Agency Theory and Its Consequences

A study of the unintended effect of Agency Theory on Risk and Morality

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Executive Summary

The failing corporate governance system, excessive risk-taking and the greedy manager have all been cited as reasons for the recent financial crisis. This thesis determines the connection between these three aspects and agency theory, deriving two potential side effects and consequences. In theoretical support of the relationship between the shareholder primacy inherent in agency theory and risk-taking as well as the critique of the model of man in agency theory, two intertwined research questions are investigated,

Did the agency theoretical prescriptions of corporate governance and directors' financial literacy impact the risk profile of Scandinavian banks during the Financial Crisis? And are there differences in the moral and ethical perceptions of business majors in comparison to other majors?

Through an analysis of agency theory and its impact on practical corporate governance, this thesis develops ten hypotheses regarding the relationship between risk-taking to the composition of board of directors, director background and the utilization of stock based remuneration. Additionally, based on the critique of agency theory, three hypotheses with regards to the presumed negative impact of agency theory on the moral and ethical perceptions of business majors are presented.

The data from Scandinavian bank boards and risk measures shows that some of the agency theory prescriptions may lead to increased risk-taking. Moreover, it finds that the financial literacy of directors leads to a higher proclivity to utilize these prescriptions and therein also higher risk-taking, however the verdict on concrete side effects of agency theory is not unequivocal.

Through a questionnaire on ethical perceptions, this thesis further finds that there is no difference in the perceptions of business majors vs. other majors, but rather that there is a difference in the ability to follow through on their ethical or moral convictions. Business majors thus appear to be more willing to carry out a given action despite these convictions.

The discussion of these results as a whole argues that a more critical approach to management education is needed in order to question the consequences, side effects and assumptions of agency theory and the ethos associated therewith. Herein both the introduction of alternative theories of governance and an integration of business ethics, particularly of virtue theory, is perceived to provide a relevant framework for assessing courses of action and enabling a more holistic and informed approach to decision making. Consequentially, such enhanced critical inquiry may aid in questioning those prevailing best practices and norms that may not actually be in the interest of society nor ethically correct.

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1 Introduction

"It is the things towards which we have the stronger natural inclination that seem to us more opposed to the mean"

- Aristotle (2004, p.47) -

The documentary "Inside Job" portrays a riveting account of a financial industry festered with greed and conflicts of interest. As bankers gambled creatively with the life savings of laymen investors, ratings agencies and regulators closed their eyes to the full picture, whilst scholars supported the development of over the counter derivatives designed to safeguard the ever-increasing rate of subprime mortgages. Beginning in mid-2007 the largest American financial crisis since the Great Depression began to unfold (Jickling 2010) with thousands of homeowners defaulting on their mortgages (Pinyo 2008). The consequences were to be felt around the world and the Global Financial Crisis (GFC), as it came to be known, soon had national governments scrambling to "bail out" private institutions in effort to keep the financial industry afloat and mitigate the fallout from digressing into pandemonium (Shah 2010, Sidelsky 2009). Inevitably, the pressing questions of governments, media and the public alike were how could it have gone this wrong and who was to be blamed?

Shots were fired left, right and center, targeted at a range of factors from regulation and credit agencies to financial innovation and central banks. Particularly, the intertwined aspects of executive remuneration and the auspices of corporate governance (CG) were targeted as having failed to safeguard the company and incentivized risk-taking. The attacks were not only directed at "institutional constructs", a recurrent character was also the greedy banker and his apparent disregard for ethics and morality in pursuit of his own gain.

As we enter the "post-crisis" era, governments and regulators seek to redevelop regulations and standards to prevent the recurrence of a GFC. Generally however, their focus only addresses what is visible (Dobbin et al. 2010). The purpose of this thesis is to delve deeper and review the underlying theoretical construct of best practice CG mechanisms utilized today, agency theory (AT), a construct that has also been criticized as "green lighting" a higher propensity towards risk, along with unethical and immoral behavior (Ghoshal 2005). This thesis therefore poses the questions:

Did the agency theory prescriptions of corporate governance and directors' financial literacy impact the risk profile of Scandinavian banks during the Global Financial Crisis? And are there differences in the moral and ethical perceptions of business majors in comparison to other majors?

Based on hypotheses derived from AT and through the utilization of data on Scandinavian Banks'

board of directors and incentive plans, the thesis addresses the first part of the research question by investigating whether AT prescriptions contributed to the risk-taking behavior that propelled the GFC. Subsequently, the second part of the research question is analyzed on the basis of hypotheses grounded in the popular criticisms of AT in begetting immoral or unethical managers, and seeks to answer this question through a survey of ethical perceptions. Ultimately the result of the research question is discussed with a view to management education and moral philosophy. Prior to investigating these issues, it is important to understand the motivation driving the aims of this thesis.

2 Motivation

The GFC has not only been a contentious topic for regulators, bankers and the media, business schools have also debated the causes and consequences in effort to find ways to better prepare their students for future challenges[1]. This debate, in combination with previous research on agency theory in banking (Smith et al. 2009) sparked the author's initial interest through the simple question *"What role have agency theory prescriptions played in the crisis?"*. What started as a simple question has evolved into this thesis, wherein the consequences and side-effects of the AT perspective is reviewed due to its prominent role in business education (Dobbin et al. 2010) and its potential relationship to the GFC. What further augmented the interest was the perceived simultaneous incapability of agency theory as a descriptive theory of CG (Dalton et al. 1998) in combination with its strong normative capability, and potential side-effects. Essentially the question that remained after the review of scholarly writings on agency theory, was whether the side-effects of encouraging risk-taking and the presumed postulation of creating immoral managers in fact was true, and if so, what would this mean for management education. Out of this emerged the research questions under investigation here, for which the obvious choice for data collection was the banking industry as both greed and excessive risk-taking have been argued as causes of the crisis (Shah 2009).

The specificity of the area of interest however meant that as opposed to much of the current business research on the GFC, this thesis has never intended to provide input for how financial regulation should be formulated. Rather, the goal has been to highlight the potential consequences for management education, given the lack of research herein even though many future bankers will be the product of business schools. Additionally, the specificity of the research questions means that

[1] Discussions on the impact of the financial crisis on management education were observed at a CEMS Executive Board meeting in Singapore in May 2010. CEMS is an alliance of 26 leading world-wide business schools.

the structure must be qualified properly before commencing, as it handles two simultaneously independent and intertwined questions. The subsequent section will thus introduce the thesis structure.

3 Structure

As a result of the research questions and the data collections, the structure of the thesis will make a topical split when deemed necessary to avoid confusion between the treated data and hypotheses. The structure for the thesis will therefore set out accordingly, first by outlining the context of the GFC, thereafter assumptions and limitations will be presented in order to demarcate the research area. Subsequently, the theoretical background will be introduced, first highlighting the core theoretical foundation of agency theory and subsequently moving into the two different *consequences* under investigation – risk-taking and ethics. Hereafter the hypotheses for each *consequence* will be introduced, which will be followed by a joint methodology section. Thereafter the thesis is divided, first focusing solely on risk-taking and governance mechanisms, their analysis and partial conclusion, followed by the analysis of the second strand, the ethical hypotheses. Finally once all hypotheses have been investigated, these two strands will be integrated in the discussion and the findings will be summed up in the conclusion. Throughout the thesis, a graphical representation of the structure (Figure 1) will indicate shifts from one section to another.

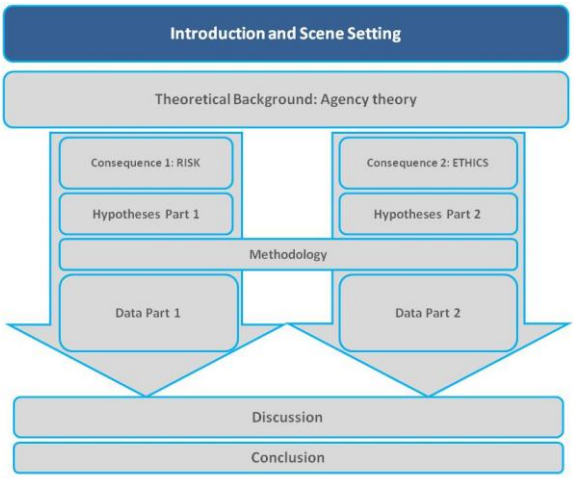

Figure 1 - Structure

Having outlined the motivation and structure, the following section seeks to qualify the predominant focus on governance and greed with respect to the GFC and their connection to the economic theory.

4 Greed, Governance & the Financial Crisis

4.1 Greed

The populist cause of the GFC is greed, (Pinyo 2008, Guina 2008) wherein investment bankers gambled with customer funds (Shah 2010). Credit was cheap, needed to be lent out and with no more prime borrowers, bankers went to sub-prime borrowers to cash in more money (Jarvis 2009). The gamble was almost a safe bet provided housing prices kept rising, but when the housing bubble began to constrict and interest rates rose, sub-prime borrowers began to default (Jickling 2010, Time 2011). Though acknowledged as a contributing factor (Anderson 2008), the events preceding the GFC are too multifarious to be attributed to greed alone.

4.2 Governance

4.2.1 Distorted Bonus Bonanza

A bonus culture that effectively espoused excessive risk-taking did not help. The potential for upside gains were significant and the downside costs negligible, or so it seemed (Sidelsky 2009). As noted by Krugman (2008) in the New York Times, *'The pay system …lavishly rewards the appearance of profit, even if that appearance later turns out to have been an illusion'.*

Variable pay packages that tied managerial wealth to the wealth of shareholders were commonplace. Rajan noted back in 2005 that these created distorted incentives and promoted risk taking, even proclaiming that *'They may create a greater probability of a catastrophic meltdown'* (p.318). Lord Turner, head of FSA, would later support Rajan in claiming that the bonus culture indeed had an effect on the financial crisis (BBC 2010). Their arguments were also supported academically by Bechmann and Raaballe on a sample of Danish banks (2010). Rajan (2005) and Blundell-Wignall et al. (2008) argued that the inherent problem of incentive schemes was that they were not risk adjusted, effectively accentuating risk-taking behavior.

The hefty bonuses accumulated by bank managers were also targeted for criticism in the post-GFC finger-pointing game, as politicians either questioned or sought regulatory action on bonus levels (Arentoft 2010, Condon 2010). However Sidelsky (2009) contended that bankers, though also self-interested, acted largely in accordance with the adage of the system – profit maximization.

4.2.2 Corporate Governance Failure

Closely related to the issue of bonus schemes is the perspective that contemporary CG has failed in safeguarding the firm (Jickling 2010, Blundell-Wignall et al. 2008). Foong (2009) also pointed to weak CG mechanisms to explain the effectual failure of the market. OECD (2010) provided similar critique, describing a system that failed to provide and cultivate sound business practices. Professor Hasung Jang posited that like the 1997 Asian financial crisis, shortcomings in CG was a root cause of the GFC (Jang in Sharma 2008). Others point specifically to the general ineffectiveness of boards to stem incessant risk-taking behavior (Dobbin et al. 2010, Abdullah 2006).

The governance best practices that may have failed, the distorted bonus culture and the greedy manager share common ground through the perspective of agency theory, a facet that remains unaddressed by regulators.

4.3 The Connection to Economic Theory

A less espoused argument for the cause of the GFC attacks the underlying economic theory that underpins the development of established governance mechanisms and may have adversely impacted the moral compass of business managers.

Dobbin et al. (2010) noted that the political responses to the GFC have focused on the regulatory environment, ignoring the contributions of economic paradigms, particularly agency theory, in promulgating the wealth maximization environment that abetted the crisis.

Daianu (in ALDE 2008) argued that the theoretical underpinnings of policies were problematic in general, and the principal-agent problem in particular fuelled the crisis. Policies based upon economic theories that expect humans to be rational and discount complex realities to achieve perfect models have essentially failed (The Times 2010). Priester (in ALDE 2008) criticized the proclivity of business models towards short term wealth maximization as *'fundamentally flawed'* on the grounds of being both *'economically obsolete'* and *'morally indefensible'* (p. 38) by transferring all power to the shareholder. From an ethics perspective, he further argues that the permeation of economic theory has dehumanized business and only heralded innovation for the purpose of private gains, when in fact *"innovation [is] for-or-about [serving] the substantive interest of the Human Person"* (p.38).

In essence, the crisis may not only be a consequence of poorly constructed institutions of control, but rather of poorly constructed financial theories supporting and dictating the development of

these institutions (Kou 2009). Therefore this thesis investigates whether the agency theoretical prescriptions added to more risk with regards to the GFC and whether it creates immoral managers.

Before delving into the theoretical background, hypotheses, methodology and data testing, it is relevant to define the appropriate assumptions as well as demarcate the research area through some limitations.

5 Assumptions

Throughout the thesis a number of assumptions are made, none of which are believed to distort the overall picture, though they may in fact have an influence on the generalizability of the thesis (Bryman et al. 2003).

For both areas it is assumed that the constructs measure the intended effects. Through the qualification of measures by previous studies investigating similar variables, the assumption is assessed to be fair. It is additionally assumed for both data sets that Agency Theory is part of education and financial literacy ergo also means a familiarity and understanding of agency theory. This assumption although grand in its scope is not unrealistic, as noted by Zajac et al. (2004) and Dobbin et al. (2010).

A more questionable assumption is made with regards to the impact of education. Although some like Albert et al. (2010) highlight that education has lasting effects, it is impossible given the research design to discern between self-selection and actual impact of education. The relationship between formation and actions must therefore be treated with regards to this assumption.

6 Limitations

As with any other, this thesis is limited by timeline, scope and scale which confines the ability to investigate all possible variables and contributing factors.

Unlike AT, alternative models of CG, such as stewardship and stakeholder theory (Lan et al. 2010), have yet to gain a solid foothold in the practical literature and enactment of CG (Daily et al. 2003)[2]. As such, reflecting the real life context, the thesis does not directly investigate these alternatives, though they are referred to as points of discussion.

Amongst the many potential consequences of agency theory, this thesis will focus on two due to their perceived relevance to the GFC. As noted, whilst it is acknowledged that there were many

[2] An overview and short critique of these models and the director primacy model is available in Appendix 17.1.

contributing factors to the GFC, the intention of this thesis is to empirically analyze the consequences of agency theory. As such, the GFC serves as the context for analysis rather than the object of investigation. The banks are not disregarded however, given that their societal role makes the application of AT prescriptions within the industry all the more intriguing. Nevertheless it is acknowledged that the findings of this thesis related to CG will be derived from a distinct and heavily regulated industry, which may limit their utility (Battilossi 2009).
Upon investigating the second research objective, it is accepted that temporal limitations made the assessment of moral philosophy development challenging and the cogency of results may be restrained by the difficulty in establishing the degree to which individual moral development is influenced by business education and not also self-selection (Pfeffer 2005).

Overall however these primary assumptions and limitations, by virtue of their academic support and conscious inclusion, are not believed to fundamentality compromise eventual findings.

Having established these caveats, the thesis will return to outlining the connections between the presented causes of the GFC and economic theory. But before qualifying the consequences of AT on risk and morality, it is imperative to first delineate the concept itself.

7 Theoretical Background

7.1 Agency Theory

The 1976 article "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure" by Jensen and Meckling helped establish AT as the dominant theoretical framework of the CG literature, and position shareholders as the main stakeholder (Lan et al. 2010, Daily et al. 2003). The adoption of the agency logic increased during the 1980's as companies started replacing the hitherto corporate logic of managerial capitalism with the perception of managers as agents of the shareholders (Zajac et al. 2004). The subsequent stream of

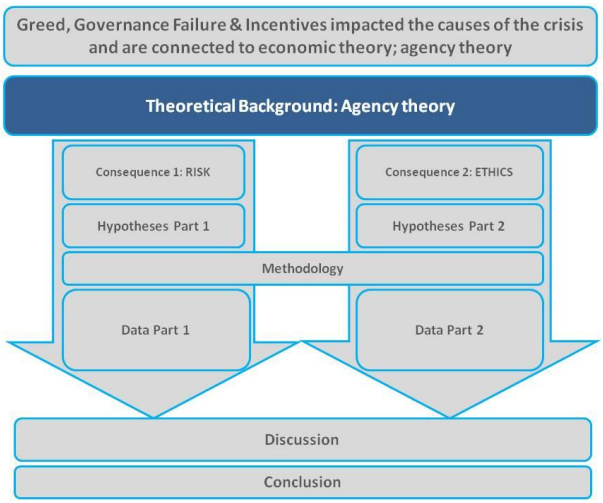

Figure 2 - Structure

literature would break with the tradition of largely treating the firm as a black box and the assumption that the firm always sought to maximize value (Jensen 1994). AT addressed what had become a growing concern, that management engaged in empire building and possessed a general disregard for shareholder interest, what Michael Jensen called *"the systematic fleecing of shareholders and bondholders"* (1989, p.64), through providing prescriptions as to how the principal should control the agent to curb managerial opportunism and self-interest (Perrow 1986, Daily et al. 2003). As the market reacted positively to this change in logic, with time the agency approach became institutionalized in the practice of CG, within business education, research and media (Zajac et al. 2004; Shapiro 2005, Lan et al. 2010).

Out of the agency logic grew two closely related streams of research; the mathematically complex Principal-Agent literature and the more practice oriented Positive Agency Theory (Shapiro 2005). Common to both is shareholder primacy, wherein the principal is positioned both as the residual claimant and main stakeholder. Although the influence of Principal-Agent theory cannot be denied (Asher et al. 2005), the practical and empirical nature and implications of Positive Agency Theory on CG situate this stream as the main concern of this thesis.

7.1.1 Foundations

As any theory, AT is based in a number of assumptions about man, which have a significant impact on the formation of the theory (Davis et al. 1997).

The most common belief is that AT is based in the economic model of man (e.g. Brennan 1994, Perrow 1986, Shapiro 2005). Jensen and Meckling denounce this interpretation however, by arguing that the theory is grounded in what they call REMM – the Resourceful, Evaluative, Maximizing Model (Jensen et al. 1994). They argue that the REMM most closely replicates human action, and that the economic model of man is a simplified version that does not reflect the spectrum of human behavior.

However, the extent to which these two models are actually different is questioned by Brunner (1996) and Tourish et al. (2010), who treat them as equals (see also table 1 for comparison and overview of assumptions). Their arguments are based in the fact that the REMM, although accepting that wealth may not be the only goal, will willingly substitute goods for monetary rewards (Baker et al. 1988). In addition, despite the fact that the REMM can act with altruism, it can only do so simultaneously with individual self-maximization[3]. As such pure altruistic behavior without ulterior

[3] Self-interested altruism although creating a possibility of other-regarding behavior – does only so given a positive

motives cannot take place.

