433:1 for the high and low scenario surveys, respectively.

Our experiment is divided into three parts. In the first part, we present the respondents with one of two firm scenarios (as dependent on which group they are randomly assigned). We proceed to ask for their Say-on-Pay vote for the hypothetical firm and their opinion on the perceived fairness of the CEO pay ratios.

In the second part, we survey the respondents to discover their individualist or collectivist ideals. We use the CVSCALE (Individual Cultural Values Scale) that measures Hofstede’s dimensions of culture at the individual level, developed by Yoo et al. in 2011. Our experiment designed for the cultural dimension section, which will be modeled as a five point Likert scale to capture the attitudes of respondents from a set of statements. Likert scales are a proven method, and have been widely used in research in behavioral sciences, marketing, and other domains (De Winter et al., 2010). Point 1 is regarded as most collectivist and point 5 as most individualist, and we coded the cultural inclination questions accordingly on Qualtrics. In a paper by Boone, et al. (2010) on analyzing likert data, the typical analysis process starts by calculating a composite score, whether a sum or mean, from four plus likert items. In summing up the possible scores from our likert items, we arrive at a range from 6 to 30 points.

In the last section, we ask respondents screening and demographic questions. We understand the importance of statistical accuracy, so this last section logs the respondents basic demographic information relevant to the experiment. If a respondent fails to complete this section, their data will not be used in our analysis.

The second step in our experiment is to randomly assign the respondents into two groups. To do so, we launched the two surveys on a website, on which respondents have a 50% chance to be directed to the high pay scenario survey and a 50% chance to be directed to the low pay scenario survey **(Appendix 1)**.We had difficulty convincing our counterparts at universities to randomly sort (by whichever means available) MBA students among our two surveys, nor could we trust that they do it correctly. In order to ensure random grouping and a streamlined process for our respondents, we used a JavaScript function within a publically available webpage that would redirect respondents randomly to one of the two Qualtrics surveys we had. As this website was publically accessible, we locked down both surveys with a password, which was only sent by email to our desired respondents of choice. This way, we have ensured that data reliability is high, and that no unreliable respondents have tainted the data. An added benefit of this method is that computer sorting leads to true randomization, and does not commit human error. We sent out the survey to universities in Asia, Europe, and the USA, and we specifically target Lingnan College in Sun Yat-sen University, ESADE Business School, and Darden School of Business in University of Virginia. Additionally, we relied on personal connections to reach more alumni and MBA programs at Elon University and North Carolina State University. Email was our primary method of approach when soliciting responses. As part of our email, we included our confidentiality and data privacy policy. Respondents are regarded as showing consent to these terms when they begin to take the survey.

To motivate and encourage responses, respondents had the optional choice to enter a lottery to win a $50 Amazon gift card/ €45 Amazon gift card/ ￥300 JD.com gift card depending on their region. We received 111 responses altogether, among which 57 were from the high pay scenario and 54 were from the low pay scenario.

The last step before data analysis is cleaning the data. We deleted incomplete responses, and set the response time threshold at 90 seconds, meaning that any answer that does not meet this criteria will be deemed as unqualified response and deleted from our list. After cleaning the data, we kept 55 responses for the high pay scenario and 51 for the low pay scenario. Furthermore, we standardized the naming conventions of universities and countries to ensure accurate analysis, and computed several new variables such as: *Total CV Score*, *Standardized CV Score*, and *Individualism*.

**4.3 Dependent Variable**

***Say-on-Pay approval.*** Say-on-Pay approval is measured by voting for or against the CEO to average employee pay ratio. Respondents have to make the vote after they read the material in the assigned scenario. We coded approval as “1” and disapproval as “0”.

**4.4 Independent Variables**

***Pay Scenario.*** We have both a high pay and a low pay survey in our study. To better analyze our survey results, we aggregated the survey data, in which we coded the different scenarios as binary data: the *high pay* scenario as “1” and the *low pay* as “0”.

***Individualism.*** In most of the past studies, participants are categorized based on the individualist and collectivist inclination of their country rather than their own, which may bias the test result since additional research shows people can vary ideologically within the same country or culture. Yoo et al. (2011) notes that this is an important consideration to take into account. Different from most of the existing studies, we are categorizing our respondents in terms of individualist and collectivist dimensions on the individual level rather than at the national level to make our experiments more accurate. We calculated this variable by summing up respondents *CV scores*, as this is the standard for likert data according to Boone et al (2010). As data was skewed towards more collectivist, we decided to classify respondents as either individualist or collectivist based on their summed Culture Score in relative relation to the midpoint of our culture score data. 0 being collectivist and below the midpoint of the data, whereas 1 is individualist, and above the midpoint.

**4.5 Control Variables**

To better isolate the theoretical relationships that we propose, we include a set of control variables on individual factors into the quasi-experiment model. A previous study regarding the relationship between CEO compensation and culture that we analyzed contained no control variables, due to the data coming from a dataset (Schuler & Rogovsky, 1998). Furthermore, other studies regarding the same relationship (Bryan, 2012) only control for the determinants of compensation structure. We controlled compensation structure in our experiment by keeping the ratios equal across our surveys. Regardless of the fact that studies did not control for other potential demographic moderators, we brainstormed and identified several variables that could influence an individuals Say-on-Pay vote, and controlled for them by creating the control variables below. While this is not an exhaustive list of all the possible demographics to control via variables, it does cover the major characteristics of an individual that have the potential to influence their vote. Additionally, it is not possible or feasible to control for every possible demographic-related influence, especially given quasi-experiment methodology and our desire to keep our survey concise and straightforward. Below are the control variables that we used. However, in the course of our analysis, none of the control variables we included in our models was statistically significant in helping us determine the approval of Say-on-Pay votes. Perhaps this was due to our small sample size.

