



Master Thesis Accounting and Finance

“The effect of cultural backgrounds on executive compensation contracts”

ABSTRACT: Cultural backgrounds in executive compensation packages is a widely discussed topic by the press. Incorporating cultural backgrounds in executive compensation contracts could in theory, alleviate the agency problem by better aligning the interests of the executive and that of the shareholders. Using executive-level data combined with financial data from the United States over a period from 2010 to 2021, I find that there is no evidence that the amount of compensation an executive receives is influenced by their cultural background. This means that there was no evidence found that there is any discrimination in executive compensation contracts. I found some evidence to support the notion that a compensation contract's structure differs between executives with different cultural backgrounds. There are links found with the risk profile of executives from different regions of the world based on the cultural dimensions by Hofstede. Lastly, there is no evidence that incorporating cultural background into the compensation contract of an executive leads to higher firm performance.

Name: Pascal van Twist
Student number: 426969
Supervisor: T.P.M. Welten
Second assessor: J.P.M. Suijs

The content of this thesis is the sole responsibility of the author and does not reflect the view of either the supervisor, second assessor, Erasmus School of Economics or Erasmus University.

Table of contents

1 Introduction	1
1.1 Problem statement	1
1.2 Research question and objective.....	1
1.3 Relevance.....	2
1.4 Structure of the thesis	2
2 Theoretical framework	3
2.1 Compensation contracts.....	3
2.2 Agency problem and firm performance.....	3
2.3 Managerial power theory	4
2.4 Social identity theory.....	4
2.5 Cultural background, ethnicity, and nationality	4
2.6 Interrelationship between concepts.....	6
3 Prior literature.....	8
3.1 Agency problem, cultural background, and compensation contracts	8
3.2 Agency problem, managerial power theory, and social identity theory	9
3.3 Hypothesis development.....	10
4 Research design	12
5 Sample selection and descriptive statistics	15
5.1 Sample Selection	15
5.2 Descriptive Statistics	17
6 Results	19
6.1 Effect of cultural background on total compensation.....	19
6.2 Effect of cultural background on the percentage of variable pay	21
6.3 Effect of cultural background on LTIP.....	23
6.4 Effect of contracts that incorporate cultural background on firm performance.....	25
6.5 Conclusion results.....	28
7 Conclusion.....	29
References	31
Appendix A – Variable Definitions.....	35

1 Introduction

1.1 Problem statement

Is there a link between cultural backgrounds and executive pay? Like all persons, executives have their preferences, beliefs, and morals. These could be incorporated in their compensation contracts. The Compensation Committee of firms needs to know if compensation contracts should incorporate an executive's cultural background. Especially during the COVID-19 crisis, companies are motivated to change how compensation contracts are made because many goals will not be achievable. As a result, companies have begun looking at other ways to incentivize executives, and incorporating cultural background in their compensation packages could be part of the solution (Groysberg et al., 2021). In our goal to align the interests of principles and agents and thereby alleviating the agency problem, it is crucial to have a better understanding of compensation contracts. At this point in time, it is unclear whether this is done because there is little research on this topic. Differences in executive compensation between genders is a widely studied phenomenon in academic literature (Kulich, 2011; Bugeja et al., 2012; Bowlin & Renner, 2008; Hill, 2015). However, academic literature on differences in executive compensation contracts between cultural backgrounds is scarce. Nonetheless, executive compensation and its link with the cultural background of the executive is a widely discussed topic by the press (Jalbert et al., 2007). This is because pay differences between executives with different cultural backgrounds could indicate an issue of significant social, political and economic importance, namely discrimination (Federal Glass Ceiling Commission, 1995). Relevant empirical research is needed to provide evidence in this debate. Attempts have been made to see if differences in the cultural background contribute to the variation in compensation structure and amount. These papers use different datasets, old data and are not based on all executives, but CEOs only (van Twist, 2021). Their results also contradict each other (Guest, 2017; Jalbert et al., 2007; Ellahie et al., 2017).

1.2 Research question and objective

In this paper, I will conduct theoretical research on whether executives with different cultural backgrounds respond differently to incentives and then conduct empirical research to see if their compensation contracts are therefore designed differently. I will also conduct empirical research to see if these "optimized contracts" based on the cultural background of the executive lead to higher firm performance. This paper aims to understand compensation contracts better and try to alleviate the agency problem by seeing if an executive's cultural background is incorporated in their compensation contract and if this should be done according to previous research. Cultural dimensions, as described by Hofstede (1980), are used as indicators for culture (Power distance index (PDI), Individualism vs. collectivism (IDV), Uncertainty avoidance (UAI), Masculinity vs. femininity (MAS), Long-term orientation vs. short-term orientation (LTO), Indulgence vs. restraint (IND)). These dimensions have been linked to executive compensation in previous research. I will look at both the composition of the contract and the amount of pay. An executive's nationality will be used as a proxy for an executive's cultural background. To investigate the relation between the compensation contracts and executives with different cultural backgrounds, the research question will be as follows:

“Are executive compensation contracts different between cultural backgrounds, and does this lead to higher firm performance?”

1.3 Relevance

This thesis aims to provide more insight into the relation between the cultural background of an executive and their compensation package. This is important for academics and top management of firms, as well as society as a whole. It is important for academics, because they get a better understanding of compensation contract, and therefore how they can alleviate the agency problem better. (van Twist, 2021). The link between pay and performance and aligning the actions of the managers with what the shareholders want is a constant struggle. This is called ‘agency theory’ and will be further examined in the theoretical framework. Academic research on compensation dominantly uses this theory (Bratton, 2005). This research will extend the existing academic research on compensation packages. This thesis is informative for the top management of firms because they get a better understanding if compensation contracts should be made incorporating cultural background, and therefore possibly align the actions of the managers with the shareholders’ goals. (van Twist, 2021). Control mechanisms that alleviate the agency problem, such as better contracting, positively affect firm performance (Agrawal and Knoeber, 1996). Higher firm performance is always one of the most important goals of a company. No previous research examines the relation between firm performance and “better contracts” based on the cultural background of the executive. Lastly, this thesis is informative for standard setters, because evidence of a pay disparity between cultural backgrounds could indicate whether executives with different cultural backgrounds suffer from discrimination, which is an issue of significant social, political and economic importance (Federal Glass Ceiling Commission, 1995). My research will contribute to the social debate on executive cultural background and compensation and inform academics and top management of firms on whether cultural backgrounds are incorporated in compensation packages. In my conclusion, I will advise on how these compensation packages should look based on cultural dimensions, as described by Hofstede (1980). It will add to the existing literature by using another database (BoardEx), include all executives instead of just CEOs, and use more up-to-date data (up to 2021).

1.4 Structure of the thesis

The next chapter will discuss the theoretical framework. I will dive deeper into the different concepts like compensation contracts and cultural background discussed in this paper. Chapter 3 will examine prior literature about these concepts and develop the hypotheses accordingly. Chapter 4 explains the research design, including the models used in this thesis. Chapter 5 provides descriptive statistics and outlines the sample selection process. Chapter 6 will show the empirical results. With these results, I conclude my thesis in chapter 7 with an answer to the research question and advice on how compensation contracts should look, incorporating cultural backgrounds. Lastly, the limitations of this study and areas for future research are discussed.

2 Theoretical framework

This chapter will discuss the different theoretical concepts and their interrelationship. A better understanding of the different concepts is needed to get a clear view of what will be discussed in this thesis. The explanation of the concepts will be based on prior literature.

2.1 Compensation contracts

Compensation contracts are legal contracts between an employee and an employer that outline the compensation they will receive for doing their job. They are made to reward individuals for contributions to firm performance and to motivate future behavior that increases profit. These contracts usually have a fixed part and a variable part. Therefore, as a proxy for the structure of a compensation contract, the percentage of variable pay compared to the total compensation is used. Compensation includes salary and bonuses such as cash, stock, and stock options (Kole, 1997). Long-term incentive plans (LTIP) are also part of an executive's compensation. These LTIP typically include stock options, restricted stocks, and performance plans. The purpose of these LTIP are to satisfy the interests of the shareholders by motivating the executive on a more long-term basis. Usually, strategic goals as determined by the board of directors are put in place (Westphal and Zajac, 1993). One of the essential elements in the compensation contract is the link between pay and performance. This means that the executive's total pay should, in reality, reflect the executive's performance. This makes it a powerful motivator for the executive to make an effort. Under the pay-for-performance method, the best-performing executives are rewarded by maximum allowable pay, average executives receive average pay, and the worst-performing executives are punished by no pay increase (Meyer, 1975). Previous research has indicated that increased pay is a powerful method to increase executive incentives. Shareholders, however, have not optimized the motivations of the executives completely. This is because of the agency problem discussed in the next paragraph. (Bebchuk and Fried, 2004)

2.2 Agency problem and firm performance

Jensen and Meckling first introduced the agency problem in 1976. They define it as: "The agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent. If both parties to the relationship are utility maximizers, there is good reason to believe that the agent will not always act in the best interests of the principal". In the case of executive compensation contracts, there is an incongruence between what the shareholders want and the executives' actions. Previous research indicated that control mechanisms that alleviate the agency problem could lead to higher firm performance (Agrawal and Knoeber, 1996). As a proxy for firm performance, the Return on Assets (ROA) is used in this paper. ROA is a widely accepted indicator of firm performance. An argument for using ROA and not, for example, Tobin's Q is that ROA is highly related to executive compensation (e.g., Antle and Smith, 1986; Jensen and Murphy, 1990b; Ely, 1991), and Tobin's Q has measurement problems and is better at proxying firm growth opportunity rather than firm performance (Mehran, 1995). Another theory that adds to the agency problem is the managerial power theory (Bebchuk and Friend, 2004), which will be discussed in the next paragraph.