Thereby the REMM is largely similar to the economic model of man, which assumes that humans are rational, selfishly motivated and will behave opportunistically, even ruthlessly, whenever advantageous (Ghoshal 2005, Daily et al. 2003). Herein, actions are undertaken according to self-interest (Fama 1980) and opportunistic behavior is fostered when monitoring contracts and relationships becomes difficult and costly due to bounded rationality and information asymmetry (Perrow 1986, Donaldson 1990). Opportunism is therefore central to this view of man, where an actor's promise to do a certain action is worthless if the circumstances of the promised action changes before the action is carried out (Heath 2009). As such, changes in behavior are also driven by changes in incentives (Prendergast 1999) and behavior is directed by maximizing self-interest under game-theoretical like conditions (Perrow 1986).

Human Assumptions	
REMM	**Economic Man**
Bounded Rational	Rational
Maximizer based on thorough evaluation	Maximizer
Self-Interested	Self-Interested
Actions driven by Incentives	Motivated by incentives
Opportunistic if beneficial	Opportunistic with guile
Will substitute goods if beneficial (not driven exclusively by extrinsic rewards)	Focus on extrinsic rewards
Altruistic if beneficial	Not other-regarding
Resourceful – innovative when facing constraints and opportunities	(Resourceful) [4]

Table 1 - Comparison of REMM and Economic Model of Man

Regardless of whether Jensen and Meckling's (1994) postulation that the REMM guides AT, Table 1 shows that the REMM in fact have few differences from the Economic Model of Man (Brunner et al. 1996). Bearing in mind the lack of self-interested altruism and the slightly stronger focus on extrinsic motivators in the Economic Model of Man, arguments against this representation of

benefit to the individual. Thereby self-interested altruistic behavior can potentially be reduced to an intrinsic motivation (Brunner et al. 1996).

[4] The Economic Man is like the REMM perceived to be resourceful, yet the literature is generally less focused on this aspect of his/her behavior as opposed to the other notions (Brunner et al. 1996).

human behavior must then also be applicable to the REMM model (see section 7.3.1)

With the understanding that man is self-interested, ever opportunistic and driven by incentives, AT addresses the effect of having this man as a manager in the modern corporation by providing prescriptions to taming him. But what is the modern corporation in the eyes of AT and what are these effects and prescriptions?

7.1.2 The Modern Corporation, Effects & Prescriptions in Agency Theory

7.1.2.1 The Modern Corporation is Separation of Ownership and Control

The model of the modern corporation used in AT is driven by the development in the mid 20th Century, where the corporation grew in size, complexity and in the need for external capital. This, combined with an increased stock market, a limit on managerial wealth and a need for efficient risk allocation (Fama 1980, Fama et al. 1983, Demsetz et al. 1997), meant an increase in the diffused ownership of companies amongst shareholders.

As shareholders have a willingness to bear risk but do not necessarily possess the interest and time to actively manage the company (Brealey et al. 2008), a contractual relationship is created wherein an agent (manager) will manage the risk and control the company on behalf of the principal (shareholder), who is the residual claimant, risk bearer and owner of the company (Jensen et al. 1985, Fama et al. 1983). As such, the modern corporation is reduced to a 'nexus of contracts' between principals and agents and the separation of ownership and control is created (Jensen et al. 1976).

7.1.2.2 The Effect of Conflict of Interest and Moral Hazard

Given the separation of ownership and control, and the diverging risk profiles of the participating parties (Eisenhardt 1989, Jensen 1989), it cannot be expected that risk-averse managers (agents) will act in the interest of risk-neutral shareholders (principals) as it may not be in the manager's self-interest to pursue shareholder wealth maximization (Bonazzi et. al. 2007, Lan et al. 2010, Demsetz et al. 1985). Jensen et al. (1985) argue that the three prominent problems with management that cause the conflict of interest are, 1) the choice of effort, 2) differential risk exposure, and 3) differential time horizon. The agency problem in separating ownership and control is therefore the assumed diverging goals of the "cooperating parties" – the residual claimant and manager (Donaldson 1990, Hendrikse 2003). This inevitably increases the incentives for moral hazard and opportunistic

behavior as self-interest guides action (Demsetz et al. 1985).

Moral hazard is central to AT, and is also referred to as hidden action or opportunistic behavior (Hendrikse 2003). However, hidden action refers specifically to the information asymmetry in the contractual relationship (Arrow 1968, Eisenhardt 1989), whereas opportunistic behavior is an inclination in the human (Jensen 1994)[5]. Moral hazard on the other hand, is the combination of these two terms together with the above described conflict of interest (Hendrikse 2003) and refers to the actual actions taken by the agent once the contract has been entered.

The imperfect contract (Prendergast 1999) in the agency relationship makes the observation of true effort very difficult and as such causes the hidden action problem of asymmetric information (Arrow 1968). This inherently leads to an encouragement of moral hazard (Perrow 1986), where the principal will not know whether the agent has acted in accordance to the principal's interest (Shapiro 2005, Hendrikse 2003). It is therefore to be expected that the self-interested agent will shirk on the contract and carry out actions that are not in the interest of the principal (Hendrikse 2003, Eisenhardt 1989).

Although moral hazard presumably is present in all types of relationships, Boyd et al. (1998) researched the possibilities for moral hazard in banking and found two possible areas of moral hazard. One is the relationship between the bank and their borrowers, the other is the moral hazard created from the cushion of the deposit insurance (John et al. 2000, Demsetz et al. 1997), as the deposit insurance reduces the interest from monitoring whilst simultaneously increasing the incentives for risk taking (Macey et al. 2003). Moral hazard is the exact problem that AT is designed to address through various mechanisms – most notable incentives and monitoring (Eisenhardt 1989).

7.1.2.3 The Creation of Agency Costs

The problem of moral hazard leads to costs for the firm associated with administering the contract, hereunder contracting, transaction, moral hazard and information costs – namely agency costs (Gomez-Mejia et al. 2005, Jensen et al. 1985). The level of the costs will depend on the ability of the principal to find an appropriate solution to reducing information asymmetries through measuring managerial performance, determining effective incentives, as well as implementing rules and

[5] Adverse Selection follows the same patterns as Moral Hazard, but deals with the selection of contracts and staff, and are more focused on pre-contractual areas of opportunistic behavior. Although a central part of agency theory, this section has less relevance for this thesis, and has therefore been described in the appendix 17.2.

regulations to limit unwanted behavior or moral hazard (Brickley et al. 1994, Gomez-Meija et al. 2005). Whilst achieving zero agency costs is practically impossible, as the marginal costs of doing so will eventually be higher than the accompanying benefits of perfect alignment (Jensen et al. 1976), monitoring and incentives intends to minimize them (Eisenhardt 1989, Jensen et al. 1985, Shapiro 2005)[6].

7.1.2.4 Monitoring and Incentives as Prescriptions of Agency Theory

The proposed mechanisms for curbing moral hazard are generally monitoring and incentive contracts (Jensen 1993, Daily et al. 2003), where the board of directors (BOD) comprises the main monitoring mechanism. According to AT, they should act on behalf of the shareholders and hold foremost responsibility for the functioning of the firm, with the goal of reducing information asymmetries through ratifying and monitoring important decisions (Fama et al. 1983, Heath 2009, Shapiro 2005, Fama 1980). The BOD is therefore also responsible for controlling resource allocation and accompanying risks (Tufano 1998).

The monitoring system provides an ex post control system (Jensen et al. 1976, Fama et al. 1983), where the extent of the monitoring in place will depend on the proclivities of management for opportunistic behavior and the costs and benefits related to its implementation (Jensen et al. 1976). The more effective the board is in obtaining information about agent behavior, the more likely the manager will be to act in the interest of the shareholder, and therefore fewer resources need be spent on aligning the interests through incentives (Hermalin et al. 1988, Eisenhardt 1989).

Besides the BOD, incentives can be similarly employed to limit moral hazard on the part of the manager. The conflict of interest addressed earlier is in part caused by differing risk preferences, where managers are risk averse and shareholders risk-neutral. This often leads to contrasting predilections, where the manager will make less risky investments than preferred by the shareholders (Shapiro 2005, Eisenhardt 1989). This conflict can be mitigated by introducing a compensation scheme, in the form of a risk premium (Prendergast 1999), where rewards are based on outcome, commonly stock price (Hendrikse 2003). By tying part of managerial wealth to shareholder wealth, the incentive system can be utilized to create alignment between management and shareholders (Lan et al. 2010, Aulakh et al. 2000, Stroh et al. 1996).

[6] Empirically speaking the possibility to accurately measure agency costs is near impossible, but the conceptual presence of these costs is what leads to the prescribed measures (Daily et al. 2003).

In this way, the wage becomes a bribe and a condition from the principal to the agent in order to induce certain behavior aligned with the principal's interest (Prendergast 1999). However, a noted problem with performance based pay is that *'dysfunctional behavioral responses where agents emphasize only those aspects of performance that are rewarded'* is present (Prendergast 1999, p. 8). As such, just as the principal may learn which incentives work the best, the agent learns which aspects of performance the principal is interested in and primarily seeks to optimize these exact aspects (Shapiro 2005, Brickley et al. 1994). The consequence becomes a system where everything is driven towards meeting measurable targets and not necessarily towards creating real value and growth (Porter 1992).

A summation of the modern corporation in the eyes of AT, the effects and the prescriptions can be made as follows;

- → The Modern Corporation = The Separation of Ownership & Control and a Nexus of Contracts, where shareholders are the owners.
- → The Effect of Separation of Ownership and Control = Conflict of Interest, Moral Hazard & Agency Costs.
- → The Prescriptions of Control = Monitoring & Incentives.

Upon understanding AT, its assumptions and focus on shareholder primacy, it is relevant to also critically question these. Particularly, how do the AT prescriptions impact the risk-taking in banking?

7.2 The Consequence of Risk Taking

Aligning managerial interests with that of shareholders may seemingly make sense. However the usage of outcome based incentives packages and a shareholder aligned board as prescribed by AT may lead to increased risk levels (John et al. 2000). In order to comprehend why, one has to understand the consequence of the diverging risk interests between shareholders and debtholders. Here option theory can provide a relevant reasoning.

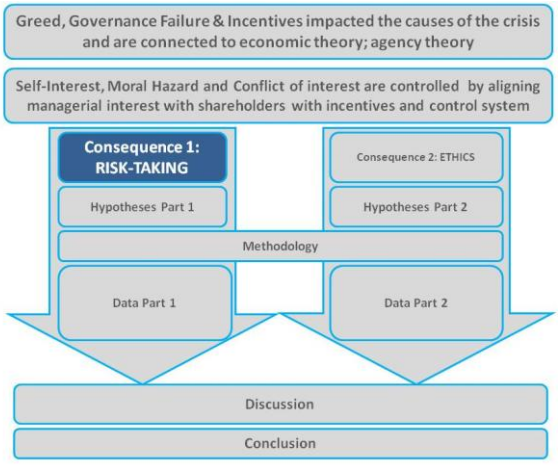

Figure 3 - Structure

7.2.1 Equity as a call option

According to option theory, equity can be viewed as a call option on the firm's assets (Brealey et al.

2008), where debtholders are the holders of the firm's assets until the value of these supersede the value of the debt. This implies that shareholders have limited downside potential, and their payoffs are therefore similar to a call option.

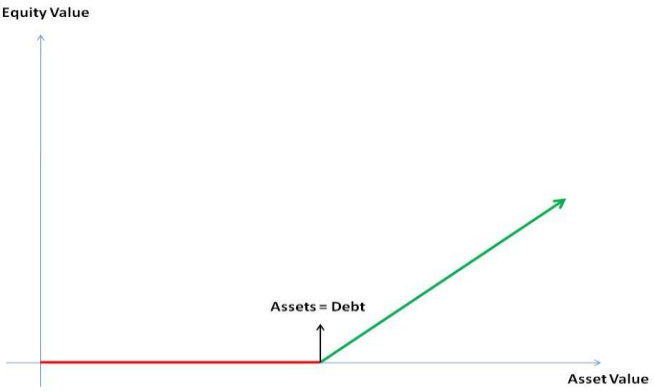

Figure 4 - Equity as a Call Option

Due to the provision of limited liability for shareholders, asset values under the exercise price (the face value of debt) are irrelevant. Consequentially higher volatility of the asset base in the form of higher risk increases the probability of the shareholder's call option being "in the money", whilst less volatility and less risk increases the possibility of repayment to the debtholders. This means that when risk is increased the value of the debt falls, whilst the value of the stocks increases, as such shareholders prefer a higher amount of volatility than debtholders (Rajan 2005, Jorion 2007).
In this way, a shareholder aligned manager can increase value to shareholders by transferring wealth from the debtholders to the shareholders through taking on more risk (Jensen et al. 1976).

7.2.2 Risk and Banking

The willingness on the part of shareholders to increase risk is further exacerbated within banks, as the downside potential is insured through the deposit insurance (DI) (Boyd et al. 1998, Alexandre et al. 2009). The reason is that the bank shareholders in effect have a subsidy which increases in value with leverage and bank risk (John et al. 1991). This problem is further exacerbated, due to the fact that the presence of the DI decreases the interest of bondholders and depositors in monitoring the bank, thereby easing the possibility of expropriation at the expense of tax payers and depositors (Demsetz et al. 1997, Hellman et al. 2000). The explanation for the limited interest in monitoring by the debtholders is that they in effect hold a put option on their deposits (John et al. 1991). In a normal company, when the value of the assets decrease so does the value of the debt, but in a bank it is mainly deposits, which are insured. Therefore the value of the deposits is safe and should the

asset value fall below the value of the deposits, the depositors can exercise their put option and sell the bank assets to the government for the value of their deposits.

An additional aspect of banking that can potentially force management to take on more risk is the presence of capital requirements[7] (John et al. 2000), as they reserve a certain portion of funds, management must pursue higher risk strategies in order to cover the opportunity cost of the idle capital (ibid).

The concept of "too big to fail" have also been argued to lead to higher risk levels as large banks, understanding their importance for financial stability, know that in the case of financial difficulty, they will be "bailed" out to avoid excessive financial instability (Hellman et al. 2000, Battilossi 2009). As such due to the systemic risk posed by banking the implicit assurance that they will be bailed-out (in most cases) exacerbates the incentives for risk-taking as shareholders will not bear the majority of the costs in case of failure (BIS 2006, Alexander 2006).

As such the concept of shareholder primacy as promoted by agency theory may indeed conflict with the role of the banks. As Adams et al. (2003) argue the stakeholders of a bank extends well beyond the shareholder, as the depositors, creditors and the government all have an interest in the well-being of the bank as an integral part of the financial system. The shareholder wealth maximization model is therefore even more questionable in the world of banking as it conflicts with a supposedly inherent "stakeholder" view and may lead to increased risk-taking (Macey et al. 2003).

7.2.3 Risk and the Board of Directors

The BOD act on behalf of shareholder in AT and the BOD therefore forms a central role in the remuneration of management, the ratification, controlling and monitoring of the firm. This is evident both in the practical CG literature (OECD 2004) as well as in the academic literature (Shapiro 2005, Fama et al. 1983). Although the BOD may have additional roles (advising and servicing) (Brennan 2006), within AT, the monitoring and controlling role is by far the most important one, and therefore much of the AT literature sees the BOD as the main information system controlling executive behavior on behalf of shareholders (Eisenhardt 1989, Jensen et al. 1985), and it is therefore also their role to manage the risk profile of the company (BIS 2006, DGCG 2005,§VII).

Given the "risk management" role of the BOD, the composition of the BOD consequentially

[7] Capital requirements are present due to the fact that governments may be concerned with the negative externalities of bank failure (Rime 2001)

becomes interesting, as Jensen (1993) argues that the composition of the board is crucial for effective monitoring. He is supported by other AT scholars, who despite the fact that a theoretical optimum of board composition does hardly exist, provided information on what constitutes a well-functioning and effective CG system, e.g. size, independence and expertise (e.g. Linck et al. 2008, De Zoort et al. 2001).

An additional role of the BOD is setting the compensation of managers. Here Jensen et al. (2010) argues for the usage of incentive pay in the form of tying managerial wealth to shareholder wealth through stock options or share programs. But with the relationship between shareholder primacy and risk-taking, the usage of incentive pay in the form of aligning managerial interests with that of shareholders will lead to higher levels of risk (Miller et al. 2002). Demsetz et al. (1997) find a significant positive relationship between managerial equity holdings and risk taking for banks with low franchise value. Banks with high franchise values are found to take on less risk, due to the fact that the costs associated with default and financial difficulties are increased for shareholders. The main concern of incentive packages should therefore be the tradeoff between the optimal package and optimal risk levels (Miller et al. 2002).

As the prescriptions on composition and incentives are founded in AT and its expectance that the BOD uphold a fiduciary duty to shareholders, it is anticipated that a board which adheres to these prescriptions will be more inclined to support risky projects and utilize incentive pay (Alexandre et al. 2009).

Besides questioning the side effect of risk, AT is also questioned for its validity (Daily et al. 2003). Some further argue that AT is unethical and consequentially has a negative impact on students of this theory. As such, it is interesting to understand how and why AT may be unethical?

7.3 The Consequence of Morality & Ethics

7.3.1 A Humanistic Critique of Agency Theory

Shapiro (2005) argues that the AT perspective is a '*peculiar way of understanding the social reality'* (p.2), that the assumptions therein are detached from reality and purely made in order for the model to be workable mathematically (Mara 1985, McCracken et al. 1995, Hartman 2008a, 2008b, Surendra 2010). This leads to an oversimplified way of characterizing and solving problems in the organizational setting that may be potentially dangerous (Kanter 2005, Perrow 1986).

The theory wholeheartedly disregards social life and views the social dynamic in a highly conservative top-down approach (Shapiro 2005, Perrow 1986, Walsh et al. 2003, Donaldson 1990). Friedman (1970) however provides a sharp dismissal of this criticism by arguing that the only social responsibility of the firm is to maximize shareholder value whilst conforming to the rules of society, as this form of maximization will in turn lead to greater social welfare and prosperity.

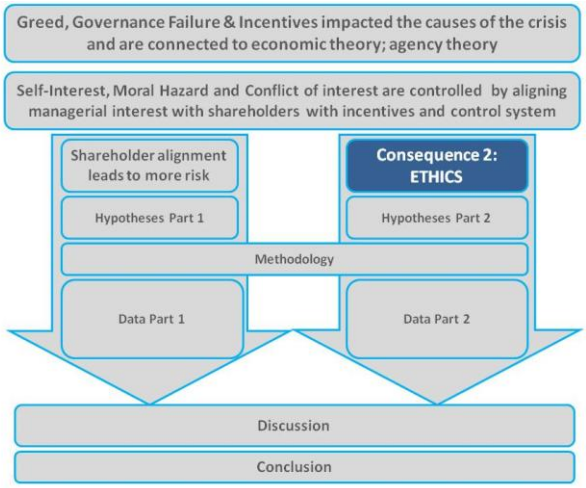

Figure 5 - Structure

The "unrealistic" and "faulty" assumptions combined with the shareholder primacy view may make people more immoral and prone to sketchy behavior (e.g. Ghoshal 2005, Brennan 1994), as the excessive focus on measurable outcomes and stock prices might result in the manager pursuing amoral or possibly even illegal activities in order to inflate and manage the measures (Shapiro 2005). Shapiro (2005) continues by arguing that the inherent distrust evident in AT has led to a dehumanization of the agent, where the intrinsic motivations are ruthlessly replaced with a rational calculation of the value of consequences and reduced the firm to a dyadic contract between individuals (Ghoshal 2005, McCracken et al. 1995). This has been complemented by the development of a system based on formal rules which have crowded out norms and moral principles previously found in a relational society (Coleman 1993).