***Nationality.*** We provided 3 questions on our survey to measure Cultural Identification: *Country of Birth, Nationality, and Country most Identified with*. We selected *Country most Identified with* as an independent variable for analysis, as our hypothesis requires measuring cultural identity. We included the aforementioned variables to be controlled, as Hofstede (1984) notes that there are real differences between major cultures. Identity itself is a personal perception, and this rationalized our selection of this specific response as our variable. In the vast majority of our responses, *Country most Identified with* was the same as the *Country of Birth* or the *Nationality* of the respondent. After this, we grouped respondents into 4 regions for simplicity: North America, Latin America, Europe, and Asia to use as control variables.

***Gender.*** Research has shown that there is substantial difference between men and women in in-group bias, which is the preference of others of the same gender. In Rudman et al. (2004), it was shown that women’s in-group bias is significantly stronger than that of men’s. In addition, Eckel et al. (1998) demonstrated that women are far less selfish than men. Due to these gender related differences, we recognized the need to control for Gender, as our sample included both men and women, and the CEO in our hypothetical scenario was male. We asked our respondents for their gender, providing 3 options: Male, Female, and Other/I Prefer not to Respond. Upon analysis, we did not have a single respondent who selected the third option, and as such, we were able to simply use Male and Female as binary data for our control variable.

***Age.*** Previous research has proposed that there are differences in attitudes among different age groups. Quintelier (2007) indicated that each stage of life holds differing social inclinations because of differentials in resources, experience, and occupation of different social roles. As such, we recognized the need to control for age. We gave our respondents 5 choices for age: under 21, 21 to 24, 25 to 28, 29 to 32, and above 32. Each range is equally spaced, and centers around the age ranges that an MBA student would most likely fall into, as they were our primary target. Additionally the upper and lower bound options include all ages above, and below (respectively) in order to track all respondents.

***Income.*** We suspected that those with greater income and wealth would have a different perception of fairness than those with less. Indeed this is the case, as research conducted by Armantier (2006) suggests that relative differences in wealth seem to reshape one’s concept of fairness. To account for this, we gave our respondents 5 choices for income: less than $29,999, $30,000 to $59,999, $60,000 to $89,999, $90,000 to $119,999, and greater than $120,000. Each range is equally spaced, and covers all income possibilities. This variable aims to verify whether an MBA student has sufficient financial ability to make investments.

***Investment.*** Similar to the *Income* control variable, we included a control variable to measure *Investment.* We classify investments as another form of wealth, using Armantier (2006) study as a reason to include the *Investment* control variable. Additionally, those with investments theoretically should have a greater understanding of investor responsibilities. This variable is to measure whether the respondent has investment experience. They are provided with 5 choices: greater than $30,000, around $30,000, unsure, less than $30,000, and no investment.

**5. Data Analyses**

**5.1 Descriptive Statistics**

We collected 55 valid responses from the High Pay scenario, among which 29 approved the compensation package, while in the Low Pay scenario we had 51 responses and 34 of them approved the CEO compensation package.

The tables below show the descriptive statistics of the dependent variable, independent variables, and all the demographic factors of the respondents in the High and Low Pay scenario. The demographic factors are included as control variables to check for correlation to Say-on-Pay or to the cultural inclinations of the respondents. All the variables excluding Total Culture Score (Individualist CV Scale) and standardized Total Culture Score are binary variables and so the mean also represents the percent of the sample population that have these characteristics.

All of our respondents are current or former MBA students, most of whom are male, 29 years or older and with an income above $60.000.