2.3 Managerial power theory

Another theory that decreases the link between pay and performance is the Managerial Power Theory (Bebchuk and Fried, 2004). According to this theory, managers use their influence over the board to obtain higher compensation, which decouples the link between pay and performance. Excessive compensation contracts are made because managers have power over the board of directors, influencing their compensation contracts. The shareholders' desires and the managers' actions are not in line. Evidence indicates that cash compensation is, at best, weakly correlated with firm performance. This compensation has been awarded to executives whose performance was mediocre compared to other executives in the industry. Other forms of compensation such as favorable loans, pensions and perks also had a tendency to be insensitive to executive performance. Other factors might contribute to the managerial power theory, like the social identity theory, which will be examined in the next paragraph.

2.4 Social identity theory

Then there is a social-psychological theory that could increase the magnitude of the managerial power theory, which is the *Social Identity Theory* (Tajfel and Turner, 1986). According to this theory, in-group members are individuals that share the same characteristics, and out-group members don't share those characteristics. Individuals evaluate in-group members higher than out-group members. This is due to individuals striving to maintain a positive social identity. This means that individuals care for a sense of positive distinctiveness for their group memberships. This distinctiveness is based on favorable comparisons between in-group members and out-group members. The following theory is that pressure to evaluate an individual's group positively through in/out-group comparisons is a way for social groups to differentiate themselves from each other. With a clear view of compensation contracts and the different theories discussed in this thesis, the following paragraph will discuss cultural background.

2.5 Cultural background, ethnicity, and nationality

According to the Cambridge Dictionary, a person's cultural background relates to habits, traditions, and beliefs (Cambridge University Press, n.d.A). To have a measurable indicator of a person's cultural background, their nationality is used in this thesis. This proxy for a person's cultural background has been used in previous research and is based on the premise that a person's cultural background is highly related to a person's nationality (Jalbert et al., 2007; Ellahie et al., 2017). Previous research also used ethnicity as an independent variable. Ethnicity is very similar to nationality. According to the Cambridge Dictionary, ethnicity means "a large group of people with a shared culture, language history, set of traditions etcetera" (Cambridge University Press, n.d.B). Cultural dimensions, as described by Hofstede (1980), are also linked to CEO pay. These cultural dimensions are different characteristics that represent a person's cultural background. The dimensions are the Power distance index (PDI), Individualism vs. collectivism (IDV), Uncertainty avoidance (UAI), Masculinity vs. femininity (MAS), Long-term orientation vs. short-term orientation (LTO), and Indulgence vs. restraint (IND). PDI is the ability of the less powerful members of an organization to accept and expect the power of the members higher in the organization. IDV means if the person in question deals with issues more individually or collectively. UAI measures how much ambiguity and uncertainty are

embraced or rejected. MAS refers to how much of the culture is more masculine or feminine. LTO means if the people of a culture are more long-term-orientated or short-term-orientated. IND means how much freedom is given to a person by society.

Haynes (2014) investigated the relation between the cultural dimensions of Hofstede (1980) and CEO compensation. The sample consisted of data between 2009 and 2012 gathered from the Capital IQ database. This research found a positive link between PDI and IND and the amount and composition of CEO pay. The positive link to Power Distance could be explained by high power distance cultures showing acceptance of high pay differentials between more and less powerful members of the hierarchy and the practice of high CEO pay levels. The positive link to Individualism could be explained by the tournament-like properties of firms in individualistic countries, where reaching a higher corporate position is seen as a more significant achievement and rewarded more. Another explanation is that heightened Individualism leads to greater performance risk being transferred to the CEOs (Tosi and Greckhamer, 2004). Now that the different concepts used in this thesis are discussed, the following paragraph will examine the interrelationship between the concepts.

2.6 Interrelationship between concepts

The goal of this thesis is to enhance the understanding of compensation contracts and thereby try to alleviate the agency problem. Control mechanisms that alleviate the agency problem have a positive effect on firm performance, so the agency problem has a negative effect on firm performance. One of the ways to alleviate the agency problem is through compensation contracts. Theoretically, by incentivizing an executive in a proper way, the agency problem can be alleviated. This theory is based on optimal contracting, but in practice it is difficult to achieve optimal contracting. Alleviating the agency problem can increase firm performance, and therefore the agency problem has a negative effect on firm performance. A theory that adds an extra problem to the agency theory is the Managerial Power Theory (Bebchuk and Fried, 2004). This problem increases in magnitude due to the Social Identity Theory (Tajfel and Turner, 1986). This last theory is based on the cultural background of the board member and the executive being the same. A possible factor addressed by previous research that might contribute to alleviating the agency problem is incorporating the cultural background of the executive into the compensation contract. A schematic of the interrelationship between the different concepts is displayed in figure 1. The possible positive effect on the agency problem of incorporating cultural background into the compensation contract factor is indicated by the “?” sign between Cultural Background and Compensation Contracts in figure 1. The possible alleviating effect of incorporating cultural background into the compensation contract on the agency problem, and therefore the possible increase in firm performance, is indicated by the “?” sign between Agency Problem and Firm Performance in figure 1. The next chapter will discuss a few studies about CEOs' cultural backgrounds and compensation contracts.

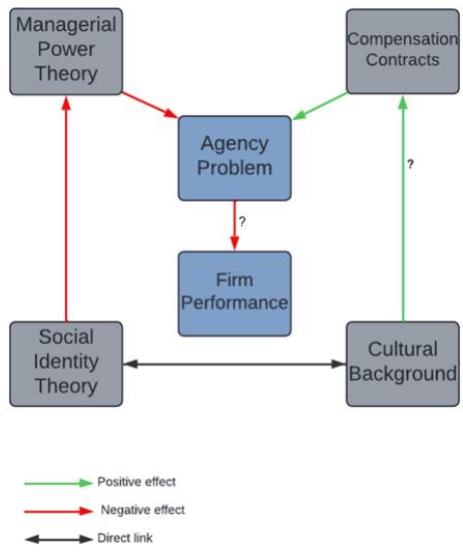


Figure 1: Interrelationship between concepts

3 Prior literature

In this chapter, previous papers about the relations discussed in this paper are examined. First previous papers about the relation between agency problem, cultural background and compensation contracts will be examined. Next, previous papers about the relation between agency problem, managerial power theory, and social identity theory will be examined. The explanation of the different concepts used in this thesis, together with prior literature will be used to form the hypotheses.

3.1 Agency problem, cultural background, and compensation contracts

The link between agency theory and compensation contracts is thoroughly examined. According to academic research, there is a positive relation (Brick et al., 2006; Conyon, 2006:). The agency problem is mitigated through this relation. This should prevent managers' harmful actions to the firm, making it a powerful governance tool (Harvey & Shrieves, 2001). A research by Bhagat et al. (1984) indicated that improved compensation contracts for executives improve firm performance. In their research, they looked at non-tax advantages stock purchase plans for employees and executives, and found that these improved contracts indeed have a positive effect on firm performance and shareholder wealth. This effect was more pronounced for executives than employees. The question raised in this paper is whether improved compensation contracts based on the executive's cultural background can also positively affect firm performance.

Even though differences in compensation contracts between executives with different cultural backgrounds is not a widely researched topic, an early paper that looked at this is that of Jalbert et al. (2007). They looked at the effect of CEO nationality on firm performance, financial management and total CEO compensation. They grouped nationalities by continent. They found that executives from Oceania and Central and South America received higher total CEO compensation than North-American CEOs. The researchers included control variables for the CEO like the percentage of the firm owned, age, and year and industry fixed effects to control the confounding factors. However, this research has limitations. It is hard to control for all the confounding factors and the R-squared is very low. This research is also relatively old. (data from before 2002). A lot could have changed almost 20 years later. (Van Twist, 2021)

Another paper about the relation between compensation contracts and cultural background is from Guest (2017). This paper examines the relation between executive compensation and race and uses more up-to-date data (up to 2011). The researcher included control variables for the CEO like the percentage of the firm owned, age, and year and industry fixed effects, just like the paper in the previous paragraph. This paper found no difference among Caucasian, Hispanic and Asian executives. Significantly lower pay, however, was earned by African Americans. lower stock option exercise, stock grants, bonus and salary is the cause of this lower pay. More risk-aversity by African Americans is a possible explanation. African Americans, therefore, prefer less variable pay and lower equity incentives. A different explanation is discrimination. This paper checked for discrimination at companies with an ethnic minority on the compensation committee or the board of directors, and see if the phenomenon persisted. Still,

there was no evidence found. Underperformance is also a possible explanation. Like the paper from Jalbert et al. (2007), it is possible that there are omitted executive characteristics present.

Ellahie et al. (2017) also researched the relation between CEO pay and cultural background. This paper examines the role of inherited beliefs and values in CEO compensation contracts in an international setting. An algorithm is used that links specific ethnicities to CEOs' names. They claim that CEOs can express preferences in a negotiation with the board of directors about compensation. Inherited beliefs and values are proxied by ethnicity, and there is a link to their preferences. The researchers do not look at the amount of compensation, but if the ethnicity can explain the variation in a CEO's variable pay. This paper found a significant relation between the variable portion of CEO compensation and ethnicity fixed effects, even with robustness checks. When there is CEO turnover due to a change in CEO, where the replacement is of different ethnicity, there are changes in the variable amount of CEO compensation. Evidence is found that innate characteristics shape the variable pay preferences, such as future time preferences and the religious culture of economic incentives. Changes in corporate policy decisions do not explain the change in variable pay of the CEO and, therefore, could be an indication of inherited beliefs and values of the CEO. The increased bargaining power explains changes in variable pay after different CEO with a different ethnicity. Lastly, a preference for job security is also linked to the cultural background of the CEO. An association is found between a riskier compensation arrangement for ethnicities and job security.

Overall, the results from previous research found that a compensation contract can be influenced by the cultural background of a CEO. Evidence on what ethnicities have higher income or variable pay is mixed. The evidence is not very specific. It is unclear whether incorporating cultural backgrounds into compensation contracts can mitigate the agency problem. This can be seen by the “?” sign in figure 1. My research expands this literature by examining how different cultural backgrounds affect executive compensation, including all executives, and using a different database.