Heath (2009) posits that AT creates an obligation to the principal and therein a moral duty to serve their interests in the best possible way. Since the maximization of profits and share price is in the principal's interest and is socially accepted, these goals become an obligation for the agent to pursue. Heath (2009) and Brennan (1994) question the theory's disregard for altruistic behavior as well as the continuous distrust and suspicion derived from opportunistic inclinations. Brennan (1994) further argues that more things are at stake for humans than the pure self-interest and that humans would rather seek a virtuous life of morally balanced actions (Aristotle 2004).

Whether AT creates immoral actors is hard to solidify, though the nature of the theory may make this self-fulfilling. As more companies adopted the agency logic, the logic became institutionally dominant (Zajac et al. 2004), which meant that with the growing expectation of people behaving with opportunism actually led to people behaving opportunistically (Heath 2009). Perrow (1986) argues along the same lines, postulating that the continued focus on individual rewards will further

exacerbate and strengthen the focus on self-interested behavior, regardless of whether humans are inherently self interested. Furthermore, the lack of ethics that AT supposedly promotes should be seen as a lack of other-serving capability, leading managers to ruthlessly pursue measured targets on behalf of shareholders at the expense of society (Perrow 1986).

7.3.2 The Adverse Impact of Agency Theory on Student Moral Philosophies

One of the strongest attacks on AT was made by Sumantra Ghoshal in his seminal posthumous article from 2005, "Bad Management Theories Are Destroying Good Management Practices". Here, he accuses business schools as having had damaging effects on student attitudes towards moral responsibility by teaching amoral theories such as AT. In the process of making business studies a science, all sense of morality and ethical behavior is said to have been removed from the developed theories and instead been replaced with a pessimistic view of human behavior that does not reflect reality (Kanter 2005, Ghoshal 2005). The continual usage of these theories has helped legitimize immoral actions and crowded out ethics and virtues in decision-making (Mitroff 2004), and the persistent teaching and implementation of the prescriptions have allowed them to become self-fulfilling (Kanter 2005, Pfeffer 2005).

Ghoshal's (2005) main concern was the effect that uncritically teaching these negative and amoral theories has had on business students, given the behavioral effects of education (Albert et al. 2010, Rose et al. 2007). Thereby the solid foothold of agency logic in the business school curricula may have a pronounced effect on the actions of students as future managers (Tourish et al. 2010). Ford et al. (2010) finds a strong possibility that the norms of textbook managerial education may have impacted postgraduate student behavior. In contrast, Neubaum et al. (2009) found that business student moral philosophies were no different from that of other students, and that these did not change over the course of their business education. However, their findings do show that there is a stronger tendency amongst business students to have a stronger profit orientation than their non-business peers. This is supported in a 2002 study (Pfeffer 2005) which found that the student focus on shareholder wealth maximization increased during the course of their business education. However a repeat of the study in 2008 showed that whilst the importance of shareholder wealth maximization had decreased slightly in regards for more socially oriented purposes, it still remained a solid first priority (Aspen Institute 2009). The study further found that although students expect clashes of interest with their own personal values, less than 45% are willing to speak up and object, but show willingness to advocate for alternative courses of action. Marwell et al. (1981) does find

that students of economics have a higher propensity to free ride than other test groups. Additionally, they find that economics students generally value the concept of fairness lower. Although, they do not necessarily prove that students of economics become less preoccupied with morality and fairness during their time of studying, they do provide some indications that this may be the case. Borkowski et al. (1998) sums up the findings in their meta-study of students' ethical beliefs, by arguing that the results have been mixed and no consistent conclusion can be drawn. The true impact of education may therefore be hard to measure (Watson 2006), as the problem may be more related to self-selection of students rather than the business school education (Pfeffer 2005).

Regardless, Ghoshal (2005) and Mitroff (2004) question why this fatalistic perspective is still being taught, when Michael Jensen has admitted that the AT proposed incentive system of stock options have failed to work (Ghoshal 2005), and when the underlying assumptions have continually been refuted (Mitroff 2004). Yet the lack of supporting evidence for the Chicago School agenda has still not led business schools to search actively for a new paradigm (Shareef 2007).

Heath (2009) concludes that AT has little more usage than being an example of what will happen if all morality was removed from society, and society plummets into continual opportunistic behavior and moral hazard.

7.3.3 The Incapability of Agency Theory as a Tool for Analysis

Another common critique of AT is the incapability of the prescriptions in curbing managerial opportunistic behavior and improving performance (Daily et al. 2003). The fact is that amongst the empirical tests of AT and performance, no consistent trend can be viewed. This in itself makes AT irrelevant for prescribing tools to control the presumed conflict of interest, yet the logic can be found everywhere (Daily et al. 2003, Zajac et al. 2004). Donaldson (1990) concurs with the fact that AT offers little more than devices from looking at known data patterns, and has no capability in providing future oriented guidance. Rather AT have had an effect on the way the firm and individuals are perceived and thought about, as e.g. the usage of incentive compensation system has become common practice but may have as a consequence that the agent will pursue higher levels of risk, than beneficial (Brennan 1994, Demsetz et al. 1997, Pathan 2009). As such the teachings of AT become best practice and the pursuit of financial success becomes the main corporate value, whilst moral and ethical actions become second-place (Sims et al. 2003).

7.4 Summary & Qualification of Research Question

With a starting point in the causes of the GFC and its relationship with AT, the previous theoretical

background have presented two potential consequences of AT, namely the excessive risk-taking as a result of the shareholder wealth maximization, and the postulations that the prevalence of AT in business research has created immoral students of management.

Whilst the position of AT as the dominant theoretical paradigm for the development of CG codes can hardly be questioned, the potential side effect of the agency theoretical CG mechanisms on risk-taking under the crisis is questionable. This warrants further investigation to understand if the agency theoretical foundation of shareholder alignment actually led to increased risk taking.

In a similar vein as the permeation of AT in the governance literature can scarcely be questioned, the diffusion of AT in the business school curricula is therefore also interesting, as the question arises whether the teachings of AT could have created the greedy manager that ruthlessly pursued profits above the safety and soundness of the financial system.

Based in the theoretically argued potential consequences of AT, this thesis therefore proposes the following two interrelated questions;

Did the agency theory prescriptions of corporate governance and directors' financial literacy impact the risk profile of Scandinavian banks during the Global Financial Crisis? And are there differences in the moral and ethical perceptions of business majors in comparison to other majors?

8 Hypotheses

8.1 Hypotheses on Board of Directors

In order to transform the theoretically grounded research question on AT and risk, this thesis turns to the practical CG literature, as AT is fundamental here.

As the sample investigated consists of Scandinavian banks and relates to the GFC, it seems impertinent to apply the Scandinavian CG codes available prior to the crisis[8] for the formulation of hypotheses. Due to a similar heritage the codes are fundamentally aligned, albeit with some small national differences (NCG

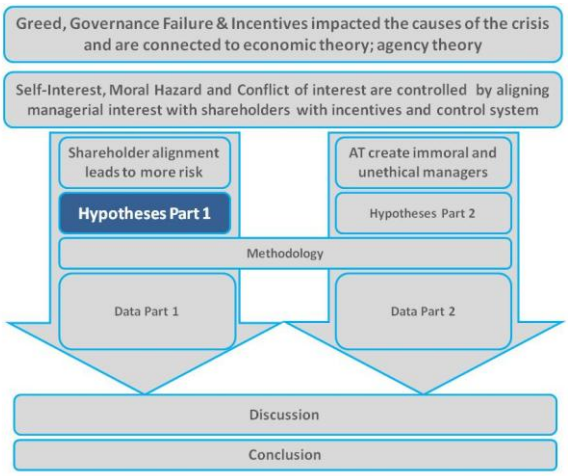

Figure 6 - Structure

[8] The Norway (2007), Denmark (2005), Sweden (2005), OECD (2004) and Basel (2006)

2009). Therefore the creation and testing of hypotheses can be undertaken with little fear of conflicting CG codes. Additionally, since the chosen industry is that of banking the principles for CG by the Basel Committee (BIS 2006) should be consulted, as well as the international guidelines issued by OECD (2004).

Although the Scandinavian model is argued by some to be a more stakeholder oriented CG model (e.g. Thomsen 2008), a linguistic analysis of the available codes shows a clear shareholder primacy, with shareholders being a frequently used word as well as conflict of interest between management and shareholders being the central focus area. As such the relationship to AT can still clearly be seen. Even in the Basel Committee's principles (BIS 2006) where there is focus on the role of banks to society and to depositors, there is evident focus on shareholders, as the goal of CG is still *"to pursue objectives that are in the interest of the company and its shareholders" (p.4)*. That AT is still fundamental in even stakeholder oriented codes is supported by Ciancanelli et al. (2000), who argue in their paper on "Corporate Governance in Banking", that the current CG frameworks assume that all firms, *"conform to the concept of the firm used in AT" (p.2)*.

It should however be noted that whilst a substantial amount of the proposed hypotheses are clearly derived from the AT perspective, some such as gender, nationality and age have less of a foundation in AT. These aspects still however form part of what is commonly connected to risk taking and should therefore similarly be tested.

8.1.1 Independence

One of the most fundamental AT prescriptions with regards to the composition of BODs is the degree of insider vs. outsider directors, who are generally perceived to be independent from the firm and therefore better able to carry out the fiduciary duty to shareholders (Fama et al. 1983, Jensen et al. 1976, Bonazzi et al. 2007). The Nordic codes (NGC 2009) states that *"a majority of the Board members, to be elected by the shareholders have to be independent of the company" (p.8)*.

The rationale for the attention on independence is to ensure that no additional conflict of interest is introduced into the principal-agent relationship (Raheja 2005), as well as to increase the likelihood that corrective action is taken when needed and in the interest of shareholders (Bonazzi et al. 2007). According to Huang (2006) inside directors are more inclined to side with the CEO, which may undermine the effectiveness of monitoring, as insiders, in AT, are expected to be unable to make unbiased decisions (Chhaochharia et al. 2009). Additionally, Raheja (2005) argues that the inclusion of outside directors will help minimize the private benefits to management. The importance of

independence in AT is therefore due to a better ability to monitor management (Huang 2006).
When viewing this in relation to the risk profile of a given company, combined with the fact that the individual director is elected by shareholders, and with a desire to be reelected and sustain his/her reputation will take the shareholders interest (Raheja 2005). As such, a relationship between shareholder primacy and independence is expected and thereby also a higher risk preference.

H1: A positive relationship between the degree independence and riskiness is expected to exist due to stronger alignment with shareholders.

8.1.2 Size

The size of the BOD is another important factor for board effectiveness in AT (e.g. Linck et al. 2008, Mak et al. 2001, Jensen 1993). The optimal size should be a balance between the knowledge and resources gained from a larger board with that of more effective communication and coordination obtained from a smaller board (Andres et al. 2008), as communication costs increase with size (Harris et al. 2008, Lipton et al. 1992). Mak et al. (2001) find that smaller boards are more effective in monitoring the firm due to less free-riding and managerial influence.
Their findings are supported by both Jensen (1993) as well as Smeardon (2004) who argued that an efficient board has 7-8 members. Hermalin et al. (2003) find that a smaller board leads to a better alignment with shareholders, which is more effective in controlling the agency problem.
Practically as well, the focus on smaller boards as being more effective is supported by all of the Scandinavian CG codes, in that the board must be of a size that *"will allow it to employ simple and effective working methods"* (SCGC 2005) and "*allow a constructive debate and an effective decision-making process"* (DCGC 2005).
When relating BOD size to the riskiness of the individual bank, Pathan (2009) finds, in his sample of American bank holding companies, that there is a positive relationship between smaller boards and risk-taking due to a better alignment with shareholders. It is therefore expected as well that a larger board will be less inclined to take risks as it is more easily controlled by the risk-averse manager and less aligned with shareholders (Raheja 2005). Consequentially;

H2: A negative relationship between board size and risk is expected due to less alignment with shareholders and more free-riding by directors.

8.1.3 Busyness of Directors

All three Scandinavian CG codes, as well as the Basel Committee highlight the relevance of having sufficient time for the duty of being a director (DCGC 2005, SCGC 2005, NCGC 2007, BIS 2006).

The Danish CG Codes are more specific with regards to the number of positions held simultaneously, as they recommend that "*a member of a supervisory board…hold not more than three ordinary directorships or one chairmanship and one ordinary directorship" (DCGC 2005, p.7).* The reasoning for having a limited number of directorships should be understood through the fact that board members with many commitments to other boards will be subject to stronger influences by the CEO, due to their limited time to gather "reliable" information about the company (Jensen 1993). Core et al. (1999) and Lipton et al. (1992) support this by finding that directors holding numerous positions are less capable of monitoring the firm on behalf of shareholders, as the CEO will have too much power (Jensen 1983). In fact, Jiroporn et al. (2008) argue that directors holding a large number of board positions may indeed exacerbate agency costs as opposed to diminish them.

Another strand of research, than the introductory busyness argument, that is relevant to be aware of is the reputation strand (Chen 2008). This strand contends that numerous board positions should be seen as a sign of the ability of a director, as Ferris et al. (2001) argue in line with Fama (1980) and Fama et al. (1983) that directors of successful firms are more attractive in the managerial labor market and therefore tend to hold multiple directorships as a sign of their competence (Perry et al. 2005). Their competence will then accordingly help reduce the agency costs of the firm as they are more capable of monitoring and advising the management (Ahn et al. 2010).

However, the view of Jensen (1993) is that an important part of AT and CG is to limit the managerial discretion in decision making. This combined with the focus of the practical CG codes make the busyness strand the main point of interest. It can therefore be argued with regards to risk that a busy director will be less capable of limiting and monitoring managerial discretion, thereby reducing the shareholder primacy, and therefore take on less risk. As such;

H3: A positive relationship between the number of directors holding less than 3 simultaneous board positions and risk is expected due better oversight possibilities.

8.1.4 Knowledge & Expertise

Throughout the literature there is broad agreement that the directors on the BOD should possess the relevant knowledge needed to carry out their duty. The Danish CG Codes state that '*supervisory board candidates…[must]…possess relevant and necessary knowledge and professional experience in relation to the requirements of the company, including the necessary international background and experience' (DCGC 2005, p.6).* The Basel Committee (BIS 2006) recommends along similar lines that '*board members should be qualified for their positions, have a clear understanding of their role in corporate governance and be able to exercise sound*

judgment about the affairs of the bank' (p.6). Yet despite the obvious concurrence that knowledgeable members are needed on the BOD, few articles directly investigate the relationship (see e.g. De Zoort 1998, 2001), and no articles assess the relationship with risk-taking. The concept of knowledge on BODs is therefore still largely a black box.

Shapiro (2005) notes from an AT perspective that once the principal has hired an agent as an expert, this agent will have the informational upper-hand, and therefore a capable principal is needed in order to control the information asymmetry (Arrow 1968). Jensen (1993) and Fama et al. (1983) therefore argue that the board needs expertise in order to provide relevant input into the decision making. Although this can help reduce the agency costs, financial knowledge is generally missing on BODs (Perel 2003).

The relevance of industry and firm knowledge can therefore not be underestimated as it is especially crucial with regards to resource distribution, hereunder in the understanding of proposed projects (e.g. loans and special purpose vehicles) (Raheja 2005, DCGC 2005). Here the ability of an "unknowledgeable" director to effectively monitor and advice is reduced (Huang 2006, Abdullah 2006). As such, the prescriptions of AT include the delegation of decision rights to the actors with the most knowledge (Kanter 2005).

Within the financial sector, the rapid innovation in financial instruments led to the financial sector growing in complexity (Jorion 2007) and therefore according to Adams et al. (2003) and Linck et al. (2008) there was a growing need for knowledgeable directors to ensure effective governance (Hall et al. 2005). Lars Nørby[9] (in Beckett et al. 2011) as well as a recent report from the Senior Supervisors Group (SSG 2009) therefore argue that part of the governance problems in relation to the GFC has been a lack of knowledgeable people, who could assess risk appropriately (Mongiardino 2010). Their views are supported by De Zoort (2001), who in his study of CG experience and performance, argue that financial literacy and board experience are needed by the BOD, as otherwise the CG of the bank will be weakened.

The importance of assessing financial literacy can also be seen from the perspective that directors with high levels of financial literacy will have an assumed prior exposure to AT and therefore potentially be more inclined to utilize the prescriptions. Wilson et al. (2000) argue that previous

[9] Lars Nørby was chair of the Danish committee of good corporate governance back in 2002, which created the corporate governance codes of 2005.

exposure to concepts, knowledge or experiences increases the cognitive understanding, which heightens the probability of application (Albert et al. 2010, Dyck et al. 2001). Mitchell (1982) further argues that the retrieval of information is highly influenced by context, therefore given that the usage of variable pay packages constitute a best practice, then we will be more likely to continually apply and remember the key learnings of AT. As such, it can additionally be argued that the predominance of AT within financial education and governance practice means that expert directors will be familiar with the AT best practice and act accordingly (Surendra 2010, Weaver 2006).

Therefore one should expect that knowledgeable directors to a larger degree manage the firm on behalf of shareholders by lowering monitoring costs (Raheja 2005). Consequentially, it can be hypothesized that;

H4: A positive relationship exists between risk and director knowledge due to better alignment with shareholders.

H4a: A positive relationship exists between risk and director education due to better alignment with shareholders.

H4b: A positive relationship exists between risk and director work experience due to better alignment with shareholders.

Combined with the prior argumentation on the reputation hypotheses (Fama et al. 1983) it can also be expected that directors with larger board experience will be better at monitoring and controlling the firm on behalf of shareholders, and as such it can be hypothesized that;

H4c: A positive relationship between risk and director board experience is expected to exist due to lower monitoring costs and better advisory possibilities.

8.1.5 Board Shareholding

As the BOD is appointed by shareholders, it may be in the interest of shareholders to ensure increased alignment through the usage of total or partial stock based remuneration, or a general requirement for directors to hold company shares (Jensen 1993). This will increase the alignment with shareholders, and thereby lead to higher benefits of monitoring as the board will have vested

interest in the company's profitability (Raheja 2005), leading to a more proactive board in mitigating the agency problem (Hambrick 2000, Abdullah 2006).