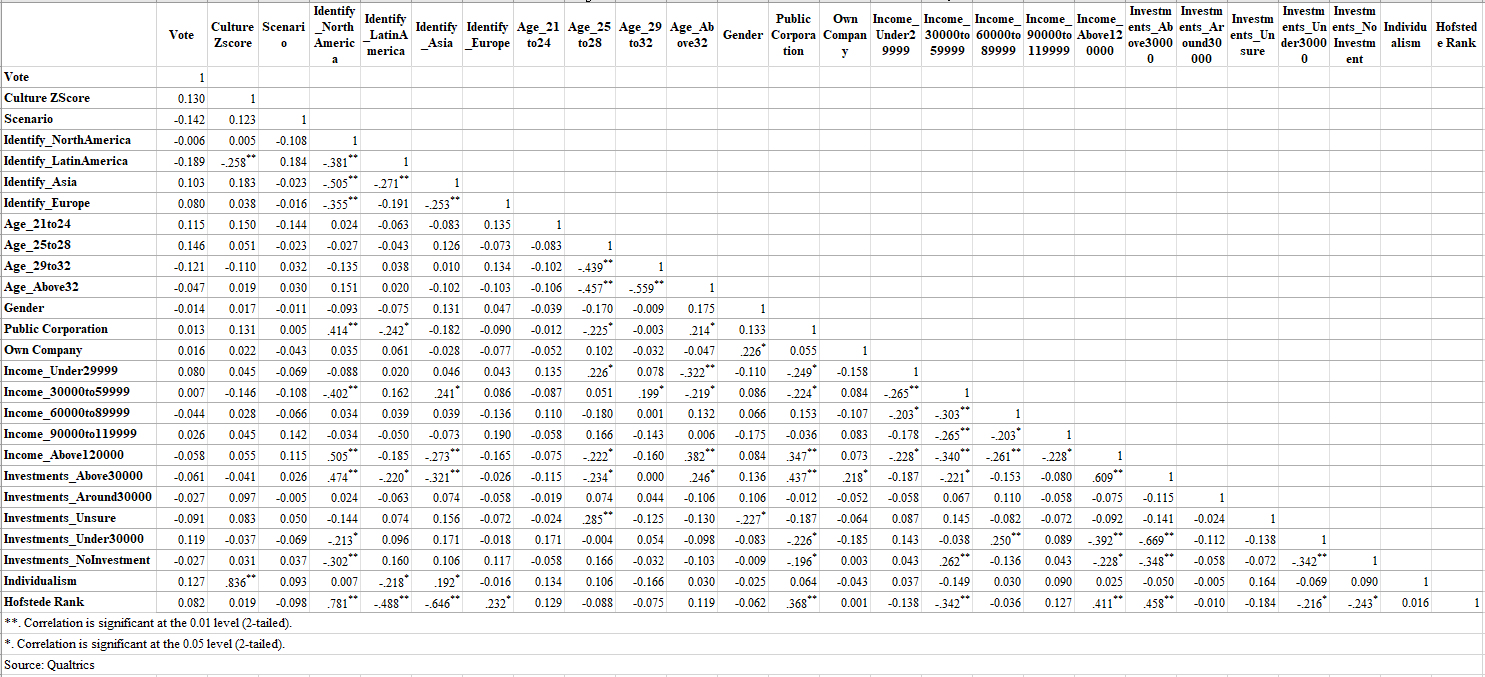
|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **High Pay Survey** | | | | | **Low Pay Survey** | | | | |
| **Variables** | **Mean** | **Median** | **Standard Deviation** | **Min** | **Max** | **Mean** | **Median** | **Standard Deviation** | **Min** | **Max** |
| *Vote* | 0,527 | 1 | 0,504 | 0 | 1 | 0,666 | 1 | 0,476 | 0 | 1 |
| *Individualist* | 0,527 | 1 | 0,504 | 0 | 1 | 0,470 | 0 | 0,504 | 0 | 1 |
| *Total Culture Score* | 15,236 | 16 | 3,977 | 6 | 23 | 14,275 | 14 | 3,821 | 7 | 22 |
| *Hofstede Ranking* | 45,737 | 46 | 22,509 | 13 | 91 | 44,933 | 38 | 25,519 | 12 | 91 |
| *Ext. Time Abroad* | 0,254 | 0 | 0,440 | 0 | 1 | 0,235 | 0 | 0,428 | 0 | 1 |
| *North America* | 0,363 | 0 | 0,485 | 0 | 1 | 0,471 | 0 | 0,504 | 0 | 1 |
| *Latin America* | 0,236 | 0 | 0,429 | 0 | 1 | 0,098 | 0 | 0,300 | 0 | 1 |
| *Asia* | 0,273 | 0 | 0,449 | 0 | 1 | 0,274 | 0 | 0,451 | 0 | 1 |
| *Europe* | 0,127 | 0 | 0,336 | 0 | 1 | 0,157 | 0 | 0,367 | 0 | 1 |
| *Gender (Male)* | 0,636 | 1 | 0,485 | 0 | 1 | 0,628 | 1 | 0,488 | 0 | 1 |
| *Age under 21* | 0,00 | 0 | 0,000 | 0 | 0 | 0,00 | 0 | 0,000 | 0 | 0 |
| *Age from 21 to 24* | 0,00 | 0 | 0,000 | 0 | 0 | 0,039 | 0 | 0,196 | 0 | 1 |
| *Age from 25 to 28* | 0,255 | 0 | 0,440 | 0 | 1 | 0,275 | 0 | 0,451 | 0 | 1 |
| *Age from 29 to 32* | 0,364 | 0 | 0,485 | 0 | 1 | 0,333 | 0 | 0,476 | 0 | 1 |
| *Age above 32* | 0,382 | 0 | 0,490 | 0 | 1 | 0,353 | 0 | 0,483 | 0 | 1 |
| *Worked in a Public Corporation* | 0,546 | 1 | 0,503 | 0 | 1 | 0,549 | 1 | 0,503 | 0 | 1 |
| *Founded a Company* | 0,109 | 0 | 0,315 | 0 | 1 | 0,137 | 0 | 0,348 | 0 | 1 |
| *Income under 29,999* | 0,127 | 0 | 0,336 | 0 | 1 | 0,177 | 0 | 0,385 | 0 | 1 |
| *Income from 30,000 to 59,999* | 0,236 | 0 | 0,429 | 0 | 1 | 0,333 | 0 | 0,476 | 0 | 1 |
| *Income from 60,000 to 89,1000* | 0,164 | 0 | 0,373 | 0 | 1 | 0,215 | 0 | 0,415 | 0 | 1 |
| *Income from 90,000 to 119,1001* | 0,200 | 0 | 0,404 | 0 | 1 | 0,098 | 0 | 0,300 | 0 | 1 |
| *Income above 120,000* | 0,273 | 0 | 0,449 | 0 | 1 | 0,176 | 0 | 0,385 | 0 | 1 |
| *Investments above 30000* | 0,418 | 0 | 0,498 | 0 | 1 | 0,392 | 0 | 0,493 | 0 | 1 |
| *Investments roughly 30000* | 0,018 | 0 | 0,135 | 0 | 1 | 0,019 | 0 | 0,140 | 0 | 1 |
| *Investments under 30000* | 0,364 | 0 | 0,485 | 0 | 1 | 0,431 | 0 | 0,500 | 0 | 1 |
| *Investments unsure* | 0,036 | 0 | 0,189 | 0 | 1 | 0,019 | 0 | 0,140 | 0 | 1 |
| *No Investments* | 0,163 | 0 | 0,373 | 0 | 1 | 0,137 | 0 | 0,348 | 0 | 1 |

*n=56 n=51 Source: Qualtrics*

The sample resulted in a collection of responses, slightly skewed towards collectivist ideals. The minimum point among all the respondents is 6 and the maximum is 23, which means that there are respondents showing extreme collectivism but individualist respondents are less extreme. In order to limit the negative effects of skewness in our analysis, we decided to standardize our data into Z scores. The total CV SCALE scores are standardized to obtain a Z CV SCALE normal distribution to be used in logit regressions.Additionally, it must be taken into account that there were three nationalities present in our data that did not have Hofstede individualist/collectivist scores (Paraguay, Cuba, and Kazakhstan), corresponding to 4 respondents out of 106. We assigned the Hofstede individualist/collectivist score of a culturally similar country to each of these (Argentina, Venezuela, and Russia, respectively). As such, the descriptive statistics for Hofstede ranking may contain slight error.