3.2 Agency problem, managerial power theory, and social identity theory

Managerial Power Theory (Bebchuk and Fried, 2004) argues that the link between pay and performance decreases due to managers' influence over the board of directors on their compensation contracts. They found evidence that cash compensation is at best weakly correlated with firm performance. This compensation has been awarded to executives whose performance was mediocre compared to other executives in the industry. Other forms of compensation such as favorable loans, pensions, and perks also tended to be insensitive to executive performance. A more recent analysis of managerial power theory was made by van Essen et al. (2015). Based on US-based studies, they did a meta-analysis to see the managerial power theory's effect on CEO compensation. They found that the managerial power theory can predict indicators for core compensation variables such as total cash and total compensation. They had a more challenging time seeing the link with pay-for-performance sensitivity.

Another research that looked at managerial power theory and agency theory is that of Zhang et al. (2016). Their study was based on Chinese-based companies. Once again, a relation was found between managerial power and executive compensation. Aside from the link with the same compensation variables as before, they also documented a negative link between managerial power and performance pay. They found an apparent negative correlation between the agency costs of Chinese listed companies with executives with more managerial power and the pay for performance.

Lastly, evidence for the social identity theory (Tajfel and Turner, 1986) having a negative effect on the managerial power theory is also documented. As said before, this theory implies preferential treatment of members that belong in an individual's own group compared to those that do not belong to that group. Nationality is an important indicator for an individual belonging to an in-group member or an out-group member. A paper from Shayo (2020) documented empirical evidence for this in many spheres of economic activity such as consumption, production, hiring, promotion, and financial investments. This means that this preferential treatment is adding to the managerial power theory. When the executive is evaluated higher because they and the board member are of the same cultural background, the executive's power over the board member increases (Guest, 2017).

3.3 Hypothesis development

As stated, there is evidence found for different compensation contracts CEOs with different cultural backgrounds. A decrease in total compensation for certain CEOs with different cultural backgrounds is possibly explained by discrimination. Economic theories are based on either prejudice (Becker 1971) or statistical discrimination (Arrow 1973; Phelps 1972). Average minority group ability could be a perception based on information asymmetry by board members, leading to statistical discrimination on pay. A prejudice towards certain cultural backgrounds or a taste-based preference could also be present with board members to try to reduce any interaction with different ethnicities. Caucasian CEOs have traits that correlate more with leadership, according to social psychology studies. (Chung-Herrera and Lankau, 2005; Rosette et al., 2008;). This could lead to lower pay due to stereotyping. There is also the *Social Identity Theory*. This theory states that people evaluate members in their own group higher than members who are not in their group (Tajfel and Turner, 1986). When the executives and the compensation committee members have the same ethnicity or not could relate to a difference in pay.

The structure and amount of an executive with a different cultural backgrounds' compensation contract could be caused by discrepancies in risk tolerance. Personal wealth, investment preferences and discrepancies in risk tolerance could be linked to the cultural background of an executive. The evidence for a different risk-aversity between African Americans and Caucasians is mixed (Barsky et al. 1997; Sahm 2007), but Hispanics and African Americans seem to hold less risky assets (Kimball et al. 2008). There is also suggestive evidence a higher risk tolerance by Asians (Barsky et al. 1997). After controlling for income levels, African Americans and Hispanics own less wealth than Caucasians, after controlling for income levels (Brimmer, 1988; Gittleman and Wolff, 2004). The reason for this is probably due to higher consumption (Charles et al., 2009), lower investment returns, and lower inheritance (Gittleman

and Wolff, 2004). This is why more risk-averse ethnicities that have less wealth will probably prefer lower equity incentive holdings and more minor variable compensation structures will probably be preferred more by ethnicities with less wealth and more risk-aversity than ethnicities that own more wealth and are less risk-averse. (Van Twist, 2021)

The cultural background of the top management of a firm's can affect the behavior and how they operate the business (Wolfe Morrison and Milliken, 2000). This could possibly lead to differences in their compensation contract. Ellahie et al. (2017) documented the same trend. A future time preference and religious culture is the explanation for the compensation contracts being different between cultural backgrounds in their paper. The researchers argue that languages that separate present and future (strong time reference) are risk-averse and less future-oriented. Lastly, a relation is found between religion and risk-aversion by Norris and Inglehart (2011). This is also a way the compensation contract can be influenced by the cultural background of the executive. (Van Twist, 2021)

Based on previous research, optimal contracting is an effective control mechanism to alleviate the agency problem. Because there is a difference in the risk-aversion between cultural backgrounds, these contracts should incorporate these differences. Therefore, "optimized contracts" based on these cultural backgrounds can also be a control mechanism to alleviate the agency problem and increase firm performance. Due to these different findings on executive compensation between ethnicities, my hypotheses are as follows:

H1a) The cultural background of an executive has a significant impact on the amount of compensation that they receive.

H1b) An executive's cultural background significantly impacts the structure of the compensation contract they receive.

H1c) Firms that use compensation contracts incorporating an executive's cultural background achieve higher performance than firms that do not.

Previous research indicated that an executive's risk profile should be incorporated into an executive's compensation contract. Two dimensions by Hofstede related to risk are LTO (long-term orientation) and UAI (uncertainty avoidance index). The compensation contracts of executives with cultural backgrounds, proxied by the region they are from, with significantly higher or lower levels of LTO and UAI, should incorporate these cultural differences. The way to incorporate LTO into executive compensation contracts is through the amount of LTIP they receive, and UAI is incorporated through the percentage of variable pay they receive.

4 Research design

The research method that will be used is a statistical analysis of data (“empirical archival”). An OLS regression will be used to test the effect of the cultural background of an executive on the amount and structure of the compensation contract. A modified version of the model used in the Jalbert et al. (2007) paper will be used to see the effect that cultural background has on an executive’s total compensation. An overview of all the variables and their definitions can be found in Appendix A.

$$(1) \text{ TCOMP} = \alpha + \beta_1(\text{BP2}) + \beta_2(\text{BP3}) + \beta_3(\text{BP4}) + \beta_4(\text{BP5}) + \beta_5(\text{BP6}) + \beta_6(\text{BP7}) + \beta_7(\text{POWN}) + \beta_8(\text{AGE}) + \beta_9(\text{ASSETS}) + \beta_{10}(\text{ROA}) + \beta_{11}(\text{MNEX}) + \beta_{12}(\text{MNFRM}) + \beta_{13}(\text{FNDER}) + \beta_{14-25}(\text{IND1-12}) + \text{Year Fixed Effects} + \epsilon$$

TCOMP stands for Total Compensation, and is the dependent variable. This variable comes directly from the database. It consists of salary plus bonus awarded to the executive in that specific year. BP2-BP7 are indicator variables, standing for the different cultural backgrounds grouped by continent. Following Jalbert et al. (2007), the dummy for the North-American region is left out of this regression, because the compensation analysis is compared to North-American born executives. BP2 is an indicator variable if the executive is born in Africa; BP3 is an indicator variable if the executive is born in Asia; BP4 is an indicator variable if the executive is born in Europe; BP5 is an indicator variable if the executive is born in the Middle East; BP6 is an indicator variable if the executive is born in Oceania (Australia or New Zealand) and BP7 is an indicator variable if the executive is born in Central or South America. Previous literature has indicated that the following variables are control variables that have a positive impact on executive compensation. POWN stands for the percentage of the firm owned by the executive. AGE stands for the age of the executive. ASSETS stands for the firm’s total assets as a proxy for firm size. ROA is a proxy for firm performance, and stands for Return on Assets. MNEX stands for the number of months the executive is active in that position. MNFRM stands for the number of months the executive is active in the firm. FNDER is an indicator variable indicating whether the executive was one of the firm’s founders. IND1-12 are indicator variables for the firm of the executive belonging to a specific industry. Four-digit SIC codes are used for this indicator variable. A deviation from the Jalbert et al. (2007) paper is that I added an error term in which the unobservable variation is captured that cannot be captured by the rest of the model, and Year Fixed Effects to control for discrepancies over the years and Following Jalbert et al. (2007). I will begin by regressing the birthplace dummies with the dependent variable Total Compensation. After that, I will regress each control variable on the dependent variable. Lastly, I will regress the birthplace dummies combined with all the control variables with the independent variable to see if the result holds, including the control variables. All numerical variables are winsorized at the 1% level to make the tests more reliable. This regression will answer hypothesis 1a, whether executive compensation contracts differ between cultural backgrounds in amount.

The next test looks at if the percentage of variable pay is different between cultural backgrounds. The percentage of variable pay is a proxy for how the compensation contract is

structured. Once again, a modified version of the model used in the Jalbert et al. (2007) paper will be used.

$$(2) \text{VPAY} = \alpha + \beta_1(\text{BP2}) + \beta_2(\text{BP3}) + \beta_3(\text{BP4}) + \beta_4(\text{BP5}) + \beta_5(\text{BP6}) + \beta_6(\text{BP7}) + \beta_7(\text{POWN}) + \beta_8(\text{AGE}) + \beta_9(\text{ASSETS}) + \beta_{10}(\text{ROA}) + \beta_{11}(\text{MNEX}) + \beta_{12}(\text{MNFRM}) + \beta_{13}(\text{FNDR}) + \beta_{14-25}(\text{IND1-12}) + \text{Year Fixed Effects} + \epsilon t$$

VPAY is the percentage of variable pay compared to the total compensation that the executive receives. Variable pay consists of bonus payments rewarded to each executive in a reporting period. This can include call options, shares, stock grants, and cash bonuses. The other variables in model (2) are the same as in model (1). The regressions will be the same as with model (1). This regression will partly answer hypothesis 1b, whether executive compensation contracts differ between cultural backgrounds in structure.