When viewing the practice of stock based remuneration in relation to the risk profile of the individual bank, the stronger shareholder alignment leads to a larger risk-willingness (Demsetz et al. 1997). As such it can be hypothesized that;

H5: A positive relationship between board shareholding and risk is expected due to a stronger alignment with shareholders.

8.1.6 Age

The general perception of the BOD is that of white males with a certain age and background (Rose in Beckett et al. 2011). The reason for generally hiring older directors lie in their experiences, from which they can draw (Cochran et al. 1984), but also due to the fact that older directors will spend more time ensuring that the information with which they work is correct (Simcock et al. 2006). Age in itself is not something that is commonly referred to in AT (Walt et al. 2003), but it can be an important influence on risk taking. Rhodes et al. (2011) and Bellante et al. (2004) find for example that older people take less risk, due to the reduced time for recovering their losses (Anbar et al. 2010). It is therefore hypothesized that;

H6: A negative relationship exists between director age and risk taking due to greater risk aversion.

8.1.7 Gender

Another aspect with is not part of the general proposition of AT, but still relevant for risk-taking, is gender, which is a much debated topic in Scandinavian CG (Langer 2011, DI 2011), as Norway and Sweden (Jensen 2011) have taken legal action and introduced a law specifying that at least 40% of the seats on BOD be fulfilled by women (Nyhus 2010, Klinken 2011). The results on the influence of female directors on performance are mixed with arguments for better monitoring versus undermining of board credibility if it is a legal requirement (Lönnqvist et al. 2007, Adams et al. 2009). However with regards to risk, Anbar et al. (2010) argue that women are more risk averse due to a lower degree of sensation seeking. Brooks et al. (2009) and Rhodes et al. (2011) support the argument in their studies of gender and risk aversion. Within banking, Bellucci et al. (2010) find similar results, namely that female loan officers are more risk averse and restrict credit availability more than their male counterparties. It can therefore be hypothesized that:

H7: A negative relationship exists between percentage of female directors and risk taking due to greater risk aversion.

8.1.8 Director Culture

The importance of culture for risk, albeit not part of AT, should not be neglected. Most well-known within this sphere is the study carried out from 1967-1973 by Hofstede (1984), which despite criticism remains one of the most important studies for the cross-cultural research (Tung et al. 2010). Amongst Hofstede's cultural dimensions two are of specific relevance with regards to risk taking; uncertainty avoidance and individualism vs. collectivism (Rapp et al. 2011). Uncertainty avoidance deals with the individuals' preference for risk, as high uncertainty avoidance cultures will be less inclined to take on risk and prefer certain outcomes (Clements et al. 2009, Hofstede 1984). Individualism vs. collectivism on the other hand deals with the degree of societal and group concern (ibid).

With regards to risk, individualistic cultures are more focused on individual achievement and can therefore be expected to be more aligned with the shareholder primacy (Lan et al. 2010, Goktan et al. 2011). It is therefore hypothesized that:

H8: A positive relationship exists between the degree of individualism on the board of directors and risk taking due to stronger shareholder primacy.

When analyzing uncertainty avoidance and risk, Bontempo et al. (1997) find a positive relationship between financial risk taking and low uncertainty avoidance cultures. As such, it can be expected that directors with lower degrees of uncertainty avoidance will be more positively inclined to take on risk, therefore;

H9: A negative relationship exists between the degree of uncertainty avoidance on the board of directors and risk taking due to larger risk willingness.

8.2 Hypothesis on Incentives

The role of the BOD extends beyond monitoring and controlling management, as it is also responsible for executive incentives, and these should therefore also be noted in the hypotheses. The role is well noted in the practical CG literature (NCG 2009, BIS 2006, OECD 2004), where according to e.g. the OECD guidelines (2004) the board is responsible for ensuring that the compensation of executives is aligned with the *"long term interests of the company and its shareholders" (p.24)*. The Basel principles (BIS 2006) also have a strong focus on the role of incentives with regards

to the shareholders by arguing that good CG provides proper incentives for management to pursue the interests of the company and its shareholders. However they also address the potential relationship between compensation and risk-taking by arguing that *"[incentives should be] designed to enhance long-term corporate value. In order to avoid incentives being created for excessive risk-taking" (p.15).*

Before the entrance of AT in CG most firms were managerially controlled and remuneration was mainly used to attract talent (Zajac et al. 2004). But with the introduction of AT in CG the focus is now on using it as a way of aligning the interest between management and shareholders (Prendergast 1999, Jensen et al. 1976, Fama et al. 1983).

Commonly remuneration consists of both a fixed (salary) and a variable component (bonuses, shares and options), and it is the latter that receives the most attention in AT. As Jensen argues (1993, 2010), using variable incentive pay is important for the creation of alignment. Here the utilization of stock options and shares are a crucial step in the right direction in creating more optimal management of the firm. Without outcome based remuneration, the risk-averse manager's compensation is solely based on the fixed salary, which causes the manager mainly to be concerned with keeping the company running. This is done by lowering the likelihood of bankruptcy by increasing the distance to default (Amihud et al. 1981), through investing in safe projects, which is not in the interest of shareholders (section 7.2.1) (Hendrikse 2003). However when the alignment of interest between management and shareholders occurs, through shares or stock options (Jensen et al. 1976), it gives the manager an incentive to maximize the value to shareholders and thereby leads the manager to choose more risky projects, as supported by Anderson et al. (2000) and Jeitschko et al. (2005). Resultantly, the usage of incentive programs leads to a stronger alignment with shareholders, where management decisions end up predominantly serving shareholders (Bonazzi et al. 2007, Porter 1992). As such an "adverse" effect of the pay performance contracts are that the agent will solely emphasize the part of the contract being rewarded (Prendergast 1999) and as John et al. (2000) argue, any given incentive package is in reality a pre-commitment to a certain level of risk.

Adams et al. (2003) argue that the usage of stock options may indeed be relevant for most companies that do not pose systemic risk to the same extent as banks. However, as banks play an important role in society, the usage of stock options can be problematic as it emphasizes a certain stakeholder group (shareholders) at the expense of others (depositors, creditors and government) and encourages risk taking on their behalf (Demsetz et al. 1997). Their argumentation is supported

by Seok (2004) and John et al. (2008) who find that in shareholder controlled banks, the stronger alignment leads to a usage of more risky assets.

As such when relating stock programs to risk, it is expected that the agent will seek to optimize the share price through increasing the risk base (Jorion 2007). It can therefore be hypothesized that;

H10: A positive relationship exists between risk and usage of stock based compensation plans due to stronger shareholder alignment and primacy.

8.3 Hypotheses Financial Knowledge & Immoral Behavior

The last hypotheses relate to the second research question, which has already been thoroughly qualified in the theoretical background. Therefore the following will only summarize the main points with regards to the critique of the human assumptions and the morality in AT.

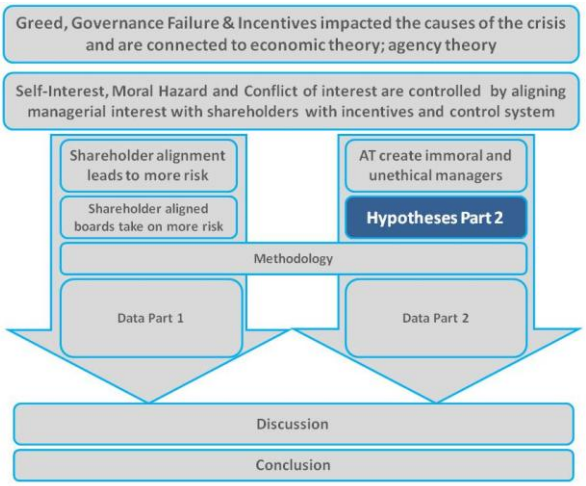

Figure 7 - Structure

A key tenet of Ghoshal's 2005 article was the influence on students from teaching supposedly immoral theories such as AT. Mitroff (2004) argued, similarly to Ghoshal (2005), that AT teaches a ruthless approach to life with a complete lack of altruistic behavior. This critique is supported by Tourish et al. (2010), who argues that there is a complete lack of critical reasoning with regards to AT, and that the humanistic assumptions and prescriptions are left unquestioned, which leaves students firmly indoctrinated in the economic assumptions about management (Shareff 2007, Antonacopoulou 2010). The lack of questioning the dominant paradigm has consequentially led to the creation of what Ford et al. (2010) calls a "textbook manager" where students conform to the economic paradigm. Pfeffer (2005) argues that there is support for the fact that being exposed to business school curricula may lead to more selfish behavior, and that these theories may in fact be self-fulfilling. It is therefore hypothesized that;

H11: Business school majors are significantly different from non-business majors in seeing shareholders as the main stakeholder due to the prevalence of shareholder primacy in business school theories.

H12: Business school majors will compared to non-business majors to a larger extent adhere to the humanistic assumptions of economic theory.

H13: Business majors will significantly differ from non-business majors in their perception of ethics and morality.

Now that the hypotheses have been theoretically and practically outlined, it becomes relevant to understand how these will be investigated. Therefore the following section will highlight the methodological considerations of truth and the more practical aspects of research design.

9 Methodology, Epistemology & Ontological Considerations

Founded firmly in a positivistic agenda, AT applies the principles of natural sciences on a social reality (Ghoshal 2005). This means that unless something can be objectified it does not exist (Bryman et al. 2003). The positivistic view of life is common within the economic sphere (Shareff 2007), which means that there is little consideration of "social constructs" as applied by e.g. ethical research (Hartman 2008b). The positivistic agenda is generally curtailed by an objectivistic ontology, where social phenomena are independent from the actors involved (Bryman et al. 2003).

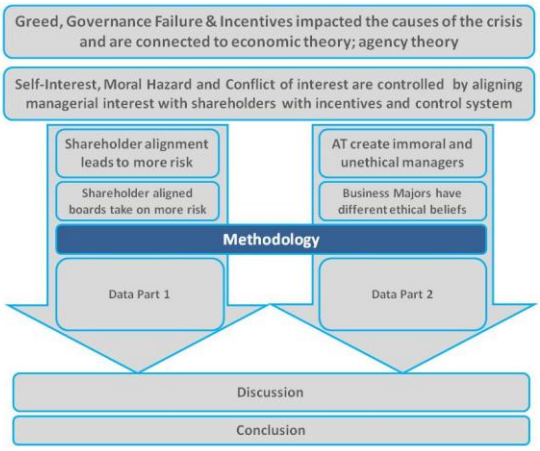

Figure 8 - Structure

Opposing positivism and objectivism is the space of symbolic interactionism, which is this thesis' perspective. This sociological perspective was introduced by Herbert Blumer (Burr 2003) and has three main concepts to be aware of; 1) human beings act towards things on the basis of the meanings that the things have for them, 2) meanings of such things are derived from the social interaction that one has with one's fellows and 3) meanings are handled in, and modified through, an interpretative process (Blumer 1986). Translating these premises into the language of this thesis means that the first premise dictates that e.g. the action of the BOD will be dependent on perception of the manager, e.g. opportunistic and self-serving. This meaning or perception is created through interaction between and amongst BODs, scholars and others (2nd point), whereby the dominating meaning emerges as a paradigm (Zajac et al. 2004). Lastly the application of prescriptions will be made in an interactionistic setting, and as such will be modified and changed to fit the context (3rd point). All three premises are relevant to consider throughout the thesis in the form of a critical approach to "truth" claims. The ontological position commonly accompanying

symbolic interactionism is primarily constructivist in nature, meaning that it stresses the active role of individuals and organizations in the construction of reality (Bryman et. al 2003). This perspective is useful when humans are seen in the context of an environment where perceptions, meanings and habits are derived from previous experience (Benzies et al. 2001).

An obvious question is whether there is an inherent conflict between AT and the fact that this thesis applies a different epistemological starting point?

9.1 Symbolic Interactionism in the Quantitative World of Positivism

It is not believed that the diverging epistemologies create any significant issues, as the different epistemological stance should rather be understood as applying a larger degree of contextual influence to the data set. Additionally, when questioning AT in the way that this thesis does, a symbolic interactionistic perspective might in fact be inherent, as it investigates a descriptive theory of data patterns' transformation to a normative theory of CG, and what these consequences are. As such, the investigation does not preclude a similar epistemological stance as the theory itself.

At the same time as using an interactionistic perspective to investigate a positivistic theory might be perplexing, the utilization of quantitative data might be argued as conflicting with the epistemological stance.

However the usage of quantitative data within symbolic interactionism is still quite accepted (Bryman 1984). As opposed to classical Chicago School of Interactionism as coined by Blumer and Mead, the Kuhnian approach, or so called Iowa school, supports the utilization of quantitative tools (Benzies et al. 2001). Bryman (1984) and Ulmer et al. (2003) for example argue that quantitative tools such as surveys are fine when focusing on public opinion or perceptions, which is the exact goal of this thesis' survey.

What is crucial when applying quantitative data in a symbolic interactionistic research is the acceptance that truth claims are not final (Benzies et al. 2001). Ulmer et al. (2003) argue that concepts such as OLS regressions and multivariate regressions, although shallow, are extremely useful and important for research even within an interactionistic strand of research. Even though quantitative data cannot account for the complexity of social processes that take place on the board of directors, it is generally a larger amount of data, from which certain patterns can be recognized and be generalized with more validity (Bryman et al. 2003). As such, this thesis does not view the conjunction of quantitative data and symbolic interaction as a contradiction.

9.2 A Deductive Research Design for testing Agency Theory

The original idea behind the thesis is a test of the consequences of AT with regards to modern CG as well as for student perceptions. As such it falls natural to apply a deductive research design, where the prescriptions of AT are tested through the creation of a number of hypotheses (Bryman et al. 2003). As opposed to classical deductive research designs the goal is a revision of AT, but rather to understand the consequences of a specific theoretical strand.

The research design is additionally cross-sectional in nature, as data is gathered at one point in time for both subject matters (Bryman et al. 2003, Zikmund 2003). This type of research design builds on the assumption that there is a causal relationship present (Kan et al. 2009), and has the goal of obtaining a significant amount of variance in order to be able to assess the influence of independent variables.

This choice makes sense with regards to the governance of banking, by providing an understanding of what type of governance composition led to the most risk-taking. However, with regards to the ethical perceptions of students, it is fully observed that the research design may indeed not be the most preferably, as a longitudinal study of student perceptions would add more information on the influence of education (Bryman et al. 2003). However due to time limitations, this form of research could not be conducted. Therefore the ultimate results cannot take into account the exogenous factor of self-selection with regards to choice of education (Pfeffer 2005). As such inferences about the results would need further certification about the causality and can only be tentative at best (Bryman et al. 2003).

The choice of a cross-sectional research design is consequentially not without drawbacks, as the internal validity of the design tends to be relatively weak (Bryman et al. 2003, Blumberg et al. 2005). However with regards to both replicability and external validity the research design is solid given that measurements are clearly stated and that research subjects have been chosen randomly. The reliability of a cross-sectional study is dependent on the qualification of the measured constructs (Bryman et al. 2003), which can be reached through ensuring that the measure applied, in reality reflect the construct investigated. The external validity or generalizability is naturally also limited by the sampling space (see also Scandinavian Banks, 10.1).

With the methodology in place, this thesis can now proceed with presenting the measurements utilized.

10 Origin of Data & Measures

10.1 Scandinavian Banks & Governance Data

As highlighted in the research question, the analysis will be based on a sample of listed Scandinavian banks, which ensures a larger sample size. The sampling of the banks was carried out as a judgment sampling (Blumberg et al. 2005, Zikmund 2003), where the sample is chosen on the basis of some pre-specified criteria; listed retail banks. The reason for this type of sampling is made on the premises that more information will be readily available combined with the possibility to utilize share-price movements as a risk measure. Banks classified as investment banks were removed from the sample in order to ensure a higher level of comparability in business models and resultantly generalizability (Bryman et al. 2003). For the same reason the comparability of Nordic CG codes (NCG 2009) removes the issue of conflicting governance models.

The data gathered for the CG related hypotheses was gathered through focusing on the period leading up to the GFC, as such ultimo 2006 was used as a base year for the BOD composition as well as incentive schemes. This was complemented with bank risk data from the period 2007-2008.

The information on the BOD at the sampled banks was initially subtracted from the annual reports. This was then complemented with information from Greens (both paper and online) and www.BiQ.dk, which contains biographies on directors within Danish companies. For Norwegian and Swedish banks the information was gathered from Reuters and Bloomberg, as well as local homepages, www.forvalt.no, and www.informa.no.

Information on the standard deviation (StDev) of total stock returns was gathered from DataStream. The data on loans and deposits were obtained from the banks' annual reports.

10.2 Risk Measure from Stocks & the Loan Deposit Ratio

This thesis uses two different common risk measurements, namely StDev of total stock returns as well as the Loan Deposit (L/D) ratio.

The utilization of StDev of stock returns is a commonly used measure for calculating risk (Jorion 2007, Pathan 2009). Adams et al. (2003) and Leaven et al. (2009) similarly use the StDev of stock returns in calculating the risk of the individual bank. In order to obtain a solid stock return measurement, this thesis uses the total stock return index, due to its inclusion of both stock splits and dividends. Further it is also commonly used in the AT literature for assessing risk (Anderson et al. 2000, Miller et al. 2002). The StDev will be calculated from 2/1-2007 to 31/12-2008, and will be

calculated from daily geometric returns[10].

The second risk measure, L/D Ratio, gains its support not only from the academic literature but also from the GFC where an excessive amount of bad loans made. As Anderson notes (2008) in his book "Cityboy";

"The banks' attempts to make profits by granting loans to American trailer trash who couldn't afford them reminds us that short-term unbridled greed is alive and well living" (p. 389)

The increase of sub-prime loans written is as a way of increasing the volatility of the underlying assets for banks (Saunders et al. 1990), and leads to a shifting in value from debtholders to shareholders as argued previously. Heid et al. (2003) and Hellman et al. (2000) support this notion by arguing that risk is strongly affected by the quality of the loans made by the bank. Practically, Seok (2004) similarly uses the relationship between loans and assets as a proxy for the riskiness of the individual bank in his study of the effect of regulation on bank risk-taking.

As such both the StDev and the L/D Ratio will be used as a proxies for risk-taking in order to increase the validity of the findings, whilst naturally also being relevant with regards to the shareholder primacy expected by AT.

[10] $R_d=\ln(P_t/P_{t-1}$ (Jorion 2007)

10.3 Individual Governance Variables

When reviewing the measures used for the BOD composition, most of these are commonly utilized in the academic literature, and as such a more thorough explanation of the more common measures is reserved for the appendix 17.3, but a summation is presented in the table below.

However two of these require further clarification; knowledge and expertise and share programs.