**5.2 Variable Correlations**

We studied the possible relationship between each pair of variables we would use in the analysis by a bivariate correlation test. The test result, a correlation table as shown below, has provided us with the information regarding how strong the variables are correlated.



The first thing we notice from the table is the negative correlation between our dependent variable, investor Say-on-Pay approval, and independent variable, pay scenario, albeit not a significant correlation. We have coded “1” as approval for dependent variable and “0” as disapproval, while for independent variable, “1” stands for high pay and “0” for low pay. Therefore, a negative relationship indicates that the approval rate for low pay scenario is higher than for high pay scenario, which supports our first hypothesis.

We also notice that our moderator, individualist ideals, exhibits a positive relationship with investor Say-on-Pay approval. We coded “1” as individualism and “0” as collectivism for the moderator. Therefore, a positive relationship suggests that individualists are prompt to vote for CEO compensation packages, which partially supports our second hypothesis, arguing that individualist ideals weaken the relationship between CEO to average employee pay ratio and investor Say-on-Pay approval.

Among all the correlation coefficients that are significant, none are above the threshold of 0.85 which should be deemed as severe multicollinearity (Schroeder et al., 1990). Therefore, it is not obligatory for us to remove any of the variables when doing logistic regressions. However, there are two pairs of variables that share moderate correlation (more than or around 0.80) with each other in the bivariate correlation matrix: Z-score of culture score with individualism (0.84), and Hofstede rank with Identify as North America (0.78).

The moderate correlation between the Z-score of culture score and individualism variable makes sense because the individualism variable (coded as “0” collectivist and “1” individualist) was computed directly from the Z-scores. Hence, we are using these two measures of culture as moderators and not as control variables. The Hofstede rank (ranks nationalities as individualist or collectivist) is moderately correlated with Identifying as North American (excluding Mexico), which suggests a positive relationship between individualism and Identifying as North American. However, the variable Hofstede rank is also a measure of culture and is a moderator, while identifying as North American variable is a control. Therefore, having them correlated does not matter much.

**5.3 Chi-square Test**

A two-sample Chi-square test with one degree of freedom was conducted to study whether there is a statistically significant difference in respondents Say-on-Pay approval between the High Pay and Low Pay scenario. We chose a Chi-square test over a t-test for mainly two reasons. First, in order to run an independent samples t-test, the dependent variable (Say-on-Pay) must be continuous (Kent State University, 2019). In this case, this condition is not satisfied. Second, our data is discrete since we collected binomial observations (approve or not approve). Based on the above two reasons, we can see that the Chi-square test satisfied all the statistical conditions needed given our dataset while a t-test did not. Furthermore, a Chi-square test with one degree of freedom has a normal distribution (IBM Support, 2016). Hence it has a symmetric distribution and is thus a two-tailed test, which allows the p-value to be divided into two if researchers are testing a directional hypothesis. Therefore, a Chi-square test is chosen in this case.

In this Chi-square test (and in latter logistic regressions), an alpha level of p < 0.1 was used becausesimilar studies analyzing compensation practices with culture have also used this threshold, and it is a common alpha level of comparison in a wide range of studies and sciences (Schuler & Rogovsky, 1998). As, our sample size was limited by the number of respondents, a higher range for error was used.

In addition, we use one-tailed p-value instead of two-tailed because research has shown that for correct directional hypotheses, two-tailed p values should be halved to draw accurate empirical conclusions at a given level of significance (Cho & Abe, 2013). Our hypotheses are structured in line with standard statistical procedure to accurately represent the directionality of the parameter approval, that is, low CEO to average employee pay ratio leads to higher investor Say-on-Pay approval.

Our hypotheses for the Chi-square test are below:

*Null Hypothesis: Investor Say-on-Pay approval rate in the low pay scenario is NOT higher than the approval rate in the high pay scenario.*

*Alternative Hypothesis: Investor Say-on-Pay approval rate in the low pay scenario is higher than the approval rate in the high pay scenario.*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Value** | **Degrees of Freedom** | **Asymptotic Significance (1-sided)** |
| **Pearson Chi-square** | 2.133 | 1 | 0.072 |