Next is a model about the amount of LTIP awarded to the executive. The amount of LTIP awarded to the executive is a proxy for the structure of the compensation package. Once again, a modified version of the model used in the Jalbert et al. (2007) paper will be used.

$$(3) \text{LTIP} = \alpha + \beta_1(\text{BP2}) + \beta_2(\text{BP3}) + \beta_3(\text{BP4}) + \beta_4(\text{BP5}) + \beta_5(\text{BP6}) + \beta_6(\text{BP7}) + \beta_7(\text{POWN}) + \beta_8(\text{AGE}) + \beta_9(\text{ASSETS}) + \beta_{10}(\text{ROA}) + \beta_{11}(\text{MNEX}) + \beta_{12}(\text{MNFRM}) + \beta_{13}(\text{FNDR}) + \beta_{14-25}(\text{IND1-12}) + \text{Year Fixed Effects} + \epsilon t$$

LTIP is the amount of long-term incentive plans the executive received that year. This variable comes directly from the database, and is the value of LTIP awarded during the period based on the closing stock price of the annual report date. These can consist of stock option plans, restricted stock, and performance plans. The rest of the variables are defined the same as model (1). The regressions will be the same as with model (1). This regression, together with regression (2) on variable pay, will answer hypothesis 1b, whether executive compensation contracts are different between cultural backgrounds in structure.

Lastly, I will perform a test to see if incorporating the cultural background into the compensation contract of an executive leads to higher firm performance. First, a test must be performed to see what dimensions by Hofstede are significantly different from the averages, to see what region has a significantly different dimension. This uses data from the Hofstede database. The way to measure if there is a significant difference in averages is the *t*-test. The Welch's *t*-test is used because the two groups have different sample sizes and unequal variances. An indicator variable is created that is equal to one if the executive has an "optimal contract" based on their cultural background, and zero otherwise. This "optimal contract" is achieved when the executive's compensation contract matches their cultural background. This cultural background can give an indication of their risk-profile, which was examined using the cultural dimensions by Hofstede (1980). Two dimensions that relate to the risk-profile of the executive are LTO and UAI. Cultural backgrounds with significant higher or lower LTO and UAI can be found in Table 8. The way LTO and UAI are incorporated into compensation contracts is through the amount of LTIP and the percentage of variable pay higher or lower than the averages, respectively. This information comes from the compensation database. Then, if the results of LTO and UAI from the Hofstede database matches with the amount of LTIP and

percentage of variable pay from the compensation database, an “optimal contract” is achieved, thus getting the indicator variable equal to one. An example of an “optimal contract” is a contract of an executive from Europe. The data from Hofstede indicates that people from this region have a significant high LTO and significant high UAI. This is then incorporated in their compensation contract by an amount of LTIP that is higher than the total average of LTIP and a percentage of variable pay that is lower than the total average percentage of variable pay. Due to the match between the risk-profile (indicated by cultural background) and the compensation contract, this executive gets an indicator variable for an “optimal contract” equal to one. The last model captures the effect of an “optimal contract” on firm performance. As a proxy for firm performance, the ROA is used. Once again, a modified version of the model used in the Jalbert et al. (2007) paper will be used.

$$(4) \text{ ROA} = \alpha + \beta_1(\text{OC}) + \beta_2(\text{POWN}) + \beta_3(\text{AGE}) + \beta_4(\text{ASSETS}) + \beta_5(\text{MNEX}) + \beta_6(\text{MNFRM}) + \beta_7(\text{FNDER}) + \beta_8\text{-}19(\text{IND1-12}) + \text{Year Fixed Effects} + \epsilon$$

ROA is the Return on Assets achieved by the executive’s company that year. This variable comes directly from the database. OC is the dummy variable indicating if there is an “optimal contract” based on the cultural background of the executive, and was made using the Hofstede database. The rest of the variables are defined the same as model (1). The regressions will be the same as with model (1). This regression will answer hypothesis 1c, whether firms that use compensation contracts incorporating an executive's cultural background achieve higher performance than firms that do not.

A framework that captures the entire research design is the Predictive Validity Framework by Libby (1981). The so-called “Libby Boxes” are presented below in figure 2.

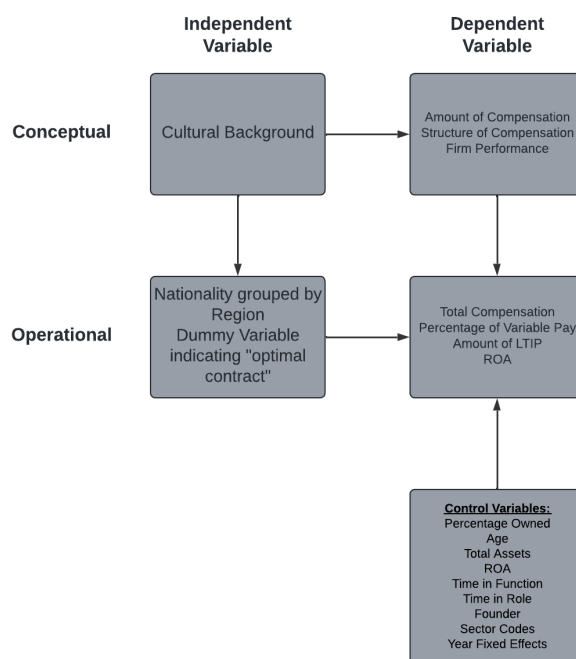


Figure 2: Libby Boxes

5 Sample selection and descriptive statistics

5.1 Sample Selection

Data on the compensation of different executives will come from the BoardEx – North America Compensation Analysis database, which gives detailed information about executives from 1999 onwards. The compensation variables used in this thesis come directly from this database. Executive-level controls are also available such as age, gender and experience. Financial data of firms used as control variables come from the Compustat North America Fundamentals Annual database. Compustat collects annually regulatory data on fundamentals and market information on inactive and active publicly held companies. Information about a companies' Income Statement, Balance Sheet, Cash Flows and supplemental data items are available. For most companies, data leads back to more than 50 years ago. Information about the percentage of the firm owned by the executive (one of the control variables) comes from the Compustat Execucomp Annual Compensation database. Execucomp is part of the Compustat database, and collects data on executive compensation directly from a companies' annual proxy statement (DEF14A SEC form). I will use US firms only because they have the most data available. The starting point of the data used will be January 2010, in order to keep this thesis as relevant as possible. The end date of the data used is June 2021, because that is the last date when all the information is available at the time of writing this thesis.

Table 2 provides the sample selection process for regressions 1 and 2. The initial sample contains 212,718 observations. Observations with missing compensation data are excluded (165,139). Observations with missing control variable data are also excluded (43,216). This brings the total number of observations for regressions 1 and 2 to 4,363. Table 3 provides the sample selection process for regressions 3 and 4. The initial sample contains 212,718 observations. Observations with missing compensation data are excluded (169,085). Observations with missing control variable data are also excluded (39,920). This brings the total number of observations for regression 3 to 3,713. Observations from the Middle East (16) could not be used in the last regression (which will be explained in chapter 6.4), so these observations are removed from regression 4. This brings the total number of observations for regression 4 to 3,697.

Table 3 provides a summary of the cultural dimensions by Hofstede per region. The data was initially acquired from the Hofstede website and used data up to 2015 (Hofstede, 2015). Scores are measured on a 0-100 continuum. This data is used to carry out the fourth regression (see section 4).

TABLE 1
Sample Selection Regressions 1 and 2

Process	Total Observations
Observations obtained from the BoardEx database	212,718
Less: Executives with missing compensation data	(165,139)
Less: Executives with missing control variable data	(43,216)
 Sample Selection	 4,363

This table provides the sample selection process for regressions 1 and 2. The data was initially acquired from the BoardEx – North America Compensation Analysis database. The data ranges from January 2010 to June 2021. Observations with missing compensation data are excluded (165,139). Observations with missing control variable data are also excluded (43,216). Financial data of firms used as control variables come from the Compustat North America Fundamentals Annual database. Information about the percentage of the firm owned by the executive (one of the control variables) comes from the Compustat Execucomp Annual Compensation database. This brings the total number of observations for regressions 1 and 2 to 4,363.

TABLE 2
Sample Selection Regressions 3 and 4

Process	Total Observations
Observations obtained from the BoardEx database	212,718
Less: Executives with missing LTIP data	(169,085)
Less: Executives with missing control variable data	(39,920)
 Sample Selection Regression 3	 3,713
 Less: Observations for the Middle East	 (16)
 Sample Selection Regression 4	 3,697

This table provides the sample selection process for regressions 3 and 4. The data was initially acquired from the BoardEx – North America Compensation Analysis database. The data ranges from January 2010 to June 2021. Observations with missing compensation data are excluded (165,139). Observations with missing control variable data are also excluded (43,216). Financial data of firms used as control variables come from the Compustat North America Fundamentals Annual database. Information about the percentage of the firm owned by the executive (one of the control variables) comes from the Compustat Execucomp Annual Compensation database. This brings the total number of observations for regression 3 to 3,713. Observations from the Middle East could not be used in the last regression (which will be explained in chapter 6.4), so these observations are removed from regression 4. This brings the total number of observations for regression 4 to 3,697.

TABLE 3
Cultural Dimensions Hofstede per Region

Region	PDI	IDV	UAI	MAS	LTO	IND
North America	39.50	85.50	47.00	57.00	30.86	68.19
Central or South America	67.56	23.44	79.19	49.19	20.40	73.51
Oceania	30.00	84.50	50.00	59.50	26.95	72.99
Europe	53.22	56.91	71.97	45.44	58.93	41.55
Asia	72.57	24.29	50.36	53.21	62.15	33.16
Africa	65.00	39.50	55.75	50.75	21.48	46.65
Middle east	50.33	44.33	69.33	47.67	22.50	31.78

This table provides a summary of the Cultural Dimensions by Hofstede per region. The data was initially acquired from the Hofstede website, and uses data up to 2015 (Hofstede, 2015). The dimensions are the Power distance index (PDI), Individualism vs. collectivism (IDV), Uncertainty avoidance (UAI), Masculinity vs. femininity (MAS), Long-term orientation vs. short-term orientation (LTO), and Indulgence vs. restraint (IND). Scores are measured on a 0-100 continuum.

5.2 Descriptive Statistics

Table 4 provides descriptive statistics containing information for the total and regional samples. Panel A provides descriptive statistics for the total sample. The first four lines are descriptive statistics on the dependent variable, and the bottom six lines are descriptive statistics on the numerical control variables. The mean total compensation is \$ 1,181,000. The salary is greater than the bonus (\$ 969,000 and \$ 204,000, respectively). The mean LTIP is \$ 9,661 per year.