MEASURE TITLE	DEFINITION
$\sqrt{\sigma^2}$	Standard deviation of stock returns from 1/1/07-31/12/08
Loans/Deposits	Loans at ultimo 2006/Deposits at ultimo 2006
%INDEP	% of independent directors on the board
BOARDSIZE	Total board size – number of board members less employees representation
%LESS3	% of directors who hold less than 3 simultaneous board positions
%KNOWLEDGE	% of knowledgeable directors present (equal weighting of Education, Work Experience and Board Experience)
%EDUCATION	% of Financially educated directors present – At least 5 years
%WORKEX	% of directors with work experience in financial sector or similar - At least 5 years
%BOARDEX	% of directors with board experience - At least 5 years.
%BOARDHOLD	% of shares held by the Board of Directors ultimo 2006
AGE	Average board age
%GENDER	% female directors
BOARDUA	Average uncertainty avoidance amongst board members (Hofstede dimensions)
BOARDINDV	Average individualism amongst board members (Hofstede dimensions)
DummyShares	Dummy variable for option/employee share programs (1 if present)
BANKSIZE	Ln(totalassets) – *(control variable)*

Table 2 - Summary Measures

10.3.1 Knowledge & expertise

In assessing the knowledge of the individual directors this thesis draws upon the study of De Zoort et al. (2001), where they classify director knowledge according to three parameters, namely education, general business and board experience. Amongst these, director education is most common as it figures prominently in institutional calculations on CG strength (Wells 2005), and has also been present in the AT literature e.g. Stroh et al. (1996) as a control variable.

From a methodological perspective, Mitchell (1982) argues that it is necessary to have multiple knowledge measures in order to avoid losing subtleties. Therefore this thesis will consequentially apply three criteria with regards to what constitutes knowledge, which will also allow for a more thorough analysis of the effects of knowledge.

It is however noted that the measurement of knowledge is inherently difficult (Reinhardt et al. 2001), as knowledge may indeed be affected by contextual factors that are beyond measurement (Armstrong et al. 2010). However a relatively the sample size (>380 directors) will alleviate some of these inaccuracies (Bryman et al. 2003).

A minimum threshold is set at 5 years of experience/education in order to ensure that the subjects

have a potentially strong knowledge base, as Albert et al. (2010) argue; long term training with exposed repetition leads to stronger behavioral effects. As such the subjects are codified along three different parameters

Variable	Assessment criteria
EDUCATION	Minimum of 5 years education in the form of e.g. a M.Sc. in Finance, Economics, Accounting or equivalent
WORKEX	Minimum of 5 years work experience in investment or retail banks, pension funds or insurance companies
BOARDEX	Directors with a minimum of 5 years previous experience in board governance.

Table 3 - Knowledge Measures

The codification was carried out by initially assigning each director a value of either 1 or 0 for fulfilling the criteria or not. This means that each director could potentially score a total of 3. This score was summed across the board and divided by 3, and then divided once more by the board size excluding employees. Although it could be argued that some types of "knowledge" are more important than others, no basis for a weighted average could be ascertained and therefore an equal weighting is applied for all knowledge variables. Therefore:

$$KNOWLEDGE = \left(\frac{\left(\frac{\sum(EDUCATION + WORKEX + BOARDEX)}{3} \right)}{(\#MEMBERS - EMPLOYEES)} \right) * 100 \text{ (equation 1)}$$

$$EDUCATION = \left(\frac{\sum(EDUCATION)}{(\#MEMBERS - EMPLOYEES)} \right) * 100, WORKEX = \left(\frac{\sum(WORKEX)}{(\#MEMBERS - EMPLOYEES)} \right) * 100, BOARDEX = \left(\frac{\sum(BOARDEX)}{(\#MEMBERS - EMPLOYEES)} \right) * 100, \text{(equation 2,3 \& 4)}$$

10.3.2 Share and option programs

The share and option programs will be codified using a dummy variable of 1 for presence. The choice of a dummy variable obviously has the drawback that it is not capable of assessing the size of the implemented plan, just its presence. However the usage of dummy variables was found to be necessary as the level of disclosure in Scandinavian banks is not transparent enough to accurately assess the level of stock/option based compensation. Despite this drawback, Davis et al. (2007) and Battilossi (2009) utilize a dummy variable in their regression models on mutual fund performance and banking crises respectively. The same utilization of a dummy variable for insider holdings is done by Demsetz et al. (1997) in their study of agency problems in banking. As such, it is still believed that the dummy variable will be capable of revealing significant information with regards to the presence of share/option programs in banks.

10.4 Model

In line with Pathan (2009), Saunders et al. (1990) and Demsetz et al. (1997), this thesis will model risk according to a linear regression, where the relationship between independent and dependent

variables are assessed, as such an ordinary least squares regression model will be applied (Canavos et al. 1999). Due to the fact that there are two different risk measures and two different knowledge breakdowns this thesis will present 4 different models.

$$MODEL\ 1: \sqrt{\sigma^2} = \propto + \beta_1 \cdot (\%INDEP) - \beta_2 \cdot (BOARDSIZE) + \beta_3 \cdot (\%LESS3) + \beta_4 \cdot (\%KNOWLEDGE) + \beta_5 \cdot (\%BOARDHOLD) - \beta_6 \cdot (AGE) - \beta_7 \cdot (\%FEMALE) - \beta_8 \cdot (BOARDUA) + \beta_9 \cdot (BOARDINDV) + \beta_{10} \cdot DummyShares + \beta_{11} \cdot (BANKSIZE),$$ (equation 5)

$$MODEL\ 2: \sqrt{\sigma^2} = \propto + \beta_1 \cdot (\%INDEP) - \beta_2 \cdot (BOARDSIZE) + \beta_3 \cdot (\%LESS3) + \beta_4 \cdot (\%EDUCATION) + \beta_5 \cdot (\%WORKEX) + \beta_6 \cdot (\%BOARDEX) + \beta_7 \cdot (\%BOARDHOLD) - \beta_8 \cdot (AGE) - \beta_9 \cdot (\%FEMALE) - \beta_{10} \cdot (BOARDUA) + \beta_{11} \cdot (BOARDINDV) + \beta_{12} \cdot DummyShares + \beta_{13} \cdot (BANKSIZE),$$ (equation 6)

$$MODEL\ 3: \frac{Loans}{Deposits} = \propto + \beta_1 \cdot (\%INDEP) - \beta_2 \cdot (BOARDSIZE) + \beta_3 \cdot (\%LESS3) + \beta_4 \cdot (\%KNOWLEDGE) + \beta_5 \cdot (\%BOARDHOLD) - \beta_6 \cdot (AGE) - \beta_7 \cdot (\%FEMALE) - \beta_8 \cdot (BOARDUA) + \beta_9 \cdot (BOARDINDV) + \beta_{10} \cdot DummyShares + \beta_{11} \cdot (BANKSIZE),$$ (equation 7)

$$MODEL\ 4: \frac{Loans}{Deposits} = \propto + \beta_1 \cdot (\%INDEP) - \beta_2 \cdot (BOARDSIZE) + \beta_3 \cdot (\%LESS3) + \beta_4 \cdot (\%EDUCATION) + \beta_5 \cdot (\%WORKEX) + \beta_6 \cdot (\%BOARDEX) + \beta_7 \cdot (\%BOARDHOLD) - \beta_8 \cdot (AGE) - \beta_9 \cdot (\%FEMALE) - \beta_{10} \cdot (BOARDUA) + \beta_{11} \cdot (BOARDINDV) + \beta_{12} \cdot DummyShares + \beta_{13} \cdot (BANKSIZE),$$ (equation 8)

The Pearson correlation coefficient will be used as a measure of linear dependence between the applied independent variables as well as a sign of collinearity (Bryman et al. 2003). In order to arrive at the optimal model, the stepwise regression of backward elimination will be utilized (Canavos et al. 1999).

10.5 Ethics data

The second data set deals with whether business majors in general have different perceptions of the firm, of humans and of what are ethical and morally responsible actions. In order to gather data on this area the thesis will utilize a survey, which is a common tool for assessing perceptions (Bryman et al. 2003). The survey is structured in three parts[11].

The first part draws on the Aspen Institute's (2009) research on MBA student perceptions about the responsibilities of the firm. Here respondents are asked to rank the three most important goals for the firm in order of relevance.

Secondly, the questionnaire presents three vignettes, which focus on concepts like justice, greed and self-interest. The respondent is asked to assess the actions on four different levels; Morally Right, Ethical, whether "they would do the same" and "their peers would do the same". Morality and Ethical although often used interchangeably differ in meaning; as morals deal with the personal stance towards right and wrong, whereas ethics refer to the social system surrounding morality. As such an action may indeed be morally wrong, but ethically acceptable (SEP 2011).

[11] See appendix 0 for the full questionnaire.

The choice of vignettes is commonly used in understanding normative standards (Bryman et al. 2003), as applied by Cohen et al. (2001) in their study of Canadian accounting students. They found that the approach creates a reliable picture of student perceptions within ethics. The survey poses only three vignettes in order in increase the response rates and to avoid respondent fatigue (Bryman et al. 2003). This choice is supported by Smith et al. (2003) who find that shorter surveys consequentially obtain higher response rates, whilst keeping the validity at consistent levels.

The third part asks for student perceptions on humans and human action.

The survey was primarily internet based in order to increase the variance of the response group (Bryman et al. 2003, Blumberg et al. 2005), however the survey was also distributed through Copenhagen Business School in order to increase the amount of respondents.

In order to ensure that the usability and ease of understanding were high, the survey was initially distributed to a select number of people, who provided feedback on ease of usage and understanding. Their feedback was incorporated and alterations were made to the survey. Most questions were provided with answers distributed on a 5-point Likert scale, in order to allow for maximum variance (Blumberg et al. 2005), as well as due to the fact that ethics and morality are rarely perceived as solid concepts.

The survey result will be assessed utilizing a variety of non-parametric statistical tools. The variance perceptions will be tested through the Pearson's Chi Square test, where the frequencies of appearance are tested for significant differences (Canavos et al. 1999). Additionally the Wilcoxen Signed Ranks and Sign test will be used in the analyses of "means".

Now that the scene has been set, the theory and hypotheses introduced and the methodology has explained the testing ground, this thesis can proceed with analyzing the data and responding to the hypotheses, starting with risk-taking.

11 The Relationship between Governance & Risk

A total of 63 listed banks were included in the sample, split across Denmark (37), Norway (22) and Sweden (4), with a total of 383 directors analyzed and assessed according to the outlined variables.

The summary statistics show clear differences and variance amongst the sampled firms meaning that despite similar CG codes (NCG 2009) there are still significant differences in the implementation of the recommendations (full summary statistics incl. T-tests – see 17.5).

The mean level of StDev was 2.83% with Denmark having the highest levels, but with no significant difference between the countries. However Danish banks lend less than their Swedish or Norwegian counterparties. The mean L/D ratio was 1.37 for the entire sample meaning that on average lending is 40% higher than deposits.

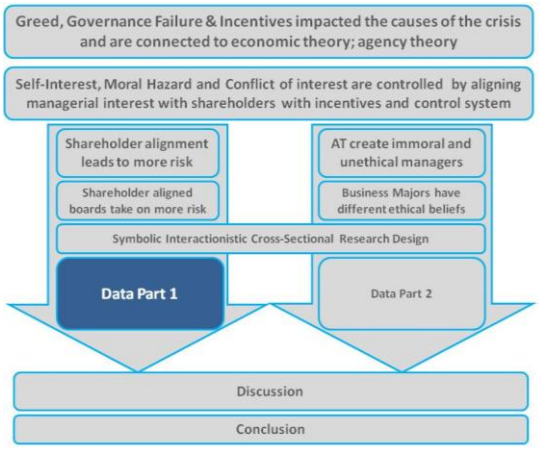

Figure 9 - Structure

With regards to the composition of BOD, the average board size was 6 members (excl. employees) with Swedish banks having the largest boards. All of the boards in the sample had similar levels of independence at an average 80%, and an average of 52% of directors having fewer than 3 positions. A key point of interest was the level of financial and governance literacy. Here the average for the composite measure was 41%, with education at 20%, work experience at 17% and board experience at 89%. The largest differences were seen with regards to education where the Danish boards were averaging only 9% as opposed to 41% in Sweden.

Another important part of AT is stock based incentives. Here the data on Board Shareholding was unavailable and imprecise and the hypothesis is therefore not pursued any further. With regards to the presence of stock or option programs, 35% of the sampled banks had these in place, with Sweden being at 75% and Norway at 23%. Danish banks used these programs in 38% of the cases.

The non-AT variables investigated showed an average age of 54.5 years, with little country differences. The female representation was higher in both Norway and Sweden due to legal requirements, at 35% and 29% respectively and with only 6% in Denmark. The analysis of the cultural variables revealed that the bank boards largely consist of directors from the bank's home country.

Based on the summary statistics and the differences for some of the variables, it becomes interesting to understand which governance factors, if any contributed to the riskiness of the individual bank.

11.1 Correlations

When viewing the correlations in model 1 and 3 (table 5, p.47), it becomes clear that there are multiple significant relationships amongst the independent variables. However, some of these are more relevant to address than others. The positive relationships between *SIZE*, *KNOWLEDGE* and Dummy*SHARES* are quite interesting, as despite highlighting the possibility for collinearity

amongst these variables, also hint at a relationship between the knowledge of and the willingness to use the theoretically "risk" enhancing variable pay packages. Other relationships such as the negative relationship between *KNOWLEDGE* and *LESS3* highlights the fact that more educated directors in general hold more positions simultaneously. For model 1 and 3, 40% of the possible correlations are significant at either 95% or 99%.

For the model 2 and 4 the picture is much the same with 52% of correlations being significant at either 95% or 99%, signaling a rather high degree of collinearity that could affect the full model fittings. Interestingly both *EDUCATION* and *EMPLOYMENT* are positively related to Dummy*SHARES*, whilst also being significantly related to each other. The picture from model 2 & 4 is strongly comparable to that of model 1 & 3 as only the composite variable *KNOWLEDGE* has been substituted.

Although the correlations do not provide any information with regards to the level of risk-taking, they may still provide indications as to what could be 2nd order effects in the backward modeling. With the high level of significant correlations, one has to weary of the strong likelihood of collinearity in the full model fittings, where the results consequentially must be treated with some degree of respect.

11.2 Standard Deviation to Loan Deposit Ratio

This thesis utilizes two different risk parameters, StDev and L/D ratio. In order to ensure the validity of this postulation, these two parameters will be regressed together with L/D ratio being the independent variable.

Parameter	Coefficient	P-value
L/D	0.017	0,061*
Simple Correlation Coefficient, r,	0.237	T-stat: 1,909

Table 4 - Standard Deviation to Loan Deposit, *90%, **95%, ***99%

The relationship is positive and significant at the 90% confidence interval. If the analysis is carried out on Denmark, it is much more strongly correlated at 99%. L/D ratio is therefore found to be an acceptable variable for measuring the riskiness of banks, but given the fact that the relationship is only significant at 90%, a slight lack of certainty with regards to model 3 and 4 must be expected.

MODEL 1 & 3 CORRELATIONS										
VAR.	STAT	SIZE	INDEP	LESS3	KNOW	AGE	FEMALE	INDIV	UNCERT	STOCKS
SIZE	Pearson		-,109	-,279**	,511***	-,111	,393***	-,431***	-,597***	,264**
	Sig.		,397	,027	,000	,388	,000	,000	,000	,036
INDEP	Pearson			,000	-,005	-,008	,201	-,109	-,029	,048
	Sig.			,999	,972	,951	,114	,396	,819	,709
LESS3	Pearson				-,466***	-,044	-,050	,024	,137	-,308**
	Sig.				,000	,732	,699	,854	,284	,014
KNOW	Pearson					-,069	,169	-,188	-,334***	,406***
	Sig.					,589	,186	,140	,007	,001
AGE	Pearson						-,392***	,364***	,317**	,073
	Sig.						,002	,003	,011	,570
FEMALE	Pearson							-,765***	-,711***	,023
	Sig.							,000	,000	,855
INDIV	Pearson								,892***	,115
	Sig.								,000	,370
UNCERT	Pearson									,024
	Sig.									,854
STOCKS	Pearson									
	Sig.									

ADDITIONAL MODEL 2 & 4 CORRELATIONS												
VAR.	STAT	SIZE	INDEP	LESS3	EDUCA	EMPLOY	BOARDEX	AGE	FEMALE	INDIV	UNCERT	STOCKS
EDUCA	Pearson	,639***	-,045	-,274**		639***	-,300**	-,315**	,342***	-,338***	-,433***	,363***
	Sig.	,000	,724	,030		,000	,017	,012	,006	,007	,000	,003
EMPLOY	Pearson	,406***	,049	-,501***			-,105	-,107	,162	-,186	-,288**	,376***
	Sig.	,001	,702	,000			,411	,404	,203	,144	,022	,002
BOARDEX	Pearson	-,182	-,009	-,098				,403**	-,275**	,0254**	,166	-,010
	Sig.	,154	,945	,445				,001	,029	,044	,192	,939

Table 5 - Correlations Model 1 & 3 & Additional for 2 & 4 , *90%, **95%, ***99%

11.3 Results Full Model 1 to 4

	Standard Deviation (σ)				Loans/Deposits			
Parameter	Coefficient (model 1)	P-value	Coefficient (model 2)	P-value	Coefficient (model 3)	P-value	Coefficient (model 4)	P-value
Intercept (α)	0.042	0.865	0.023	0.924	9,324	0,000	9,394	0,000
INDEP	-0.162	0.264	-0.199	0.158	-0,151	0,102	-0,153	0,106
BOARDSIZE	-0.420	0.050**	-0.362	0.103	-0,352	0,010***	-0,335	0,026**
%LESS3	-0.078	0.018	0.031	0.850	-0,140	0,177	-0,133	0,228
%KNOWLEDGE	-0.015	0.932	-	-	-0,288	0,013**	-	-
%EDUCATION	-	-	-0.369	0.083*	-	-	-0,203	0,150
%WORKEX	-	-	0.358	0.052*	-	-	-0,130	0,286
%BOARDEX	-	-	-0.156	0.282	-	-	-0,109	0,264
AGE	0.057	0.689	0.048	0.750	-0,173	0,061*	-0,185	0,072*
%FEMALE	-0.129	0.535	-0.101	0.616	-0,292	0,030**	-0,288	0,036**
BOARDUA	-0.125	0.718	-0.123	0.716	-0,308	0,163	-0,297	0,193
BOARDINDV	0.014	0.967	0.052	0.873	-0,552	0,011**	-0,559	0,013**
***Dummy* Shares**	0.248	0.108	0.233	0.123	0,182	0,064*	0,186	0,067*
BANKSIZE	0.230	0.404	0.276	0.302	0,670	0,000***	0,670	0,000***
R^2/ Adj R^2		0.197/0.043		0.281/0.109		0,678/0,616		0,679/0,601
F-statistics/sig		1,279/0.267		1,632/0.113		10,947/0,000***		8,798/0,000***

Table 6 - Results Full Model, *90%, **95%, ***99%

The full models are generally characterized by low levels of model significance (low R^2 and F values in model 1 and 2), but more significantly by high levels of collinearity (appendix 17.6), which means that they should be interpreted carefully.