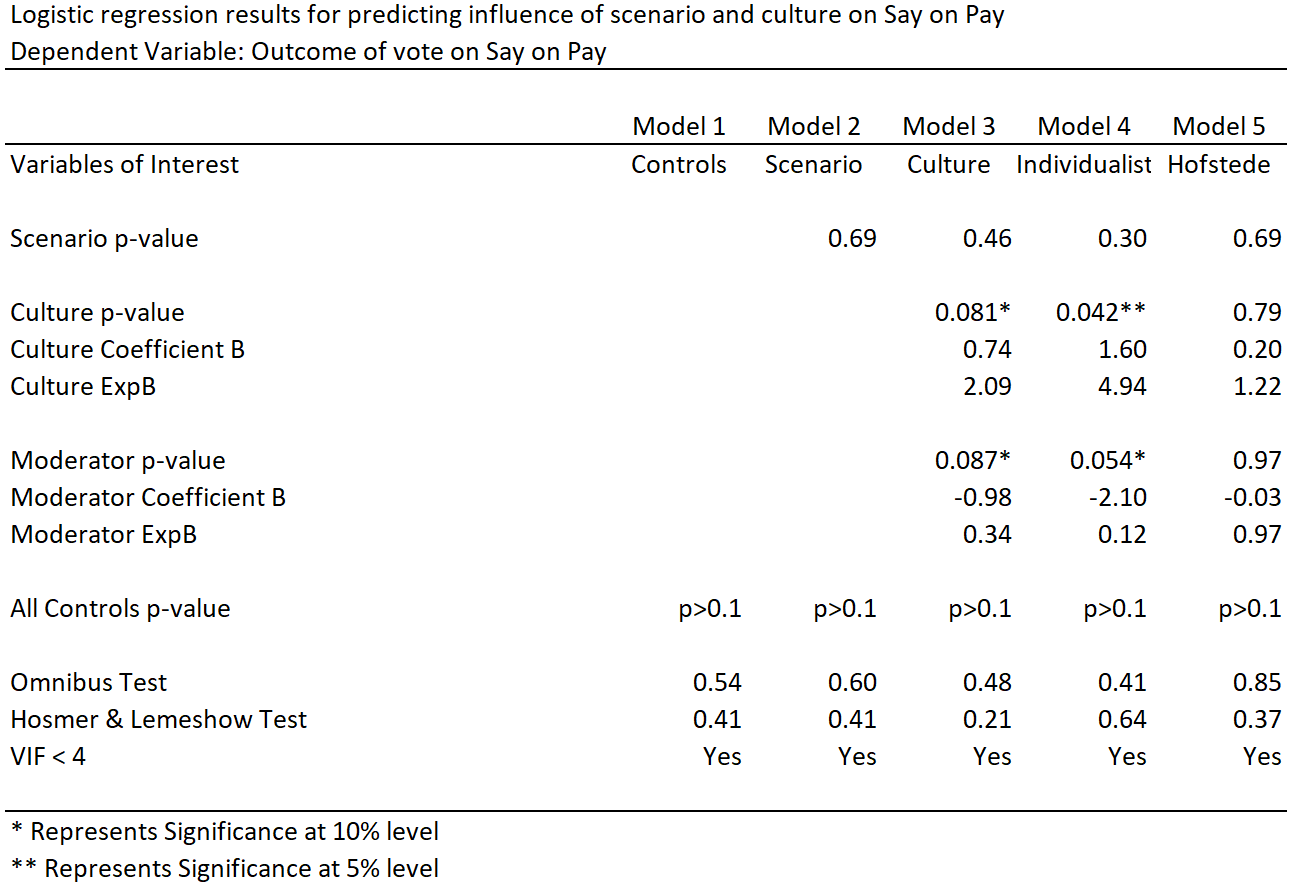
*n=106 Source: Qualtrics*

In the Chi-square test performed to examine the relation between CEO to average employee pay scenario (high or low) and investor Say-on-Pay approval, the output shown as above suggests that the relation between these variables is significant (*X*2(1, N=106)=2.133, p<0.1). Therefore, there are sufficient indications to reject the null hypothesis for Chi-square test, accept the alternate hypothesis and argue that investors are more willing to approve a CEO’s compensation package when the ratio of CEO to average employees pay is lower. The results of the Chi-square test are in line with our first hypothesis.

It is important to note that the Chi-square test is highly sensitive to sample size. The results are most reliable when the data are collected from randomly selected subjects, and when sample sizes are sufficiently large that they produce appropriate statistical power (McHugh, 2013). The findings are not substantively significant given our sample size of 106, although they are statistically significant. We will also run logistic regressions that account for control variables to better elaborate on this finding.

**5.4 Logistic Regression**

Following the Chi-square test, a logistic regression was conducted to predict whether a respondent taking the high pay survey is more likely to disapprove of the CEO pay to average employee pay. We have done the regression on five models.



**5.4.1 Model 1**

In Model 1, we ran the regression with only control variables. The VIF statistics for all the control variables are under three and none are significant (p>0.1). Some researchers state that there is no strict cutoff for a VIF statistic and argue that it is subjective (Thompson, Kim, Aloe, & Becker, 2017). Others argue that a VIF over 10 indicates strong multicollinearity (Chatterjee & Price, 1991). This suggests insufficient indication of multicollinearity between the control variables in this model.

According to the Omnibus test, the model with our dependent variable (Say-on-Pay vote) including just the control variables is not significant (p=0.54). Therefore, the overall model is not significantly different from the baseline model (i.e without predictors). As the Hosmer and Lemeshow test indicating goodness of fit is not significant (p=0.41), the model adequately fits the data. None of the control variables show any significance in this model (p>0.1). Thus, there is insufficient indication that the control variables are predictors of investor Say-on-Pay.

**5.4.2 Model 2**

In Model 2, we ran the regression to test our first hypothesis. The model includes the independent variable *scenario* and control variables. The VIF statistics for the independent variable *scenario* and all the control variables in the model are under three and none are significant (p>0.1); there is insufficient indication of multicollinearity between the control variables and the independent variable.

Controlling for all other variables, our independent variable *scenario* (low vs high pay survey) is not significant (p=0.69), and neither are any of the control variables significant (p>0.1). There is insufficient indication that the variables in this model are predictors of investor Say-on-Pay.

According to the Omnibus test, the model including the predictor and the control variables is not significant (p=0.60). Therefore, the overall model is not significantly different than the baseline model. The Hosmer and Lemeshow test indicating goodness of fit is not significant (p=0.41). So, the model adequately fits the data.

**5.4.3 Model 3**

In Model 3, we ran the regression to test our second hypothesis with culture as a moderator. The model includes independent variables *scenario,* culture, culture moderator, and control variables. The VIF statistics for the independent variable *scenario* and all the control variables in the model are under three and none are significant (p>0.1). Hence, there is insufficient indication of multicollinearity between the control variables and the independent variable.