Panel B provides descriptive statistics divided per region. First are the observations for the compensation data, and next are the observations for the LTIP data. LTIP stands for long-term incentive plans. The following four lines are descriptive statistics on the dependent variable, and the bottom six lines are descriptive statistics on the numerical control variables. Statistics from this panel should be interpreted with caution since the number of observations for some regions is relatively low. The most represented region is North America. For each region, the salary is also greater than the bonus. The highest total compensation seems to be awarded to executives from the Middle East (\$ 1,404,000). They also receive the most amount of bonus (\$ 551,800). The highest amount of LTIP is awarded to executives from Asia (\$ 28,029).

TABLE 4
Descriptive Statistics

Panel A: Descriptive Statistics Total Sample

Variable	Observations	Mean	Median	Standard Deviation	Minimum	Maximum
<i>Total Compensation (x \$1,000)</i>	4,363	1,181	1,050	1,114.26	0	7,590
<i>Salary (x \$1,000)</i>	4,363	969	1,000	542.94	0	2,860.80
<i>Bonus (x \$1,000)</i>	4,363	204	0	857.11	0	5,700
<i>LTIP (\$)</i>	3,713	9,661	7,592	8,226.09	133	48,883
Control Variables						
<i>Total Assets (x \$1,000,000)</i>	4,363	50,401	14,602	121,449.10	653	900,122
<i>Age (Years)</i>	4,363	65.05	65	7.03	49	84.38
<i>Time in Role (Months)</i>	4,363	52.36	38	49.44	0	229
<i>Time in Company (Months)</i>	4,363	174.7	158	115.24	0	668
<i>Return on Assets</i>	4,363	15.10%	14.05%	8.83%	0.4%	41.89%
<i>Percentage Owned</i>	4,363	2.58%	0%	9.34%	0%	63.01%

Panel B: Descriptive Statistics per Region

Region	North America	Africa	Asia	Europe	Middle East	Oceania	Central or South America
Observations Compensation	4,044	9	56	181	24	26	23
Observations LTIP	3,420	6	54	172	16	22	23
Variable (Mean)							
<i>Total Compensation (x \$1,000)</i>	1,179	1,044	1,227.30	1,176	1,404.40	1,268	1,127.20
<i>Salary (x \$1,000)</i>	959.40	698.30	1,095.10	1,113	852.60	1,252	1,127.20
<i>Bonus (x \$1,000)</i>	211.30	346	132.20	63.3	551.80	0	0.22
<i>LTIP (\$)</i>	9,491	6,803	19,671	9,576	9,248	15,120	7,945
Control Variables (Mean)							
<i>Total Assets (x \$1,000,000)</i>	52,293	3,340	48,387	24,981.90	9,576	12,401	28,883
<i>Age</i>	65.32	71	59.89	62.43	63.67	58.50	57.70
<i>Time in Role</i>	52.75	201.8	37.18	42.65	78.25	32.35	35.43
<i>Time in Company</i>	178.3	267	127.16	127	89.38	97.69	182.2
<i>Return on Assets</i>	14.93%	33.62%	17.97%	18.41%	9.02%	17.61%	8.67%
<i>Percentage Owned</i>	2.71%	11.10%	0.3%	1.10%	0.10%	0.19%	0%

This table provides descriptive statistics. Panel A provides descriptive statistics for the whole sample. The first four lines are descriptive statistics on the dependent variable, and the bottom four lines are descriptive statistics on the numerical control variables. LTIP stands for long-term incentive plans. All amounts are in US dollars and, together with percentages, are yearly numbers. Panel B provides descriptive statistics divided per region. First, the observations for the compensation data are given, and the following are the LTIP data. LTIP stands for long-term incentive plans. The following four lines are descriptive statistics on the dependent variable, and the bottom four lines are descriptive statistics on the numerical control variables. All amounts are in US dollars and, together with percentages, are yearly numbers.

6 Results

In this chapter, the results will be discussed. The first paragraph examines the effect of cultural background on total compensation. This paragraph investigates whether there is evidence to support the first hypothesis. The second paragraph examines the effect of cultural background on the percentage of variable pay. This paragraph investigates whether there is evidence to support the second hypothesis. The third paragraph examines the effect of cultural background on LTIP. This paragraph also investigates whether there is evidence to support the second hypothesis. The last paragraph examines whether companies that incorporate cultural background into their compensation contracts for executives achieve higher firm performance. This paragraph investigates whether there is evidence to support the third hypothesis.

6.1 Effect of cultural background on total compensation

The first test is an OLS regression analysis to check if the cultural background of an executive, proxied by their nationality, has a significant impact on the total amount of compensation that the executive received. The individual control variables are also regressed on the dependent variable Total Compensation. The results can be found in Table 5. None of the dummy variables that indicated whether the executive was born in a certain region positively or negatively impacted the amount of compensation received. The results hold when including all of the control variables. Contrary to what was expected, not all the control variables significantly impacted the amount of total compensation. The age, time in function, time at the company, and the dummy variable indicating whether the executive is also the firm's founder had no significant impact on the total compensation individually. In the complete regression with all the control variables, time in function did have a significant effect of 0.94 on the amount of total compensation at the 10% level (t-value of 3.08) and a significant impact of 0.01 on the total amount of assets at the 1% level (t-value of 33.52). This means that when the executive is one month longer in his function, they receive \$ 940 more per year in their total compensation. The 0.01 is a number rounded up for total assets but was originally 0.0044. This means that every increase of \$ 1.000 in total assets increases an executive's compensation by \$ 0.0044. This seems small, but differences in a company's total assets can be as large as billions of dollars. For example, total assets that are \$1.000.000.000 higher mean an increase in the executive's total compensation of \$ 4.400. The sign of the impact is unexpected for the percentage of the firm owned by the executive and the return on assets at the 1% and 10% levels, respectively (t-value of -4.01 and -2.55, respectively). The results indicate that with this set of tests and data, there is no indication that discrimination exists in executive compensation contracts. Based on this test, there is no evidence to support the first hypothesis that an executive's cultural background has a significant impact on the total amount of the compensation contract.

TABLE 5
Regression Analysis with Total Compensation as Dependent Variable

Intercept	BP2	BP3	BP4	BP5	BP6	BP7	POWN	AGE	ASSETS	ROA	MNEX	MNFRM	FNDER	T	F/R2
1179.34	-135.00 -0.36	47.95 0.32	-3.20 -0.38	225.04 0.986	88.43 0.40	-52.12 -0.22								N	0.24 0.001
1205.98							-9.66 -5.37***							N	28.8*** 0.007
1300.04								-1.83 -0.76						N	0.58 0.001
948.50									0.01 38.42***					N	1,476*** 0.250
1547.89										-24.29 -12.95***				N	167.7*** 0.040
1149.82											0.60 1.75			N	3.05 0.001
1230.88												-0.29 -1.95		N	3.80 0.001
1180.99													33.41 0.07	N	0.01 0.001
1060.00	2.668 0.01	111.50 0.89	69.33 0.96	331.30 1.73	273.30 1.49	43.39 0.22	-6.32 -4.01***	1.80 0.80	0.01 33.52***	-4.69 -2.55*	0.94 3.08**	-0.12 -0.91	217.10 0.52	Y	64.13*** 0.310

This table provides the OLS regression result of Total Executive Compensation as the dependent variable and executives from different regions as independent variables, together with control variables indicated by literature that can influence Total Compensation. The total sample is 4,363 observations. BP1 is an indicator variable if the executive is born in North America but was left out of this regression because the compensation analysis is compared to North American-born executives. BP2 is an indicator variable if the executive is born in Africa; BP3 is an indicator variable if the executive is born in Asia; BP4 is an indicator variable if the executive is born in Europe; BP5 is an indicator variable if the executive is born in the Middle East; BP6 is an indicator variable if the executive is born in Oceania (Australia or New Zealand) and BP7 is an indicator variable if the executive is born in Central or South America. POWN stands for the percentage of the firm owned by the executive. AGE stands for the age of the executive. ASSETS stands for the firm's total assets as a proxy for firm size. ROA is a proxy for firm performance, and stands for Return on Assets. MNEX stands for the number of months the executive is active in that position. MNFRM stands for the number of months the executive is active in the firm. FNDER is an indicator variable indicating whether the executive was one of the firm's founders T stands for Year Fixed Effects and indicator variables for the firm belonging to a specific industry as a control measure. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

6.2 Effect of cultural background on the percentage of variable pay

The next test is an OLS regression analysis to check if the cultural background of an executive, proxied by their nationality, significantly impacts the percentage of variable pay received by the executive. The individual control variables are also regressed on the dependent variable. The results can be found in Table 6. When only regressing the dummy variables that indicated whether the executive was born in a certain region of the world on the dependent variable, some regions significantly impacted the percentage of variable pay. Executives born in Africa and the Middle East had a significant positive effect of 24.25 and 11.76 on the percentage of variable pay at the 1 and 5% levels, respectively (t-values of 3.89 and 3.07, respectively). This means that executives born in these regions get 24.25% and 11.76% percentage points more variable pay than North American-born executives. Executives born in Europe had a negative impact of 0.52% in percentage points, significant at the 10% level (t-value of -2.48). When including all of the control variables, the two regions that stayed significant are executives from Africa and the Middle East, with an estimate of 20.38% and 12.22% at the 1% level (t-values of 3.48 and 3.43, respectively). The percentage of the executive-owned firm and the dummy variable indicating if they are the founder are insignificant individually or in the complete regression. Individually, age, total assets, and months in function are positively significant at the 5, 1, and 1% levels, respectively (t-values of 2.87, 24.03, and 8.43). Age loses its significance in the complete regression. Unexpectedly, the return on assets is negatively related to the percentage of variable pay at the 1% level (t-value of -12.95), but it loses its significance in the complete regression. The 0.01 is a number rounded up for total assets but was originally 0.000048. This means that every increase of \$ 1.000 of total assets implies an increase in an executive's variable pay compared to total compensation of 0.000048 % in percentage points. This seems small, but when total assets are \$1.000.000.000 higher, this means an increase in the executive's percentage of variable pay compared to total compensation of 48% in percentage points. These results indicate differences in the percentage of variable pay between executives from different regions. Executives from Africa and the Middle East received a significantly higher percentage of variable pay. Based on this test, there is mild evidence to support the second hypothesis that an executive's cultural background has a significant impact on the compensation contract's structure. However, these results should be interpreted carefully due to a low number of observations for these two regions.