The hypothesis on board size receives some support in model 1, 3 and 4, at 95 and 99%. In model 2, both *EDUCATION* and *EMPLOYMENT* are significant at 90%, with *EDUCATION* being negative and *EMPLOYMENT* being positive, potentially supporting the notion of "greedy" bankers (Anderson 2008).

In model 3, where the StDev is replaced with the L/D Ratio, *KNOWLEDGE* is now negative and significant at 95%, reversing H4. The variable *DummyShares* is positive and significant at 90% as expected by the theory. The control variable *BANKSIZE* is positive and highly significant in both model 3 and 4. In model 4, the variable of AGE, FEMALE and INDIVIDUALISM are all negative and significant supporting H6 & H7 but reversing H8. Although models 3 and 4 have high F and R^2 values, the collinearity statistics are similarly to models 1 and 2, sizable and resultantly these results are also weak.

As collinearity statistics (appendix 17.6) show that *UNCERTAINTY AVOIDANCE* and *INDIVIDUALISM* have Tolerances[12] close to 0.1, and thereby Variance Inflation Factors (VIF) of 7.642 and 7.150, and *BANKSIZE* also has a VIF of 4.8, it is therefore necessary to address the collinearities to arrive at more reliable estimates of significance.

Consequentially, this thesis will apply the stepwise regression method of backward elimination in

[12] Tolerance is % of variance within a predictor variable that is not explained by other predictor variables, e.g. a Tolerance of 0.1 means that 90% of the variance can be explained by other variables. (Canavos et al. 1999). VIF is 1/Tolerance

order to deal with this problem.

11.4 Backward Elimination

	Standard Deviation (σ)				Loans/Deposits			
Parameter	Coefficient (model 1)	P-value	Coefficient (model 2)	P-value	Coefficient (model 3)	P-value	Coefficient (model 4)	P-value
Intercept (α)	0.043	0,000	0.022	0,000	10,232	0,000	10,849	0,000
INDEP	-	-	-	-	-0,197	0,034**	-0,186	0,043**
BOARDSIZE	-0.240	0,061*	-	-	-0,362	0,008***	-0,272	0,050**
%LESS3	-	-	-	-	-	-	-	-
%KNOWLEDGE	-	-	-	-	-0,240	0,039**	-	-
%EDUCATION	-	-	-0.453	0.005***	-	-	-0,261	0,034**
%WORKEX	-	-	0.406	0.011**	-	-	-	-
%BOARDEX	-	-	-	-	-	-	-	-
AGE	-	-	-	-	-0,193	0,042**	-0,230	0,022**
%FEMALE	-	-	-	-	-0,253	0,062*	-0,254	0,060*
BOARDUA	-	-	-	-	-	-	-	-
BOARDINDV	-	-	-	-	-0,721	0,011**	-0,767	0,000***
***Dummy* Shares**	0.322	0,013**	0.271	0,038**	-	-	0,170	0,089*
BANKSIZE	-	-	-	-	0,906	0,000***	0,740	0,000***
R^2/ Adj R^2		0.12/0.091		0.202/0.161		0,638/0,592		0,650/0,599
F-statistics/sig		4,098/0.021**		4,964/0.004***		13,856/0,000***		10,345/0,000***

Table 7 - Backward Elimination Results Model 1-4, *90%, **95%, ***99%

Model 1

With backward elimination only two variables end up having a significant impact on StDEV. The variable *BOARDSIZE* is significant, as in the full model, but only at 90% as opposed to 95%. However the variable *DummyShares* is now significant and positive at 95%, which supports H10. The process of backward elimination has largely removed the collinearity, and both variables now have Tolerances of 0,93 and VIFs of 1.075. The F-value is significant at 95%, albeit only with a R^2 value of 0.12, showing that only 12% of the variation in StDev is explained by the explanatory variables. Nevertheless, the F-statistic is significant at 95% and therefore the null-hypothesis of no relationship with StDev is rejected.

Model 2

In model 2, *DummyShares* remains positive and significant at 95%, providing further support for H10. *EDUCATION* is now negative, contrary to H4a, at 99% significance. The variable *EMPLOYMENT* is positive and significant at 95%, supporting H4b. However, the simultaneous inclusion of both *EMPLOYMENT* and *EDUCATION* with opposing signage is slightly contradictory to the Pearson's correlations previously calculated, where a positive relationship at

99% was seen, and therefore this warrants further investigation (see section 11.6) as it may be a sign of remaining collinearity (appendix 17.7). Regardless, the model R^2 is at 20% explanatory power and with a high F-statistic, now significant at 99%, null-hypothesis can be rejected.

Model 3

Model 3 reveals some interesting conclusions. *INDEPENDENCE* is significant and negative at 95%, contrary to H1. *BOARDSIZE* is negative and significant at 99% supporting H2. *KNOWLEDGE* is once again present, negative and significant at 95%, reversing H4. With regards to *AGE* and *FEMALE*, they are negative and significant, providing support to H6 and H7. *INDIVIDUALISM* is negative and significant at 95% reversing H8 and *BANKSIZE* continues to influence at 99%. The model explanatory strength is at 59% with F-statistic of almost 14. Therefore the null-hypotheses can be discarded. Whilst the collinearity (appendix 17.7) has been reduced, 4 of the variables still have tolerance levels under 0.4, which although not being highly problematic still signal some presence of collinearity (Canavos et al. 1999).

Model 4

A comparison between model 3 and 4 reveals similar trends, finding *INDEPENDENCE* (95%), *BOARDSIZE* (95%), *AGE* (95%), *FEMALE* (90%) and *BOARDINDV* (99%) significant and negative, thereby reversing H1 and H8, whilst supporting H2, H6 and H7. As in model 2, *EDUCATION* is negative and significant at 95%, reversing H4a. *DummyShares* is positive, albeit only at 90% significance. The R^2 is at 0.6, and with F-statistics of 10.345, the overall model is strong in explaining the variance in the L/D ratio. The collinearity statistics have also been significantly reduced, but as in model 3 still exhibit some levels.

11.5 Backward and Full Model Results

Through the two processes of full model testing and backward elimination support for some of the hypothesis have been found, and some warrant further investigation.

Independence is significant and reversed in the backward elimination, hinting at the possibility that independence leads to lower L/D ratio, and less risk, given the positive relationship between StDEV and L/D ratio. This runs contradictory to AT that independent directors are more aligned with risk willing shareholders, and instead this hints at directors perceiving their fiduciary duty to be to the firm by consequentially lowering the L/D ratio. Albeit its significance in both model 3 and 4, the fact that independence does not appear in either model 1 or 2, shows that there is no directly

significant relationship with the stock based risk measure. This combined with the fact that the relationship between StDEV and L/D is only at 90% means that the relationship with risk should be treated as tentative and may in fact be 2nd order through the L/D ratio.

Corporate Governance Hypotheses			
	Hypotheses	Full Model Results	Backward Elimination Results
H1	+ relationship between Independence and risk	Not significant	Reversed at 95% in model 3 & 4
H2	-Relationship between Size and risk	Significant at 95% in model 1 & 4, at 99% in model 3	Significant at 90% in model 1, 99% in model 3 and 95% in model 4
H3	+ Relationship between Less than 3 positions and risk	Not significant	Not significant
H4	+ Relationship between Knowledge and risk	Reversed at 95% in model 3	Reversed at 95% in model 3
H4a	+ Relationships between Education and risk	Reversed at 90% in model 2	Reversed at 99% in model 2 and at 95% in model 4
H4b	+ Relationship between Work Experience and risk	Significant at 90% in model 2	Significant at 95% in model 2
H4c	+ Relationship between Board Experience and risk	Not significant	Not significant
H5	+ Relationship between Board Shareholding and risk	Not tested due to lack of data	Not tested due to lack of data
H6	- Relationship between Age and risk	Significant at 90% in model 3 & 4	Significant at 95% in model 3 & 4
H7	-Relationship between Degree of Female Directors and risk	Significant at 95% in model 3 & 4	Significant at 90% in model 3 & 4
H8	+ Relationship between Individualism and risk	Reversed at 95% in model 3 & 4	Reversed at 95% in model 3 and 99% in model 4
H9	- Relationship between Uncertainty Avoidance and risk	Not significant	Not significant
H10	+Relationship between Stock Based Compensation and risk	Significant at 90% in model 3 & 4	Significant at 95% in model 1 & 2 and 90% in model 4

Table 8 - Hypotheses & Results

The hypothesis on age (H6) and female directors (H7) follows the same pattern as independence, by showing their significances in the L/D models 3 and 4, but remaining insignificant in model 1 and 2. As such, the overall effect on risk might similarly be 2nd order through the relationship between L/D and StDEV. Accepting this relationship with risk, the results for age in model 3 and 4 are in line with H6 that older directors are more risk averse in their decisions. The same holds for the H7 and supports the findings of Bellucci et al. (2010) that female directors make fewer loans, and consequentially take on less risk.

The same could be argued for the hypothesis on individualism (H8) with its negative and significant presence in only model 3 and 4, but when viewing the summary statistics (appendix 17.5), it is rather a test of country differences than individual director characteristics, which is not the focus of this

thesis. Regardless, based in the same limitations as H6 and H7, H8 reverses other findings that more individualistic countries take on more risk.

H3 on directors with fewer than 3 positions was broadly rejected across in all 4 models and in both processes, meaning that the amount of positions has no effect on the riskiness of the bank. H4c was similarly not supported in any of the 4 models, which therefore questions the relevance of prior board experience as a factor for being a "good" board member. Uncertainty avoidance (H9) was neither supported in model 1 to 4.

Few variables appear in model 1 and 2 in the backward elimination. One of these is board size, which appears in both model 1, 3 and 4. The analysis as such supports H2 that larger boards tend to lead to lower levels of risk, potentially as AT argues, due to more managerial control over the board. This is in line with the previous findings of Pathan (2009) that smaller stronger boards are more aligned with shareholders, and consequentially take on more risk.

Attending to Dummy*Shares*, it shows up in model 1, 2 and 4 at varying positive levels. It is stronger with regards to the StDev of stock returns, where the significance is at 95%. Essentially, the results provide support for H10 that there is a positive relationship between stock based compensation and risk taking, due to a stronger shareholder alignment, where a risk shifting take place to the shareholder benefit. It therefore similarly to board size highlights that some of the agency theoretical prescriptions may indeed lead to higher risk levels.

With regards to knowledge, the composite was reversed in model 3, and seems to have limited explanatory capability. This could be due to its composition, where board experience as shown carries limited explanatory strength. This is supported by the fact that both education and work experience are present in the backward model 2 (for education as well in model 4). Education appears with negative signage, reversing the initial H4a that more financial education would lead to greater risk taking due to more shareholder alignment and the application of the AT best practices. Yet, at the same time work experience (4b) appears with a positive signage, hinting at the fact that financial work experience may lead directors to take on more risk, through the application of industry best practices, and a stronger alignment with shareholders. The results seem prodigious and when reviewing the correlation (section 11.1), as it shows that there is a significant positive relationship between education and employment.

Due to this conundrum and due to the additional relationships with Dummy*Shares* a further investigation of these correlations is warranted.

11.6 Education, Employment & Stock Based Compensation Schemes

As it was seen in section 11.1, the correlations between Education, Employment and Shares were positive and significant and therefore the following will test for the presence of 2nd order relationships between the variables.

A test of the relationship with Dummy*Shares* reveals that prior financial industry employment leads to a higher usage of stock based compensation. Although education falls out, due to collinearity, a similar test of education results in similar conclusions, namely that there is a positive impact of education and employment on the usage of stock based compensation schemes, which as shown leads to higher risk-taking. However, their combined presence is weakened due to collinearity.

Stock Compensation						
	Backward Elimination		Only Education		Both Education and Employ	
Parameter	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Intercept (α)	0,181	0,023**	0,075	0,003***	0,166	0,038**
%EDUCATION			0,363	0,003***	0,208	0,180
%EMPLOYMENT	0,376	0,002***			0,243	0,119
R^2/ Adj R^2		0.141/0.127		0.132/0.118		0,167/0,139
F-statistics/sig		10,018/0.002***		9,263/0.003***		5,998/0,004***

Table 9 - Backward Elimination for Shares and Knowledge, *90%, **95%, ***99%

Taking the analysis of knowledge and education further, and testing them separately with L/D, they are both significant and positive at 95% as opposed to the backward elimination. Now it supports the initial hypotheses that more financial education and employment positively impact the L/D ratio and consequentially create more risk.

Loans/Deposits				
Parameter	Coefficient	P-value	Coefficient	P-value
Intercept (α)	1,282	0,000	1,264	0,000
%EDUCATION	0,303	0,016**		
%WORKEX	-	-	0,295	0,019**
R^2/ Adj R^2		0,092/0,077		0,087/0,072
F-statistics/sig		6,150/0,016**		5,795/0,019**

Table 10 - Loan Deposit ratio with Education and Work Ex, *90%, **95%, ***99%

As such, although the conundrum remains and the actual effect of education and financial employment on risk taking is muddled, placing reliance on the backward elimination, the correlations and the special regressions focusing solely on these aspects brings slightly more clarity. The fact that both education and employment positively influence stock based compensation, which has a positive and significant effect on both the L/D ratio as well as the level of StDEV, hints at a

2nd order positive effect on risk taking as hypothesized. Therefore the previous findings of a negative education and a positive employment number impact suggest the presence of either collinearity or an unidentified u-shaped curve.

11.7 Governance Hypotheses Conclusion & Agency Theory

AT with its firm grounding in the economic rationale proposes several mechanisms for effective CG. Mechanisms that are both embodied in the practical CG codes for controlling, monitoring and incentivizing the manager, and have a solid foothold in the academic sphere, but may have an accentuating effect on risk. This was investigated in the first part of the thesis with regards to the financial crisis and with additional focus given to financial literacy.

Although the findings cannot be conclusive, certain trends were spotted that gave support to the fact that the application of some AT tools may indeed increase risk taking.

The negative influence of board size on risk-taking falls directly in line with the proposed agency logic that larger boards are more easily controlled by the manager and therefore less prone to take on risk. Additionally, it was found that the presence of stock based compensation plans, as proposed by AT, did indeed help increase the risk profile of the bank. However independent boards did make fewer loans, which could hint at the fact that independence does not equate shareholder primacy.

The breakdown of knowledge into three measures provided both conflicting and confounding results, as collinearity could not completely be removed. In some models education played a negative role in the risk profile, whilst employment was an increasing factor. At the same time, both factors positively affected the usage of stock based compensation plans, even after controlling for the size of the bank (appendix 17.8 & 0). Consequentially, no firm conclusion could be drawn on the area of education, whilst employment may be positively related to risk. The strong positive correlation of employment and education with stock based compensation plans and with each other hints at a 2nd order positive effect of these knowledge parameters on risk. As such, the AT prescriptions and knowledge of them ***may*** indeed increase risk taking.

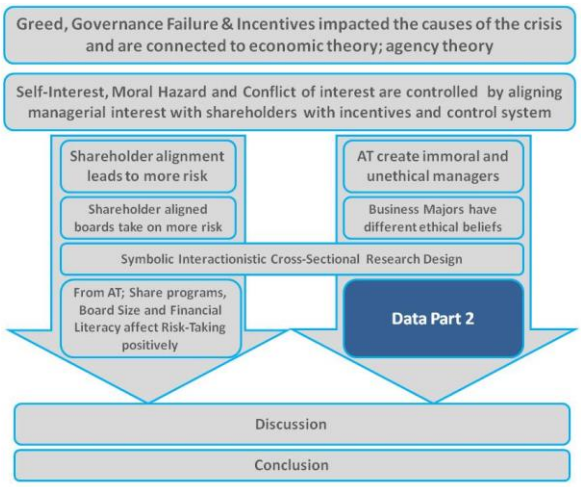

Figure 10 - Structure

With that in mind the analysis of the second strand of interest can commence.

12 The relationship between Ethics, Morality & Education

The survey was taken by 179 subjects, of which 31 responses were incomplete and 16 partial answers. As the survey was clearly divided into separate sections that had no distinct connections with each other, the partial responses are still relevant

Section	Number of observations
Basic information and Education	148
Company Purpose and Compensation	148
Ethical Vignettes	132
Humanistic Assumptions	132

Table 11 - Number of respondents per section

Out of the 148 respondents, 57% were male and 43% female, from 27 different nationalities (appendix 17.10 & 17.11) with Denmark being the largest group, totaling 56% of the sample. The average age was 26.5 years, and the average time spent at university was 4.6 years. Of the respondent 50% were currently doing their masters, or have completed a master, 39% for bachelors and 5% for MBAs. Out of the sample, 67% had majored in business.

12.1 The Purpose of the Company

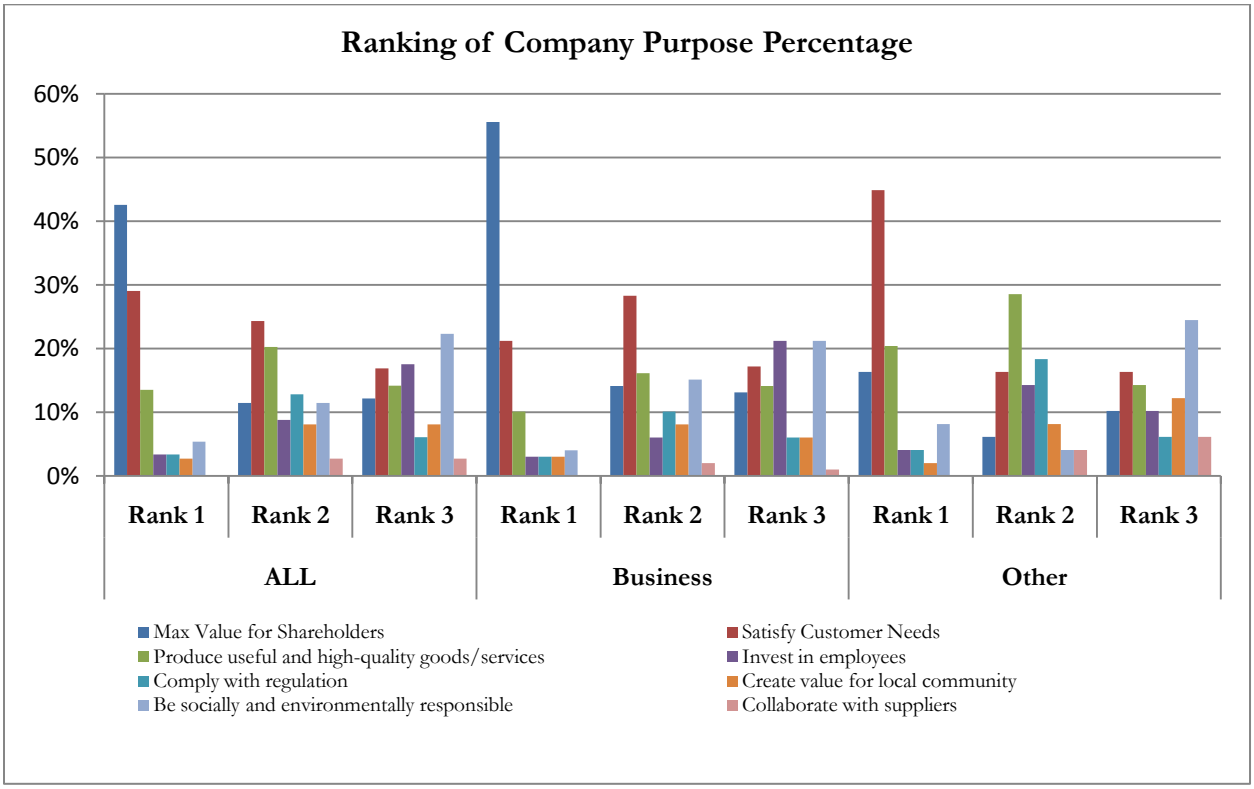

Figure 31 - Ranking of Purpose of Firm

The graph shows some interesting differences in the way that "business majors" (hereafter BMs) rank the purpose of the firm in comparison to other majors (hereafter OMs)[13]. Amongst BMs 83% have the "maximization of value for shareholders" in their top 3, whereas only 33% of OMs have it in their top three, instead rating "satisfy customer needs" as the main role of the company.