The independent variable *scenario* with the dependent variable Say-on-Pay is not significant (p=0.46). As such, there is insufficient indication that belonging to one of the two scenarios is a predictor of Say-on-Pay. The continuous variable culture score is significant (p=0.081), which is an indication that culture is a predictor of Say-on-Pay. The coefficient is positive (B=0.74), so the relationship between respondent culture and Say-on-Pay is positive. The log odds ratio is greater than one (Exp(B)= 2.09), which means that the odds of approving Say-on-Pay is higher when the culture score is higher. These results suggest that a respondent with one standardized deviation higher culture score than another, thus leaning to more individualist, is 68% more likely to approve Say-on-Pay. The continuous variable moderator (Scenario\*Culture) is significant (p=0.087). Therefore, there is indication that culture is a moderator.

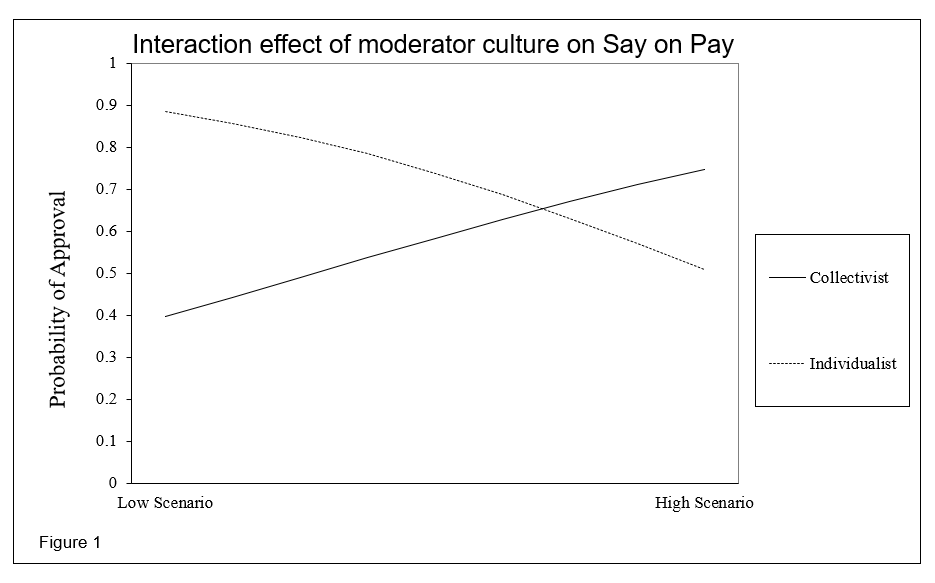


Figure 1 shows the interaction effect of the culture moderator on Say-on-Pay. The logistic regression results indicated a significant interaction (p=0.087). Figure one suggests that individualism and collectivism have different effects on Say-on-Pay when tested on a low pay ratio scenario vs a high pay ratio scenario. While the main effect variable *scenario* is not significant, the moderator culture indicates that in the low pay ratio scenario an individualist (88% chance) is more likely to approve of CEO pay, while a collectivist (40% chance) is less likely. The opposite effect happens in the high pay ratio scenario in which a collectivist (75% chance) is more likely than an individualist (51% chance) to approve of the CEO pay. However, the difference in probability of approval between individualists and collectivists in the high pay ratio scenario is lower than in the low pay ratio scenario.

According to the Omnibus test the model is not significant (p=0.48), indicating that the overall model is not significantly different than the baseline model. The Hosmer and Lemeshow test indicating goodness of fit is not significant (p=0.21). Therefore, the model adequately fits the data.

**5.4.4 Model 4**

In Model 4, we ran the regression to test our second hypothesis with our dummy variable - cultural identification (individualism/collectivism) as moderator. The model includes independent variable *scenario*, individualist moderator, and control variables. The VIF statistics for the independent variable *scenario* and all the control variables in the model are under four and none are significant (p>0.1). Hence there is insufficient indication of multicollinearity between the control variables and the independent variable.

The variable *scenario* relationship with Say-on-Pay is not significant (p=0.30), which suggests insufficient indication that scenario is a predictor of Say-on-Pay. The variable individualist with Say-on-Pay is significant (p=0.042). Therefore, controlling for all other variables, there is indication that it is a predictor of Say-on-Pay. The coefficient is positive (B=1.60). Hence, the relationship between respondent cultural identification and Say-on-Pay is positive.The log odds ratio is greater than one (Exp(B)= 4.94). Therefore the odds of approving Say-on-Pay is higher for respondents who are classified as individualist. The results suggest that a respondent classified as individualist is 83% more likely to approve Say-on-Pay. Moderator (Scenario\*Individualist) is significant (p=0.054). Therefore, there is indication that cultural identification is a moderator.