TABLE 6
Regression Analysis with Percentage of Variable Pay as Dependent Variable

Intercept	BP2	BP3	BP4	BP5	BP6	BP7	POWN	AGE	ASSETS	ROA	MNEX	MNFRM	FNDER	T	F/R2
5.83	24.25 3.89***	-0.70 -0.28	-0.52 -2.48*	11.76 3.07**	-5.83 -1.58	-5.81 -1.49								N	5.95 0.007
5.69							0.01 0.46							N	0.21 0.001
-1.81								0.12 2.87**						N	8.22** 0.002
3.06									0.01 24.03***					N	577.30*** 0.120
9.46										-0.25 -12.95***				N	167.70*** 0.040
3.21											0.05 8.43***			N	71.00*** 0.020
4.86												0.01 2.01*		N	4.05* 0.001
5.73													-5.73 -0.68	N	0.47 0.001
4.45	20.38 3.48***	0.50 3.48	-1.04 -0.77	12.22 3.43***	-1.68 -0.49	-2.77 -0.76	0.01 0.45	0.01 0.23	0.01 19.83***	1.08 0.31	0.04 7.65***	0.01 0.54	-2.39 -0.31	Y	26.30*** 0.160

This table provides the OLS regression result of the Percentage of Variable Pay compared to Total Compensation as the dependent variable and executives from different regions as independent variables, together with control variables indicated by literature that can influence the Percentage of Variable Pay. The total sample is 4,363 observations BP1 is an indicator variable if the executive is born in North America but was left out of this regression because the compensation analysis is compared to North American-born executives. BP2 is an indicator variable if the executive is born in Africa; BP3 is an indicator variable if the executive is born in Asia; BP4 is an indicator variable if the executive is born in Europe; BP5 is an indicator variable if the executive is born in the Middle East; BP6 is an indicator variable if the executive is born in Oceania (Australia or New Zealand) and BP7 is an indicator variable if the executive is born in Central or South America. POWN stands for the percentage of the firm owned by the executive. AGE stands for the age of the executive. ASSETS stands for the firm's total assets as a proxy for firm size. ROA is a proxy for firm performance, and stands for Return on Assets. MNEX stands for the number of months the executive is active in that position. MNFRM stands for the number of months the executive is active in the firm. FNDER is an indicator variable indicating whether the executive was one of the firm's founders T stands for Year Fixed Effects and indicator variables for the firm belonging to a specific industry as a control measure. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

6.3 Effect of cultural background on LTIP

The next test, is an OLS regression analysis to check if the cultural background of an executive, proxied by their nationality, has a significant impact on the amount of long-term incentive plans (LTIP) they received. The individual control variables are also regressed on the dependent variable. The results can be found in Table 7. When only regressing the dummy variables that indicated whether the executive was born in a certain region of the world on the dependent variable, some regions had a significant impact on the percentage of variable pay. Executives born in Asia and Oceania had a significant positive impact of 10,180.80 and 5,629.59 on the amount of LTIP at the 1 and 5% levels, respectively (t-values of 9.13 and 3.24, respectively). This means an executive born in these regions gets \$ 10,180.80 and \$ 5,629.59 more than North American-born executives. When including all of the control variables, the two regions stayed significant, with an estimate of \$ 9,272.00 and \$ 4,167.00 at the 1 and 10% levels (t-values of 8.75 and 2.51, respectively). Executives born in Central or South America received an estimated \$ 3,341.00 less LTIP than their North-American counterparts, significant at the 1% level (t-value of -3.51). The dummy variable indicating if the executive is the founder is not significant individually or in the complete regression. Individually, age and ROA are negatively significant at the 1 and 10% levels, respectively (t-values of -7.11 and -2.29, respectively). They both lose their significance in the complete regression. Months in function are not significant individually, but in the complete regression, are significant at the 10% level (t-value of 2.56). Control variables that are significant individually and in the complete regression are the percentage of the firm owned by the executive, total assets, and months at the firm. They are significant at the 5, 1, and 1% levels, respectively (t-values of -2.88, 12.76, and -4.54, respectively). The 0.02 is a number rounded up for total assets but was originally 0.017. This means that every increase of \$ 1.000 in total assets implies an increase in an executive's LTIP of \$ 0.017. This seems small, but when total assets are \$1.000.000.000 higher, this means an increase in the executive's LTIP of \$ 17,000. These results indicate differences in the amount of LTIP that executives receive between executives from different regions. Executives from Asia and Oceania received a significantly higher amount of LTIP, while executives from Central or South America received a lower amount of LTIP. Based on this test, there is also mild evidence to support the second hypothesis that the cultural background of an executive has a significant impact on the structure of the compensation contract. However, these results should be interpreted carefully due to a low number of observations for Oceania and Central or South America.

TABLE 7
Regression Analysis with LTIP as Dependent Variable

Intercept	BP2	BP3	BP4	BP5	BP6	BP7	POWN	AGE	ASSETS	ROA	MNEX	MNFRM	FNDER	T	F/R2
9,490.59	-2,687.59 -0.81	10,180.80 9.13***	85.75 0.14	-242.59 -0.12	5,629.59 3.24**	-1,545.59 -0.91								N	15.86 0.020
9,751.58							-50.22 -2.88**							N	8.27** 0.002
19,287.11								-148.78 -7.11***						N	50.59*** 0.013
8,947.00									0.01 12.73***					N	162.2*** 0.042
10,189.70										-3,621.60 -2.29*				N	5.23* 0.001
9,701.62											-0.80 -0.28			N	0.08 0.001
10,603.59												-5.51 -4.54***		N	20.58*** 0.005
9,662.30													-347.00 -0.16	N	0.02 0.001
9,400.00	-3,093.00 -0.98	9,272.00 8.75***	-610.10 -0.99	100.10 0.05	4,167.00 2.51*	-3,341.00 -3.51***	-59.99 -3.51***	-36.27 -1.63	0.02 15.05***	2,044.00 1.18	7.37 2.56*	-5.12 -4.12***	-927.30 -0.45	Y	20.05*** 0.14

This table provides the OLS regression result of Long Term Incentive Plans (LTIP) as the dependent variable and executives from different regions as independent variables, together with control variables indicated by literature that can influence the LTIP. The total sample is 3,713 observations BP1 is an indicator variable if the executive is born in North America but was left out of this regression because the compensation analysis is compared to North American-born executives. BP2 is an indicator variable if the executive is born in Africa; BP3 is an indicator variable if the executive is born in Asia; BP4 is an indicator variable if the executive is born in Europe; BP5 is an indicator variable if the executive is born in the Middle East; BP6 is an indicator variable if the executive is born in Oceania (Australia or New Zealand) and BP7 is an indicator variable if the executive is born in Central or South America. POWN stands for the percentage of the firm owned by the executive. AGE stands for the age of the executive. ASSETS stands for the firm's total assets as a proxy for firm size. ROA is a proxy for firm performance, and stands for Return on Assets. MNEX stands for the number of months the executive is active in that position. MNFRM stands for the number of months the executive is active in the firm. FNDER is an indicator variable indicating whether the executive was one of the firm's founders T stands for Year Fixed Effects and indicator variables for the firm belonging to a specific industry as a control measure. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

6.4 Effect of contracts that incorporate cultural background on firm performance

The next set of tests will investigate the relation between contracts that incorporate cultural background and firm performance. First, a t-test is done to see what regions have significantly different cultural dimensions compared to the worldwide average. This data comes from the Hofstede website and uses data up to 2015. The results can be found in Table 8. This test is needed in order to match the two dimensions of interest, UAI and LTO, with the compensation data in the next test. A full description of the two tests performed in this section, including an example, can be found in section 4. North America has a significantly lower UAI at the 5% level (t-value of -2.80). Central and South America have a significantly higher UAI and lower LTO, at the 1 and 10% levels, respectively (t-values of 3.87 and -2.11, respectively). Oceania has a significantly lower UAI at the 10% level (t-value of -2.11). Europe has a significantly higher UAI and LTO at the 10 and 5% levels (t-values of 2.38 and 3.55, respectively). Asia also has a significantly higher UAI and LTO, significant at the 5 and 1% levels, respectively (t-values of -2.76 and 4.03, respectively). Africa has a significantly lower LTO at the 10% level (t-value of -1.95). The way to incorporate LTO into executive compensation contracts is through the amount of LTIP they receive, and UAI is incorporated through the percentage of variable pay they receive. This means North American executives prefer higher variable pay due to their lower UAI. Executives from Central or South America prefer less variable pay and are less interested in LTIP. Executives from Oceania prefer higher variable pay. Executives from Europe prefer less variable pay and are more interested in LTIP. Executives from Asia prefer less variable pay and are more interested in LTIP. Executives from Africa are less interested in LTIP as well. The Middle East did not significantly differ in UAI or LTO, so these observations are removed from the next test. This leads to a total number of observations of 3,697.

With the previous test, a dummy variable can be added to the compensation data, indicating whether or not a contract incorporates these preferences. This leads to a total number of “optimal contracts” of 504. Then, an OLS regression is performed to see if this “optimal contract” positively affects firm performance, proxied by the ROA. The results can be found in Table 9. Individually, the dummy variable for an “optimal contract” is negatively significant at the 5% level with an estimate of -1.33 (t-value of -2.96). This would mean that the ROA decreases by 1.33% if the contract incorporates cultural background. However, when including the control variables, the dummy variable loses its significance. The percentage owned by the executive, months in function, and the dummy variable indicating if the executive is the founder are not significant individually or in the complete regression. Age is positively significant at the 10% level individually (t-value of 2.54) but loses its significance in the complete regression. Total assets and months at the firm are negatively and positively significant, respectively, at the 1% level individually and in the complete regression (t-values of -8.02 and 5.94, respectively). Based on this test, there is no evidence to support the third hypothesis that incorporating cultural background into the compensation contract of an executive leads to higher firm performance.