In order to assess the statistically significance of the differences, Pearson's Chi Square (χ^2) is calculated separately for all three ranks. The χ^2 is significant at 99% for Ranking 1 and at 95% for Ranking 2. Additionally, the Likelihood Ratio for goodness of fit is significant at the same levels.

	Ranking 1			Ranking 2			Ranking 3		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)
Pearsons Chi-Square	22,119	6	0,001***	14,533	7	0,042**	7,380	7	0,390
Likelihood Ratio	23,623	6	0,001***	15,136	7	0,034**	7,285	7	0,400

Table 12 - Chi Square for Ranking, *90%, **95%, ***99%

The Pearson's χ^2 does however not provide any directional inferences, but this can be inferred from the numerical data. As such, it clear that BMs are much more likely to find the "max of shareholder value" to be the main priority for the firm. Therefore based on the χ^2 test at 99%, the data supports H11[14].

The hypothesis receives further support when looking at the data on expectations of share or stock option compensation, as the relationship between stock based compensation and H11 is given through the fact stock based compensation is ties the wealth of the "agent" to that of the shareholder, thereby incentivizing the worker to emphasize the stock related aspects of compensation (Prendergast 1999), as supported in the governance data. Consequentially making shareholder wealth maximization the main goal.

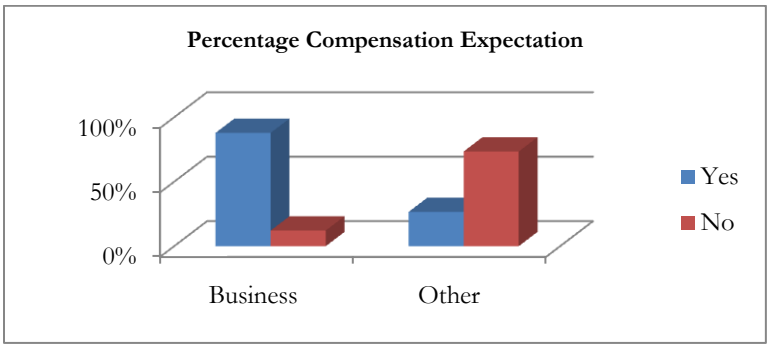

Figure 12 - Stock Compensation

[13] For numerical and percentage tables see appendix 17.12.
[14] H11: Business students perceive shareholders as the main stakeholder

Compensation Expectations			
	Value	Df	Sig (2-sided)
Pearsons Chi-Square	56,292	1	0,000***
Likelihood Ratio	56,681	1	0,000***
Fisher Exact test	2-sided/1-sided		0.000***/0.000***

Table 13 - Chi Square for Compensation, *90%, **95%, ***99%

12.2 Perceptions on Model of Man

In order to test H12[15], the respondents were asked to assess three of the AT humanistic assumptions, namely whether humans act rationally, with self-interest and without altruistic capabilities. The summary statistics show little difference across testing groups and questions; however the dispersion of answers increases for both self-interest and altruistic behavior, meaning that within the sample, the postulation that "humans are rational" is more wrong than the others.

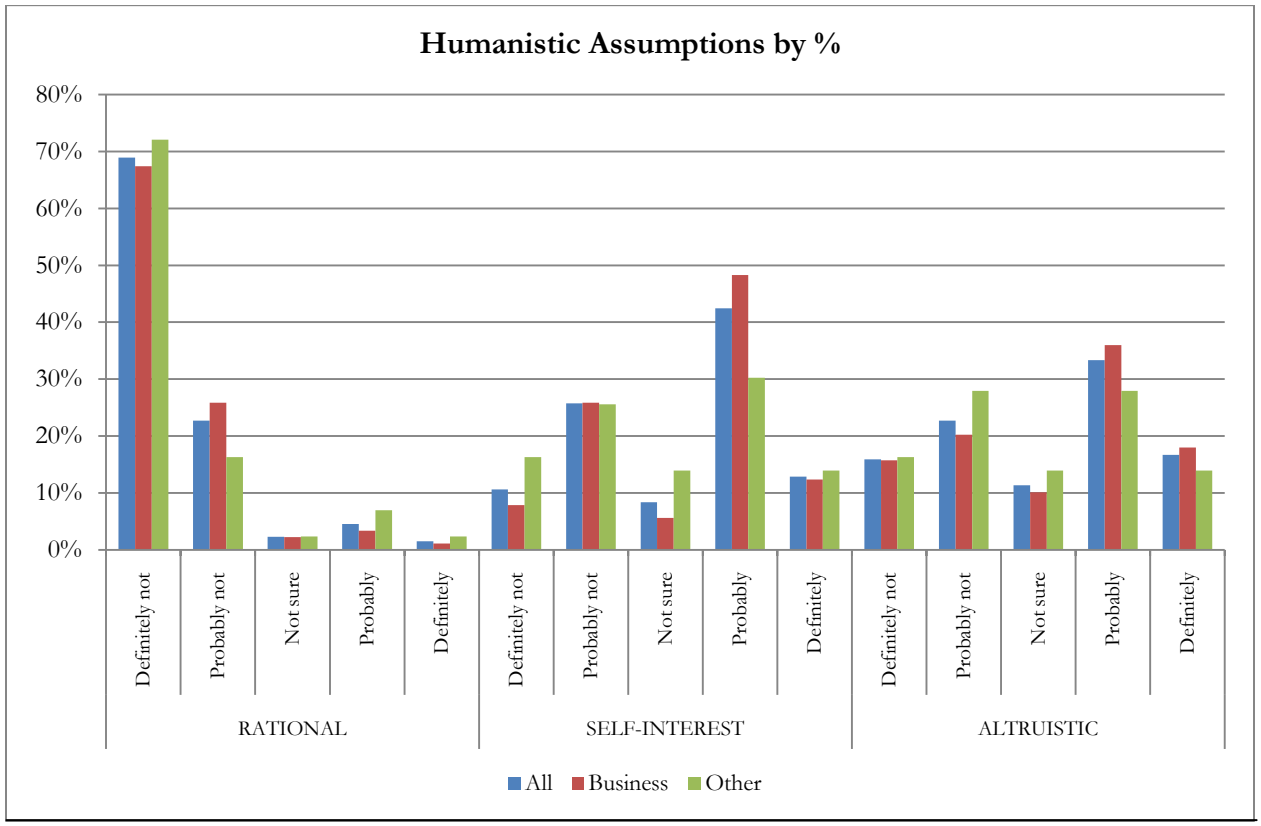

Figure 13 - Humanistic Assumptions

The Pearson's χ^2, show no statistical significant difference between the two groups, meaning that based on the survey response there is no ground for believing that BMs agree more with the economic model of man/REMM than OMS, thereby rejecting H12.

[15] H12: Business students adhere more to the humanistic assumptions of economic theory

	RATIONAL			SELF-INTEREST			ALTRUISTIC		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)
Pearsons Chi-Square	2,635	4	0,669	6,645	4	0,156	1,980	4	0,739
Likelihood Ratio	2,366	4	0,669	6,485	4	0,166	1,969	4	0,741

Table 14 - Chi Square for Human Assumptions, *90%, **95%, ***99%

The data on humanistic assumptions however reveals an interesting result. Albeit a strong disagreement, 69%, with the postulation that humans are rational, 55% of respondents believe that humans act with self-interest, whereas only 37% say the opposite, as such supporting the AT assumption. The same scenario is seen when it comes to altruistic behavior, where 50% say that humans only do good things because it is in their self-interest, whereas 39% disagrees, which is in line with the REMM model of man. All three results are significant at 99% (appendix 17.14). This hints at the fact that the underlying assumptions of the agency logic might to some extent be or have become the general belief.

12.3 Ethical Considerations

Central to the critique promulgated by Ghoshal (2005) is the fact that the economic theories taught at business schools supposedly make students less ethical, H13[16]. This was investigated via three vignettes, addressing different issues relevant to the GFC.

Vignette	Relevance
1. A loan officer in a bank is paid commission on the loans made. Because of a positive market situation more people have applied for loans. These people do not have acceptable credit ratings and will most likely default on the loans. Since the officer's bonus is tied to the value of loans made, he/she makes the loans anyways.	Subprime loans made leading up to the crisis
2. A company has been hit by recession and has seen it as a necessity to lay off a significant amount of workers. The stock market reacts positively to this and at the end of the year, the company posts a sizable profit. The CEO and management earn a large bonus because of this.	Bonus plans, stocks and compensation
3. Another company reduces its environmental standards in order to produce a higher profit. The company still complies with all the relevant regulations and standards. The consequence will be increased pollution in the local community.	Systemic risk of corporate activity

Table 15 - Vignettes

12.3.1 Vignette 1 – Subprime Loans

The first vignette portrays a scenario similar to the subprime mortgages. It is clear from the graph (and summary statistics (appendix 17.15)) that BMs are quite strongly in agreement with OMs by predominantly classifying the action as neither morally nor ethically right.

[16] H13: Business students are less ethical and morally concerned

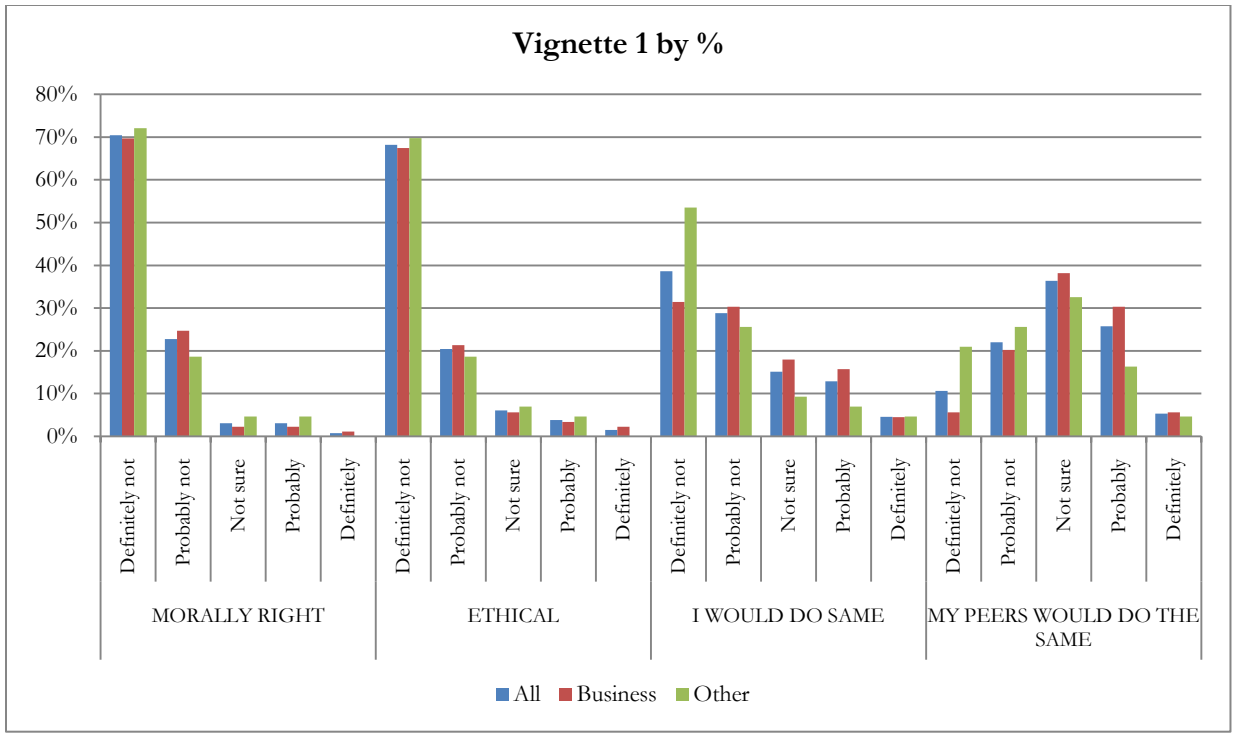

Figure 144 - Vignette 1 - per response area

The findings from the graph are supported statistically as well. The only difference, at 90%, is for whether "Peers would do the same" as BMs to a larger extent believe that their peers would do as in the vignette.

	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	2,090	4	0,716	1,310	4	0,860	7,035	4	0,134	9,317	4	0,054*
Likelihood Ratio	2,342	4	0,673	1,916	4	0,751	7,183	4	0,127	8,974	4	0,062*

Table 16 – Chi Square, Vignette 1 - per response area, *90%, **95%, ***99%

The difference between "Morally Right" and "I would do the same" is however interesting as the response pattern is much different. Although the majority still answers in a similar way, BMs have a higher proclivity to answer that "they" would undertake the same action at 20% vs. 12% for OMs, despite their ethical and moral convictions. A Wilcoxen Signed Ranks (WSR) Test and the corresponding Sign Test find that both groups have a tendency to rate "Morally Right" and "I would do the same" differently, with a positive increase of 1.17 for OMs and 1.7 for BMs (appendix 17.15.1). A WSR test further reveal that there is no difference between the way people rank "Morally right" and "Ethical" (Appendix 17.15.2).

12.3.2 Vignette 2 – Bonus Plans & Compensation

The second vignette dealt with bonuses and downsizing, a scenario that could be seen in the wake of the GFC (Barr 2009). Here the dispersion of perceptions is now higher (Appendix 17.16). In the OMs group, 72% find that the action is "Definitely not" or "Probably not" "Morally right", yet this number is only 52% amongst BMs. At the other end of the scale, the numbers are 18% for OMs and 38% BMs. The same case can be made for "Ethical" as only 53% of BMs find the action to be unethical, whereas 77% of OMs find it to be so. Additionally, 58% of all BMs would "Probably" or "Definitely" do the same, whereas only 37% of OMS would.

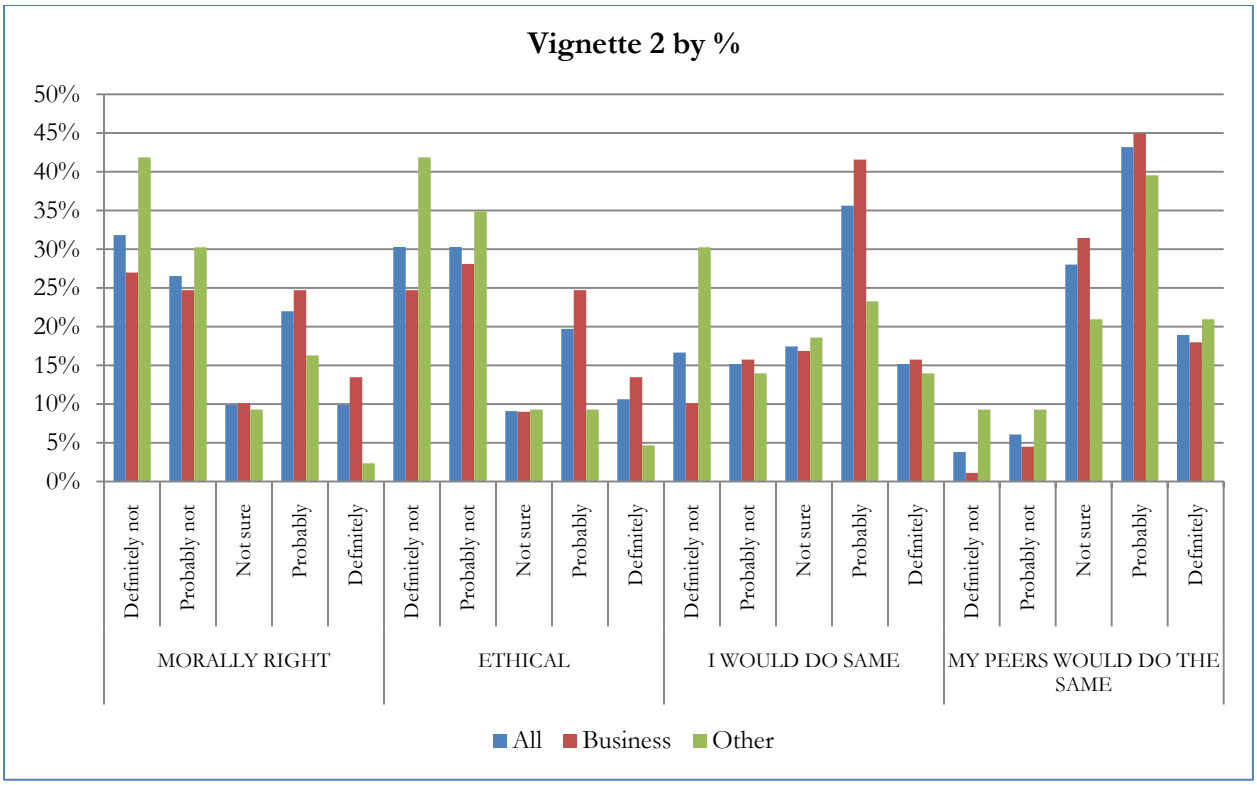

Figure 55 - Vignette 2 - per response area

The findings on "Ethical" and "I would do" are now somewhat supported statistically at 90 and 95% respectively. As such there is weak support for the BMs to be different from OMs in their ethical perceptions. No difference is found with respect to the morality or peer actions.