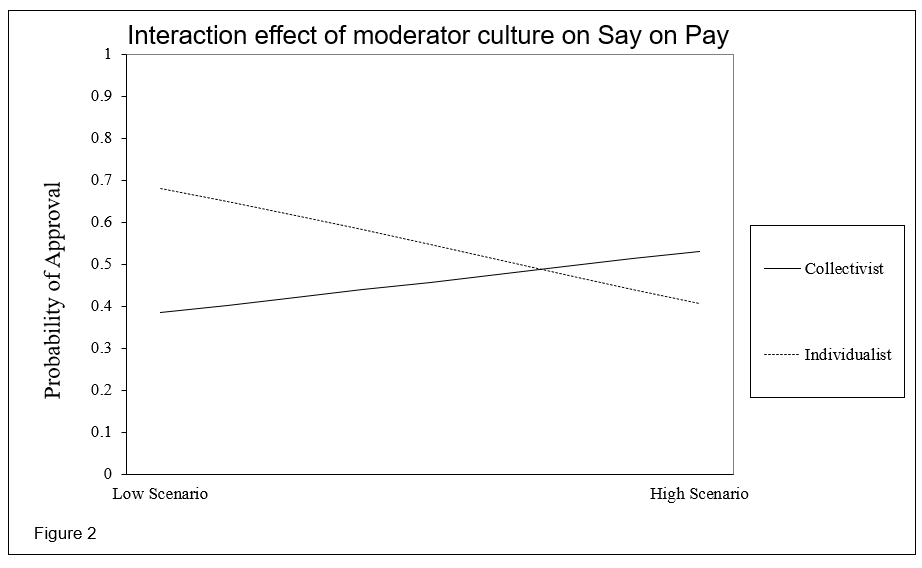


Figure 2 shows the interaction effect of the culture moderator on Say-on-Pay. Model 4, however, coded the culture score as binary variables 0 for collectivist and 1 for individualist, while in Model 3 the culture score is a standardized continuous variable. The logistic regression results indicated a significant interaction (p=0.054). Figure 2 suggests that individualism and collectivism have different effects on Say-on-Pay when tested on a low pay ratio scenario vs a high pay ratio scenario. While the main effect variable *scenario* is not significant, the moderator culture indicates that in the low pay ratio scenario an individualist is more likely to approve of CEO pay (68% chance), while a collectivist is less likely (38% chance). The opposite effect happens in the high pay ratio scenario in which a collectivist (53% chance) is more likely than an individualist (40% chance) to approve of the CEO pay. However, the difference in probability of approval between individualists and collectivists in the high pay ratio scenario is lower than in the low pay ratio scenario.

According to the Omnibus test, the model is not significant (p=0.41). As such, the overall model is not significantly different than the baseline model.The Hosmer and Lemeshow test indicating goodness of fit is not significant (p=0.64), suggesting the model adequately fits the data.

**5.4.5 Model 5**

In Model 5, we ran the regression to test our second hypothesis with Hofstede rank as moderator. The model includes independent variable *scenario*, hofstede moderator, and control variables. The VIF statistics for this model are all under four except for the control variables Identify as North American (13.5), Identify as Asian (11), and Identify as Latin American (8.7). Following the argument that the cutoff for a VIF statistic can be subjective, the control variables Identify as North American, Asian and Latin American were taken out of the logistic model to reduce the effects of potential multicollinearity (Thompson et al., 2017).

The variable *scenario* relationship with Say-on-Pay is not significant (p=0.69), indicating there is no indication that scenario is a predictor of Say-on-Pay. The variable Hofstede rank with Say-on-Pay is not significant (p=0.79). As such, there is no indication that it is a predictor of Say-on-Pay.

Additionally, the Hofstede moderator is not significant (p=0.97), meaning there is no indication that it is a moderator for Say-on-Pay. According to the Omnibus test, the model is not significant (p=0.85), suggesting the overall model is not significantly different than the baseline model.The Hosmer and Lemeshow test indicating goodness of fit is not significant (p=0.37), suggesting the model adequately fits the data.

**6. Conclusion**

In this paper we explored the relationship between culture, specifically individualism and collectivism, and investor perceptions of CEO to average employee pay ratio. While we were not able to confirm that a higher level of CEO pay leads to less Say-on-Pay vote approval, many of our tests suggested a possible influence. Additionally, our analysis suggests that culture is a factor that moderates this relationship. Higher levels of individualism were found to increase the chance of Say-on-Pay approval, especially given lower levels of CEO pay. Since these findings were conducted on a small sample size and at a 10% alpha level, our results should be treated with caution. Overall, while there is no indication that the type of scenario is predictive of Say-on-Pay, there is indication that individualism plays a role in the decision to approve Say-on-Pay when belonging to the low pay ratio scenario. In addition, although our main research objective was to study cultural influence on Say-on-Pay from the individual level as opposed to the common approach of studying it from the national level, we also conducted a regression analysis on the national level. Interestingly, national level data does not generate significant results while individual level data does, which suggests that studying cultural influence from individual level may be more accurate.

**6.1 Discussion**

Previous literature had indicated that certain cultural dimensions, namely individualism and collectivism influenced the total amount of CEO pay, but fell short in describing how different levels of pay were perceived by investors. The research we conducted is very much in line with the discussion today concerning excessive CEO pay. Furthermore, previous literature only assessed differences in culture based on antiquated scores given at the national level. Yoo et al. (2011) noted the need for more research on the differences in national and individual culture, and we have shown that there is indeed variation of national culture on the individual level.

**6.2 Theoretical Applications**

In terms of the theoretical applications of this study, we argue that the findings are a platform for understanding variations of sentiments among shareholders when discussing CEO pay or excess executive pay. Discussion and anger over current levels of CEO pay are becoming increasingly common among investors and everyday citizens alike, but it is investors who are close to companies and have tools for directly influencing pay levels. We build upon the research of Tosi et al. (2004), by giving a deep insight on how individualist ideals are correlated with the approval of Say-on-Pay votes, a governance mechanism that is becoming increasingly popular specially in western countries. Second, Krause et al. (2014) sought a deeper understanding of the influential variables, and perhaps even a theory, to explain why investors vote to approve or disapprove in a Say-on-Pay vote. Our research adds upon theirs, in that we have shown that individualism and collectivism does have an influence on the voting preferences of investors. Outside of the realm of CEO compensation, our study has the potential to be used as evidence that there is variation in cultural dimensions within a country, on the individual level. Yoo et al. (2011) identified the importance of researching this idea, and we have shown that there is indeed a difference on the individual level. For future research, we have identified 3 potential options for continued research on this topic. First, as we have only analyzed 1 out of the 4 Hofstede cultural dimensions, the other 3 dimensions (uncertainty avoidance, power distance, and masculinity-femininity) may also have some influence on individuals perceptions; and this could be researched.