TABLE 8
Significantly Different Cultural Dimensions Hofstede per Region

Region	PDI	IDV	UAI	MAS	LTO	IND
North America	39.50 (-2.47**)	85.50 (3.52**)	47.00 (-2.80**)	57.00 (2.71**)	30.86 (-0.57)	68.19 (2.23*)
Central or South America	67.56 (2.30*)	23.44 (-2.85**)	79.19 (3.87***)	49.19 (-1.38)	20.40 (-2.11*)	73.51 (2.99**)
Oceania	30.00 (-4.09***)	84.50 (3.41**)	50.00 (-2.18*)	59.50 (4.02***)	26.95 (-1.15)	72.99 (2.92**)
Europe	53.22 (0.14)	56.91 (0.58)	71.97 (2.38*)	45.44 (-3.34**)	58.93 (3.55**)	41.55 (-1.57)
Asia	72.57 (3.16**)	24.29 (-2.76**)	50.36 (2.11*)	53.21 (0.73)	62.15 (4.03***)	33.16 (-2.77**)
Africa	65.00 (1.87)	39.50 (-1.20)	55.75 (-0.99)	50.75 (-0.56)	21.48 (-1.95*)	46.65 (-0.84)
Middle east	50.33 (-0.63)	44.33 (-0.71)	69.33 (1.83)	47.67 (-2.17*)	22.50 (-1.80)	31.78 (-2.96**)
Average	54.03	51.21	60.51	51.82	34.75	52.55

This table provides a summary of the Significantly Different Cultural Dimensions Hofstede per Region compared to the total averages. The data was initially acquired from the Hofstede website and uses data up to 2015 (Hofstede, 2015). The dimensions are the Power distance index (PDI), Individualism vs. collectivism (IDV), Uncertainty avoidance (UAI), Masculinity vs. femininity (MAS), Long-term orientation vs. short-term orientation (LTO), and Indulgence vs. restraint (IND). Scores are measured on a 0-100 continuum. The way to measure if there is a significant difference in averages is the Welch's t-test. In brackets are the t-values. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

TABLE 9
Regression Analysis with ROA as Dependent Variable

Intercept	OC	POWN	AGE	ASSETS	MNEX	MNFRM	FNDER	T	F/R2
0.1482	-1.33 -2.95**							N	8.73 0.002
0.1461		0.01 0.87						N	0.76 0.001
0.1078			0.06 2.54*					N	6.46* 0.001
0.1531				-0.01 -14.77***				N	218.1*** 0.055
0.1454					0.01 0.60			N	5.23* 0.001
0.1331						0.01 5.57***		N	30.98*** 0.008
0.1465							-2.19 -0.93	N	0.86 0.001
0.0925	-0.19 -0.48	-0.02 -0.97	0.03 1.27	-0.01 -8.02***	-0.01 -0.57	0.01 5.94***	-3.10 -1.45	Y	36.31*** 0.19

This table provides the OLS regression result of Return on Assets (ROA) as the dependent variable and executives with an optimal contract based on their cultural background as independent variables, together with control variables indicated by literature that can influence the ROA. The total sample is 3,697 observations. OC is the dummy variable for an executive having an optimal contract based on their cultural background. This means that the Long Term Orientation (LTO) and Uncertainty Avoidance Index (UAI) from the cultural dimensions of Hofstede (1980) are reflected in the compensation contract of the executive. POWN stands for the percentage of the firm owned by the executive. AGE stands for the age of the executive. ASSETS stands for the firm's total assets as a proxy for firm size. MNEX stands for the number of months the executive is active in that position. MNFRM stands for the number of months the executive is active in the firm. FNDER is an indicator variable indicating whether the executive was one of the firm's founders T stands for Year Fixed Effects and indicator variables for the firm belonging to a specific industry as a control measure. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

6.5 Conclusion results

Based on the test result, no evidence supports the first hypothesis. There is no evidence that an executive's cultural background significantly impacts the amount of compensation they receive. This also means that with this set of tests and data, there is no indication that discrimination exists in the amount of executive compensation someone receives. The second and third tests did find some evidence to support the second hypothesis that the structure of a compensation contract is different between executives with different cultural backgrounds. First of all, Africa and the Middle East had significant results in a higher percentage of variable pay. According to theory and the cultural dimensions of Hofstede, there is no indication that these cultural backgrounds are less risk-averse. Because there are few observations for these regions and the contradiction that theory gives, these results could be coincidental. For the amount of LTIP the executives receive, there are significant results for Asia, Oceania, and Central or South America. A higher amount of LTIP for executives from Asia does correspond with their risk profile according to theory and the dimensions of Hofstede. The same holds for executives from Central or South America, although these results should be interpreted carefully because of a low number of observations. The results from Oceania could not be explained by theory or the dimensions of Hofstede and could be a coincidence due to the low amount of observations. Lastly, there is no evidence found for the third hypothesis that incorporating cultural background into the compensation contract of an executive leads to higher firm performance. This could be due to the few significant results in the previous tests. If there are few significant differences in compensation packages between cultural backgrounds, companies don't really incorporate cultural backgrounds into compensation packages. The variation of different executive compensation contracts between cultural backgrounds could not explain the variation in firm performance.

7 Conclusion

The purpose of this thesis is to provide more insight into the relation between the cultural background of an executive and their compensation package. Executive compensation and the link with the cultural background of the executive is a widely discussed topic by the press. At this point in time, it is not clear whether the cultural background is incorporated in the compensation contract of an executive because there is little research on this topic. In our goal to align the interests of principles and agents and thereby alleviating the agency problem, it is crucial to have a better understanding of compensation contracts. This study investigates whether executive compensation contracts differ between cultural backgrounds and if this leads to higher firm performance. Cultural background is proxied by nationality, and the cultural dimensions by Hofstede (1980) are used to examine differences in the risk profile between different cultural backgrounds. Theory predicts that the cultural background of an executive has a significant impact on the compensation package's amount and structure. Also, compensation contracts incorporating the cultural background should achieve higher firm performance because it could alleviate the agency problem. Tests are performed to see if the cultural background, proxied by an executive's nationality, significantly impacts the total amount, the percentage of variable pay, and the amount of LTIP they receive.

The following results are found using executive-level data combined with financial data from the United States over a period from 2010 to 2021. First, there is no evidence that the amount of compensation an executive receives is influenced by their cultural background. Both individually and in the regression that included control variables, none of the dummy variables indicated cultural background was significant. The next test looked at the effect of cultural background on the percentage of variable pay that an executive received. Here, significant positive results were found for the executives from Africa and the Middle East, both individually and in the regression, including control variables. The third test looked at the effect of cultural background on the amount of LTIP that an executive received. Executives from Asia and Oceania received a significantly higher amount of LTIP, while executives from Central or South America received a lower amount of LTIP. The last test looked at the relation of a contract that included cultural background and firm performance. An “optimal contract” is a contract that incorporates the risk profile of an executive based on the cultural dimensions by Hofstede (1980). Based on this test, there is no evidence that incorporating cultural background into the compensation contract of an executive leads to higher firm performance. The research question of this thesis is:

“Are executive compensation contracts different between cultural backgrounds, and does this lead to higher firm performance?”

All the tests together can answer the research question. Executive compensation contracts between cultural backgrounds are not different in amount, but there is slight evidence that indicates that the structure of the compensation package is different between cultural backgrounds. There is no evidence that incorporating cultural backgrounds into an executive's compensation contract leads to higher firm performance.

The results of this research are relevant for scholars, top management of firms, and society as a whole. In this research, there was no evidence found that there is any discrimination in executive compensation contracts. There is also more empirical evidence on the effects of cultural backgrounds on executive compensation contracts. There is no evidence that incorporating cultural backgrounds into an executive's compensation contract leads to higher firm performance, so companies are not motivated to structure their compensation contracts accordingly. Also, incorporating cultural background into a compensation contract did not alleviate the agency problem further based on these sets of tests and data sets.

This study is subject to a few caveats. First, there are undoubtedly confounding factors that have impacted executive compensation contracts that are not captured in the models. Using control variables, this research tried to minimize these confounding factors. However, factors that cannot be observed, such as compensation negotiation and executive behavior, are not captured within the models. Second, the observations used for this research are limited to the United States. The results might not be generalizable to other parts of the world. Thirdly, there are few observations for some of the regions examined in this thesis. This is mainly due to all the control variables needed in this thesis, which were not always available in abundance. This low number of observations makes it hard to interpret the results and, therefore, hard to see the relation between cultural background and compensation packages. Lastly, some of the signs and magnitudes of the coefficients found for control variables are not logical. For example, in Table 5, a ROA of 1% increase would decrease Total Compensation by \$ 4,690. These illogical coefficients could be due to this particular set of data. Since the control variables are not the main focus and in the scope of this thesis, I decided not to investigate this phenomenon further.

Future research could examine the confounding factors to develop a better model to see the effects of cultural backgrounds on executive compensation truly. This research could also be generalized to other parts of the world. This could also alleviate the problem that some regions had low observations. When including the whole world in this analysis, there would be a higher number of observations for all the regions, making the results more reliable. With this thesis included, the results found in studies for relations between cultural background and executive compensation are mixed. Future research should build on this thesis and prior research by expanding the scope and examining how we can clearly see the relation between cultural background and executive compensation packages. This is important in our constant struggle to alleviate the agency problem and our understanding of compensation packages.

References

Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of financial and quantitative analysis*, 31(3), 377-397.

Antle, R. & Smith, A. (1986). Measuring executive compensation: Methods and an application, *Journal of Accounting Research*, 23, 269-325.

Arrow, Kenneth. 1973. *The Theory of Discrimination in Labor Markets*, edited by Orley Ashenfelter and Albert Rees, pp. 3–34. Princeton, NJ: Princeton University Press.