**6.3 Implications for Practice**

It is likely that individual, non-institutional investors do not have sufficient voting power to force a change by their own Say-on-Pay votes. Regardless, it is important to know how individualism moderates the perceptions that drive these individuals’ choices on a Say-on-Pay vote. The insights that we bring forth in our research will help high level managers understand investors perceptions of CEO pay. In manager’s efforts to gain the support of their investors, it is relevant to understand the implications of how individual culture affects perception of business practices. Moreover, cultural variation in perception of CEO pay practices has broad implications for future corporate governance, especially in firms expanding across the globe. This is principally important in Asia, as many Chinese firms are starting to implement governance practices that mirror those in the US (Gao, 2004).

**6.4 Limitations**

A major limitation of our study is that political ideology could have a large effect on our sample data. Our sample was MBA students and alumni. MBA students formed the vast majority of our respondents, and it is well known that students and young individuals as a whole typically lean towards the left end of the political spectrum. A problem arises upon realizing that high levels of CEO compensation is something that many left leaning individuals will take issue with, hence political preferences may have an effect on Say-on-Pay vote. Future research can attempt to mitigate this issue by sampling of real investors, greatly increasing the sample size, and by including a political control variable.

Additionally important to note, a major limitation in researching Say-on-Pay votes is the difficulty of getting data on Say-on-Pay. It would be extremely difficult to get voting history for a large quantity of individuals, and this is why we opted for a survey in which a hypothetical scenario is presented to respondents. Respondents do not have a real connection to the company they are submitting a Say-on-Pay vote to in the hypothetical situation, and this further distances the surveys from reality, potentially altering a respondent’s voting choice. Future studies could potentially use one or several public corporations realizing a Say-on-Pay vote as case studies, but there would be added concerns of feasibility and privacy if this method were to be pursued.

In our research, we encountered problems of multicollinearity between several variables. Theoretically speaking, there should be no correlation between any of the control variables, as ours are entirely demographic. A suspected cause of this issue is our small sample size of 106 respondents. Future research should survey many more MBA students and alumni (or investors) by connecting with more universities, alumni groups, and investor groups. A larger sample size, and hence, more normally distributed data would lead to less autocorrelation between our control variables. In addition to resolving any autocorrelation issues, a larger sample size would take a more representative chunk of the population for analysis, giving more accurate results.

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**8. Appendix 1 Survey (High and Low Pay Scenario)**

You are a shareholder in Perugia Inc. Perugia Inc. is an **American shipping company** included in the S&P 500 Index and the average CEO to employee pay ratio between S&P 500 companies is **361:1.** The stock price of the company is **$103.83**, the Price/Earnings is **24.81** and the company has an EBITDA of **$3.59 billion**. Over the past year, the company’s total return to shareholders, including cash dividends, reached 10%. Over the same time period, operational revenue reached $25.6 billion and market share has been on a steady climb. Dividends to shareholders have increased by $0.03 per share over the last year. Perugia Inc. is **performing in line with its industry and the overall economic conditions** of this period, and is anticipated to experience steady growth in the future.

Now, the Board of Directors of Perugia Inc. recommends an advisory vote to approve the company CEO Karl White's compensation for 2020. You, as a shareholder, can vote to approve or reject the compensation package. Total compensation for Karl will be **$13,940,000**, and under this salary, the CEO to average employee pay ratio stands at **[[ 433:1 （HIGH SCENARIO）// 289:1 （LOW SCENARIO）]]**. The board believes that the compensation awarded to the CEO reflects the company’s goals and values.

Q1: The Board of Directors recommends an advisory vote to approve CEO compensation.

|  |  |  |
| --- | --- | --- |
|  | FOR | AGAINST |
| An advisory shareholder vote on the approval of CEO Karl White's compensation |  |  |

Q2: How much do you agree with the following statement?

The stated ratio of CEO compensation to average worker pay is fair.

* Strongly agree
* Somewhat agree
* Neither agree nor disagree
* Somewhat disagree
* Strongly disagree

Q3: How much do you agree with the following statements?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Strongly disagree |
| Q3-1. Individuals should sacrifice self-interest for the group. |  |  |  |  |  |
| Q3-2. Individuals should stick with the group even through difficulties. |  |  |  |  |  |
| Q3-3. Group welfare is more important than individual rewards. |  |  |  |  |  |
| Q3-4. Group success is more important than individual success. |  |  |  |  |  |
| Q3-5. Individuals should only pursue their goals after considering the welfare of the group. |  |  |  |  |  |
| Q3-6. Group loyalty should be encouraged even if individual goals suffer. |  |  |  |  |  |

Q4: Are you an MBA student?

* Yes
* No

Display This Question: If Q4 = Yes

Q4-1: What university do / did you attend for your MBA?

Q5: Which country were you born in?

Q6: What is your nationality?

Q7: Have you spent extended time living in a country other than your country of birth?

(Greater than 5 years)

* Yes
* No

Display This Question: If Q7 = Yes

Q7-1: In which country have you spent extended time?

Q8: Which nationality do you most identify with? (Please enter a country name)

Q9: What is your gender?

* Male
* Female
* Other / Prefer not to answer

Q10: What is your age?

* Under 21 years
* 21 to 24 years
* 25 to 28 years
* 29 to 32 years
* Above 32 years

Q11: Have you ever worked for a public corporation?

* Yes
* No

Q12: Have you ever founded your own company?

* Yes
* No

Q13: What is your annual individual income?

* Less than $29,999
* $30000 - $59,999
* $60000 - $89,999
* $90000 - $119,999
* Greater than $120,000

Q14: Are your total investments in stocks greater than $30,000 US Dollars?

* Yes
* Unsure (More or Less $30,000 USD)
* Unsure of my stock portfolio value
* No
* I do not have any investments

**Thank you very much for taking the time to complete our survey! Your response is appreciated.**

**Please enter your email to be entered into the lottery to win a $50 Amazon gift card** **(Optional).**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_