Barsky, Robert B., Thomas F. Juster, Miles S. Kimball, and Matthew D. Shapiro. 1997. Preference Parameters and Behavioral Heterogeneity: An Example Approach in the Health and Retirement Study. *Quarterly Journal of Economics* 112(2): 537–79.

Becker, Gary S. 1971. *The Economics of Discrimination*. Chicago: University of Chicago Press.

Bhagat, S., Brickley, J. A., & Lease, R. C. (1985). Incentive effects of stock purchase plans. *Journal of Financial Economics*, 14(2), 195-215.

Bratton, W. 2005. The Academic tournament over executive compensation. *California Law Review*, 93(5).

Brick, I. E., Palmon, O., & Wald, J. K. (2006). CEO compensation, director compensation, and firm performance: Evidence of cronyism?. *Journal of Corporate Finance*, 12(3), 403-423.

Brimmer, Andrew F.. 1998. Income, Wealth, and Investment Behavior in the Black Community *American Economic Review* 78(2): 151–55.

Cambridge University Press. (n.d.A). Cultural. In Cambridge dictionary. Retrieved June 3, 2022 from <https://dictionary.cambridge.org/dictionary/english/cultural>

Cambridge University Press. (n.d.B). Ethnicity. In Cambridge dictionary. Retrieved June 3, 2022 from <https://dictionary.cambridge.org/dictionary/english/ethnicity>

Charles, Kerwin K., Erik Hurst, and Nikolai Roussanov. 2009. “Conspicuous Consumption and Race.” *Quarterly Journal of Economics* 124(2): 425–67.

Chung-Herrera, Beth G., and Melanie J. Lankau. 2005. “Are We There Yet? An Assessment of Fit between governance choices. *Journal of Financial Research*, 24(4), 495-512.

- Conyon, M. J. (2006). Executive compensation and incentives. *Academy of Management Perspectives*, 20(1), 25-44.
- Ellahie, A., Tahoun, A., & Tuna, İ. (2017). Do common inherited beliefs and values influence CEO pay?. *Journal of Accounting and Economics*, 64(2-3), 346-367.
- Ely, K. M. (1991). Interindustry differences in the relation between compensation and firm performance variables, *Journal of Accounting Research*, 29, 37-58.
- Federal Glass Ceiling Commission. (1995). *A Solid Investment: Making Full Use of the Nation's Human Capital*. Retrieved April 2, 2022 from <https://www.dol.gov/oasam/programs/history/reich/reports/ceiling.pdf>
- Gillenwater, S. (2020). The Inside Track — Immigrant CEOs of the Fortune 500. Retrieved April 2, 2022 from <https://www.boardroominsiders.com/blog/the-inside-track-immigrant-ceos-of-the-fortune-500>
- Gittleman, Maury, and Edward N. Wolff. 2004. "Racial Differences in Patterns of Wealth Accumulation." *Journal of Human Resources* 39(1): 193–227.
- Groysberg, B., Abbott, S., Marino, M. R., & Aksoy, M. (2021). Compensation Packages That Actually Drive Performance. *Harvard Business Review*, 99(1), 102-111.
- Guest, P. M. (2017). Executive compensation and ethnic minority status. *Industrial Relations: A Journal of Economy and Society*, 56(3), 427-458.
- Harvey, K. D., & Shrieves, R. E. (2001). Executive compensation structure and corporate Stereotypes of Minority Managers and the Successful-Manager Prototype." *Journal of Applied Social Psychology* 35(10): 2029–56.
- Haynes, K. T. (2014). Something old, something new: Culture and CEO compensation revisited. *American Journal of Business*.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online readings in psychology and culture*, 2(1), 2307-0919.
- Hofstede, G. (2015). 6 dimensions for website. Retrieved June 3, 2022 from <https://geerthofstede.com/research-and-vsm/dimension-data-matrix/>
- Jalbert, T., Chan, C., Jalbert, M., & Landry, S. P. (2007). The interrelationship of CEO nationality with financial management, firm performance, and CEO compensation. *The Journal of Diversity Management*, 2, 7-23.

- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of financial economics*, 3(4), 305-360.
- Jensen, M. C., & Murphy, K. J. (1990). Performance pay and top-management incentives, *Journal of Political Economy*, 98, 225-264.
- Jones Edward W. 1986. "Black Managers: The Dream Deferred. *Harvard Business Review* 64(3): 84–93.
- Kimball, M. S., Sahm, C. R., & Shapiro, M. D. (2008). Imputing risk tolerance from survey responses. *Journal of the American statistical Association*, 103(483), 1028-1038.
- Kole, S. R. (1997). The complexity of compensation contracts. *Journal of Financial Economics*, 43(1), 79-104.
- Libby R. (1981), *Accounting and Human Information Processing: Theory and Applications*, Englewood Cliffs, NJ: Prentice Hall.
- Martin, J. A., & Davis, K. J. (2010). Stacked deck: Can governance structures explain CEO compensation differences across countries?. *Academy of Management Perspectives*, 24(1), 78-79. (December): 17–34.
- Meyer, H. H. (1975). The pay-for-performance dilemma. *Organizational dynamics*, 3(3), 39-50.
- Morrison, E. W., & Milliken, F. J. (2000). Organizational silence: A barrier to change and development in a pluralistic world. *Academy of Management review*, 25(4), 706-725.
- Murphy, K. J. (1999). Executive compensation. *Handbook of labor economics*, 3, 2485-2563.
- Norris, P., and R. Inglehart, 2011. *Sacred and Secular: Religion and Politics Worldwide*. 2nd ed. Cambridge: Cambridge University Press.
- Phelps, Edmund S. 1972. "The Statistical Theory of Racism and Sexism." *American Economic Review* 62 (4): 659–61.
- Rosette, Ashleigh S., Geoffrey J. Leonardelli, and Katherine W. Phillips. 2008. "The White Standard: Racial Bias in Leader Categorization." *Journal of Applied Psychology* 93(4): 758–77.
- Sahm, Claudia R. 2007. "Stability of Risk Preference." Board of Governors of the Federal Reserve System Working Paper. Washington, DC: Board of Governors of the Federal Reserve System.

Shayo, M. (2020). Social identity and economic policy. *Annual Review of Economics*, 12.

Tosi, H. L., & Greckhamer, T. (2004). Culture and CEO compensation. *Organization Science*, 15(6), 657-670.

Tajfel, Henry, and John C. Turner. 1986. "The Social Identity Theory of Intergroup Behavior." In *Psychology of Intergroup Relations*, edited by S. Worchel and W. G. Austin, pp. 7–24. Chicago: Nelson-Hall.

Van Essen, M., Otten, J., & Carberry, E. J. (2015). Assessing managerial power theory: A meta-analytic approach to understanding the determinants of CEO compensation. *Journal of management*, 41(1), 164-202.

Van Twist, P.D. (2021). The effect of cultural backgrounds on executive compensation contracts. Research Proposal. [Unpublished manuscript]. Erasmus University Rotterdam

Westphal, J. D., & Zajac, E. J. (1993, August). SUBSTANCE AND SYMBOLISM IN CEOS' LONG-TERM INCENTIVE PLANS. In *Academy of Management Proceedings* (Vol. 1993, No. 1, pp. 232-236). Briarcliff Manor, NY 10510: Academy of Management.

Zhang, X., Tang, G., & Lin, Z. (2016). Managerial power, agency cost and executive compensation—an empirical study from China. *Chinese Management Studies*.

Appendix A – Variable Definitions

Variable:	Definition:
<i>TCOMP</i>	total compensation. This variable comes directly from the database. It consists of salary plus bonus awarded to the executive in that specific year.
<i>VPAY</i>	the percentage of variable pay compared to the total compensation that the executive receives. Variable pay and total compensation come directly from the database. Variable pay consists of bonus payments rewarded to each executive in a reporting period. This can include shares, cash bonuses, stock grants, and call options.
<i>LTIP</i>	the amount of long-term incentive plans the executive received that year. This variable comes directly from the database, and is the value of LTIP awarded during the period based on the closing stock price of the annual report date. These can consist of stock option plans, restricted stock, and performance plans.
<i>OC</i>	indicator variable equal to one if the executive has an “optimal contract” based on their cultural background, and zero otherwise. This “optimal contract” is achieved when the executive’s compensation contract matches their cultural background. This cultural background can indicate their risk profile, which was examined using the cultural dimensions by Hofstede (1980). Two dimensions that relate to the risk profile of the executive are LTO and UAI. LTO and UAI are incorporated into compensation contracts through the amount of LTIP and the percentage of variable pay they receive, respectively. Then, if a significant higher or lower LTO and UAI from the Hofstede database matches with an amount of LTIP and percentage of variable pay higher or lower than the average from the compensation database, an “optimal contract” is achieved, thus getting the indicator variable equal to one.
<i>BP2</i>	indicator variable equal to one if the executive was born in Africa, and zero otherwise.
<i>BP3</i>	indicator variable equal to one if the executive was born in Asia, and zero otherwise.
<i>BP4</i>	indicator variable equal to one if the executive was born in Europe, and zero otherwise.
<i>BP5</i>	indicator variable equal to one if the executive was born in the Middle East, and zero otherwise.
<i>BP6</i>	indicator variable equal to one if the executive was born in Australia or New Zealand (Oceania), and zero otherwise.
<i>BP7</i>	indicator variable equal to one if the executive was born in Central or South America, and zero otherwise.
<i>POWN</i>	the percentage of the firm owned by the executive.
<i>AGE</i>	the age of the executive at the reporting date.
<i>ASSETS</i>	The executive’s firm’s total assets as a proxy for firm size.
<i>ROA</i>	return on assets, defined as net income divided by total assets, as a proxy for firm performance.
<i>MNEX</i>	the number of months the executive is active in that position.
<i>MNFRM</i>	the number of months the executive is active in the firm.
<i>FNDER</i>	indicator variable equal to one if the executive is one of the firm’s founders, and zero otherwise.

<i>IND1-12</i>	indicator variables equal to one if the firm belongs to a specific industry based on four-digit SIC codes, and zero otherwise.
----------------	--