	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	6,978	4	0,137	8,887	4	0,064*	9,946	4	0,041**	7,703	4	0,103
Likelihood Ratio	7,921	4	0,095*	9,559	4	0,049**	9,609	4	0,048**	7,331	4	0,119

Table 17 – Chi Square, Vignette 2 - per response area, *90%, **95%, ***99%

The WSR Test of the changes in responses for "Morally Right" and "I Would Do" once again show that although the action is considered to be "Definitely not" "Morally Right", the amount who "would do the same" is significantly lower (at 99%, appendix 17.16.1), with an average change of 0.69 higher for OMs and at 0.64 for BMs. The WSR show no differences between "Morally Right" and "Ethical" (appendix 17.16.2).

12.3.3 Vignette 3 – Systemic Risk of Corporate Activity

For Vignette 3 the summary statistics show little difference for either "Morally Right" or "Ethical", and as with the previous cases there is greater dispersion with whether "I would do". The summary statistics (appendix 17.17) show the action is considered by roughly 80% of all to be either "Definitely not" or "Probably not" "Morally Right", and around 75% for "Ethical". Difference is found in the "I would do" with BMs having a higher proclivity to undertake the action (34% vs. 19%).

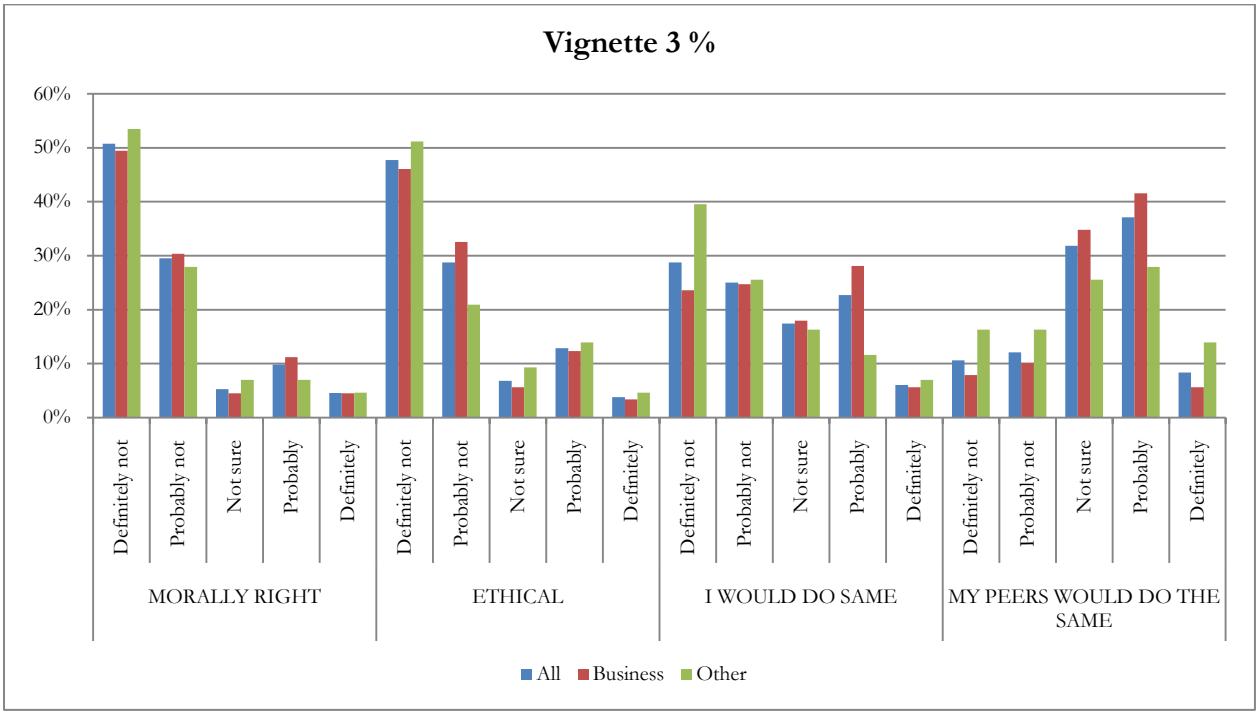

Figure 66 - Vignette 3 - per response area

However the χ^2 test shows no significant difference and it is therefore fair to say that based on the results gathered for vignette 3, there is no difference between the groups.

	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	1,024	4	0,906	2,285	4	0,683	6,161	4	0,187	7,500	4	0,112
Likelihood Ratio	1,043	4	0,903	2,330	4	0,675	6,466	4	0,167	7,267	4	0,122

Table 18 - Chi Square, Vignette 3 - per response area, *90%, **95%, ***99%

As with the other two vignettes, the WSR test was carried out for both the relationship between morals and ethics as well as whether subjects changed their responses between "Morally Right" and "I would do" (see appendix 17.17.1 & 17.17.2). The results for vignette 3 closely resemble the results from vignette 1 and 2, in that there is no significance with "Morally Right" and "Ethical", but the difference between how people respond to "Morally Right" and "I would do" is, at 99% for both groups. The average change for BMs was also almost double the value for OMs, landing at 0.764 vs. 0.395. The results are further supported by the Sign Test.

12.3.4 The Effect of Gender, Age & Educational Level on Perceptions

As ethical considerations could be influenced by either gender, age or educational level, the results are controlled for these.

Little support is found for the influence of age on ethical or moral standpoints, but there is a tendency for "younger" people to be more "idealistic" through being more inclined to state that an action is ethically or morally wrong, and although the χ^2 does provide some support for this, the likelihood ratios does not support the model, and any relationship between age and perceptions are disregarded (appendix 17.18).

The results for gender show that there is a slight significance in difference between female and male respondents. Female respondents find the actions more morally wrong than their male counterparties, at 90% and 95% for Vignette 2 and 3, respectively. With regards to whether one self or one's peers would do the same action, the difference is stronger, with males being more willing to undertake the action or expecting their peers to do so (95% significance for "I would do" and 99% for "Peers would do") (appendix 17.19).

Comparing Educational level and the responses for the different vignettes does not provide significant information, as the statistics (appendix 17.20) show little difference in the way the respondents rate the vignettes. Only in vignette 1 are there a couple of significant relationships, but

the summary statistics reveal that these are based on differences between "Definitely not" and "Probably not". The same holds true for time spent at university and its relationship with the vignettes. No relevant significant relationship can be found (appendix 17.21).

12.4 Difference in Action but not in Thought – Summary of Ethics Hypotheses

Ghoshal (2005) and others have criticized AT and business schools for creating immoral business graduates, but the results do not lend much support to their critique.

Summary of Hypotheses		
H11	Business students perceive shareholders as the main stakeholder	Supported at 99% for both Purpose and Stock compensation
H12	Business students adhere more to the humanistic assumptions of economic theory	Not supported. However, the majority of respondents believe that humans are self interested even when other-serving.
H13	Business students are less ethical and morally concerned	Not Supported, besides in Vignette 1, "Ethical", where "business" is less "Ethical"

Table 19 - Summary of Ethical Hypotheses

However what the results did support was the fact that BMs believe that the main purpose of the firm is to maximize shareholder wealth. As such, the teaching of AT may have had an impact on the way BMs think about the firm. This can also be seen in the human perceptions of especially BMs but also OMs, whose beliefs about people in general are in line with the self-interest and altruistic beliefs of AT.

When reviewing the result on ethical and moral perceptions no significant differences are found between the two groups. What however proves interesting is the fact that both groups change their response pattern for whether "they would do the same" action. This means that despite "strong" ethical and moral values the respondents do not necessarily act according to these. Although the statistical tests do not provide information on which group that changes the most, the summary statistics provide some indication that BMs in general have a higher proclivity to change their response more significantly. Consequentially, despite the fact that there is no difference in moral or ethical responses, acting on these beliefs is an entirely different matter.

Now that the thesis has investigated both research strands, it seems pertinent to summarize the overall findings before proceeding to the discussion and conclusion.

13 The Impact of Agency Theory on Risk & Perceptions

The data analysis of the governance related hypotheses revealed that several of the AT prescriptions

in fact may have an impact on risk-taking with regards to the GFC. Both smaller board sizes and remuneration with stocks or options were found to lead to increased risk-taking. Moreover, financial education and work experience were found to positively impact risk-taking through what this thesis argues to be a second order effect. This hints at the fact that there is a larger inclination for boards with high financial literacy to follow the prescriptions of AT and shareholder primacy. Despite some positive results, simultaneous board positions and independence were either insignificant or contrary to expectations. Therefore it seems inordinate to argue unequivocally that AT did promote risk-taking with regards to the GFC, but rather that some of AT ideas do so through stronger shareholder alignment.

Regarding the effect on ethical perceptions, this thesis found little difference between moral philosophies and humanistic assumptions amongst business majors versus other majors. However, the data *did* uncover a significantly stronger shareholder primacy amongst business majors. Additionally, the data exposed an issue that may add some light to the argument that business majors are inherently immoral and unethical. Despite holding similar perceptions of right and wrong, when it comes to maintaining convictions, business majors appear less inclined to do so in comparison with other majors. As such, it is clear that despite potentially strong ethical and moral values this cohort do not follow these ideals when it comes to carrying out an action.

The question for the discussion hence becomes, what management education can do to change the current situation?

14 Discussion & Implications for Management Education

When discussing the implications for management education it is fundamental to solidify what the role of education is. In line with Aristotle (2004) and Cohen et al. (2001) who write that the goal of society and of education is to promote desired behavior, this thesis argues that the role of university and hereunder management education must therefore also be the promotion of critical

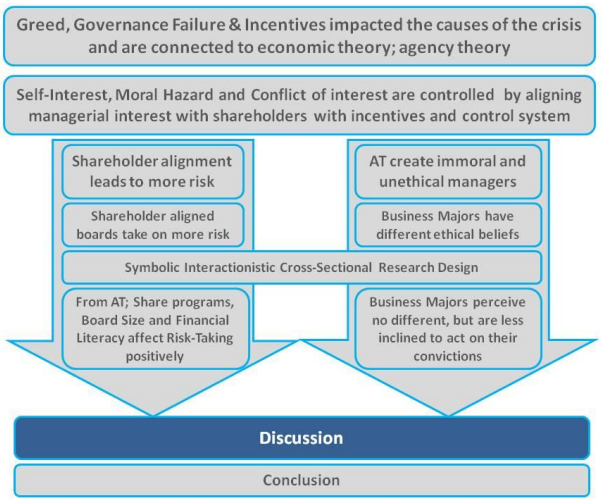

Figure 17 - Structure

thinking and ethical decision making.

Is it the role of management education to change the way we think about CG? Not exclusively, and it may be exceedingly difficult to replace a dominant paradigm such as AT, but the fact that it is best practice doesn't make it a nonpareil. The alternatives however are weak at best (appendix 17.1). The stakeholder, stewardship and the director model hardly provide the most practical or adequate ways of governing the firm, but they do provide is an alternate way of thinking about the firm and the actors role within it. They are perspectives that contrary to AT rely on multiple stakeholders, recognize the influence of business on society and forgo the opportunistic rational and contract-based human relationship in favor of trust based relationships (Lan et al. 2010). As such, they also question the notion of shareholder primacy, which this thesis has shown may lead to increased risk-taking in the banking industry. Instead their more nuanced approach to business may foster greater balance between shareholder returns and societal sustainability, however respectively they are not effective in isolation (Martynov 2009).

If the goal of management education is as conceived above, then it is not only about understanding the dominant paradigm of CG, but also about understanding the drawbacks and alternatives of shareholder wealth maximization. Not giving space to alternatives impairs holistic decision making and well as create an implicit acceptance of social relationships grounded in self-interest. Therefore, it must fall within the role of management education to ensure that a broad array of relevant theories are presented, questioned and moreover developed in consideration of their side effects and limitations over both the short and long term (Tourish et al. 2010). Introducing other models of governance into the educational realm, it is not equivalent with saying that AT is wrong, it is just very simple whereas reality is very complex and other models may provide relevant insight on how a firm can be run (Kanter 2005, Grey 2004).

Consequently the role of management education should be to question AT, particularly when applied within industries such as banking where it poses a systemic risk and inherently should support a stakeholder view over that of shareholder primacy. The GFC should as such provide (and maybe it will) a catalyst for change through addressing some of the underlying theoretical frameworks, such as AT, that took part in shaping a mindset that availed increased or excessive risk taking within the finance industry. But when an underlying theory and associated ethos that abetted the GFC is left under examined and unquestioned, despite their complicit role, attempts to develop new regulatory framework for the financial industry are likely to equate to a piecemeal solution that in reality changes very little.

What is missing from management education is therefore a critical and reflective approach to knowledge, where the impact of theories is understood in a wider perspective, and are not applied or accepted categorically (Antonacopoulou 2010, Ford et al. 2010). Instead of taking best practices for granted, as they may in fact have unintended or "negative" consequences, critical inquiry should be undertaken in consideration of multifarious cause and effects. It is particularly relevant to be critical towards a theory such as AT that is fundamentally descriptive, but through its dominant position has become normative (Kanter 2005). It is likewise relevant to understand its side effects and limitations, such as increased proclivity towards risk and capricious moral conviction, as shown in this thesis.

Part of gaining a more critical approach to the applied models means understanding the underlying humanistic assumptions and it also means questioning the ethical standards and perceptions seen at business schools, which some (e.g. Mitroff 2004, Ghoshal 2005, Grey 2004) argue are in need of a serious revision. The lack of critical management education and outdated or conventional ethical standards have allowed the agency logic to grow unquestioned, whilst its central assumptions are left untouched, even when in conflict with other dominant theories of management (Tourish 2010, Walsh et al. 2003, Ghoshal 2005). Therefore a change in the research agenda is needed to bring about more ethical and positive theories about the management of the firm (Ghoshal 2005, Bernhut 2004, Kochan 2002, Mitroff 2004).

However, critically questioning theoretical frameworks for the sake of doing so provides little value to neither management studies nor practical management. They must be questioned with a purpose, and as this thesis has shown, business majors as well as other majors seemingly act with little regard to their own convictions of right or wrong. A potential approach in creating more reflective and critical managers could therefore be through incorporating and applying business ethics theories, particularly ethics of virtue.

14.1 Ethical Management Education

According to Megone (2002) business and ethics are inseparable as all decisions fundamentally contain moral and ethical components (McCracken et al. 1995). For that reason Aristotle's virtue theory may be relevant as it addresses the way in which action driving motivation is acquired and altered, but also how issues can be framed ethically (Aristotle 2004).

The prevailing notion of ethics in business education and research, and also the one underlying AT, has focused on shareholder wealth maximization with respect to distributive justice and ordinary

decency[17] (Megone 2002), wherein the moral good is utility (McCracken et al. 1995). What this thesis has shown via the GFC is that this notion may be problematic, at least when dealing with an industry that possesses a high degree of systemic risk. Additionally it has hinted at the fact that this notion of ethics does not lead to people necessarily following their moral convictions.

One of the central propositions of Aristotle (2004) is to question of what the ultimate goal of life is. According to him, it is the pursuit of happiness (eudaimonia), which is achieved through living a life of virtue. Happiness is in itself practically impossible to define as the concept is relative to the self. But one thing is certain, it cannot be something that is a means towards a higher order or end, hereunder wealth. Here virtue theory offers its first point of interest for management education and theory, as by disregarding wealth as the ultimate goal, it simultaneously questions the overriding objective of shareholder wealth maximization, or at least limits its definitiveness. Inherently it is therefore also a question of what success in reality is (Hartman 2006), both professional and personal.

Although happiness is the overarching goal, the means to get there goes through virtues, which are dispositions towards certain actions, and in reality are the drivers behind our actions. The moral virtues are something that we all possess, as they relate to our disposition towards e.g. justice, greed and anger, but what makes the difference is whether our dispositions are balanced (doctrine of mean). What Aristotle (2004) notes is that practically speaking the balance commonly follows the majority, but that it does not make it more right (see opening quote).

Returning to the context of the GFC, and keeping the data on perceptions in mind, it can be argued that despite ethical convictions, managers may act otherwise. Their actions in this instance particularly seem rather to have been dictated by the majority. The result of the GFC and of this thesis shows that although prevailing best practices were most likely insufficient or even wrong and had negative consequences for society, they were still followed. An obvious question is therefore why?

This thesis does not hold an unequivocal answer, but the weak conviction to act ethically may provide greater insight. Finding the answer may be complex and maybe focus should rather be forward-looking. It is here that the application of virtue theory in business education may prove helpful, as it creates a dialectic process through which the agent can critically reflect on a given

[17] Distributive Justice: rewards are distributed according to contributions. Ordinary decency: Honest and Fair conduct within the legal rules.

decision and it helps him to avoid treating choice as a given factor (Koehn 1998). In this way it may provide the agent with an understanding of what a virtuous act is and thereby help provide a framework for reflecting about the choices made with regards to e.g. shareholder wealth maximization (Hartman 2008a, 2008b) as well as other virtues. At the very least, it could provide a means of critically considering available courses of action, rather than adhering to prevailing norms.

A common argument against the focus on business ethics is that it reduces the economic activity (Bragues 2006). Whilst it is certainly true that some parts of shareholder primacy do not wholly complement a strong focus on business ethics, it does not necessarily mean that ethical inquiry is bad for business. Besides the important inherent social contraposition to shareholder primacy, the Aristotelian virtues may not as such be contradictory to AT and shareholder primacy, as e.g. courage also deals with making the right investment decision (see appendix 17.22). As such, virtue theory does not entirely preclude shareholder wealth maximization, a view is in part supported by Brickley et al (1994) who argue that ethical conduct is part of the organization's goodwill and can help reduce agency costs by curbing moral hazard. As such an organization that acts ethically may actually be worth more to shareholders. It however requires a high level of transparency and focus on ethical conduct amongst the population at large. Increasing the focus on ethics within the business school curriculum may indeed help start such a trend where ethics and virtuous business conduct no longer are competitive disadvantages, but rather become a necessity for competitive parity. Herein the inclusion of ethical inquiry in the analysis of business cases and consideration of the development of codes of ethics, rather than simply their adherence, could provide value.

Driving such a change is not easy, and the institutional perspective should not be ignored, as much of what we do is stored in institutional best practices. Whilst a focus on ethics is considered fundamental it must likewise be complemented with greater structural change in the way that organizations are managed and governed. Both Sims et al. (2003) and Weaver (2006) argue that in order for ethical conduct and reflection to be able to enter into the real world of business, it must be complemented with a change in the governance and reward structures of firms. As such, critical management education, the introduction of alternative theories and business ethics may help alleviate the prevailing acceptance of shareholder wealth maximization by raising critical questions about decisions and assumptions as well as help uncover new ways of managing the firm. This will not solve the problems of AT, but it will open up for additional perspectives and critical reasoning concerning its employment and applicability.

15 Conclusion

The GFC was by some argued to have been a result of poor governance, risk inducing bonus arrangements together with greedy and amoral managers who pursued profits ruthlessly. This thesis has through the theoretical foundation and the critique of its prescriptions argued that AT appears to constitute a common denominator of these causes. It has therefore sought to empirically investigate the following research questions,

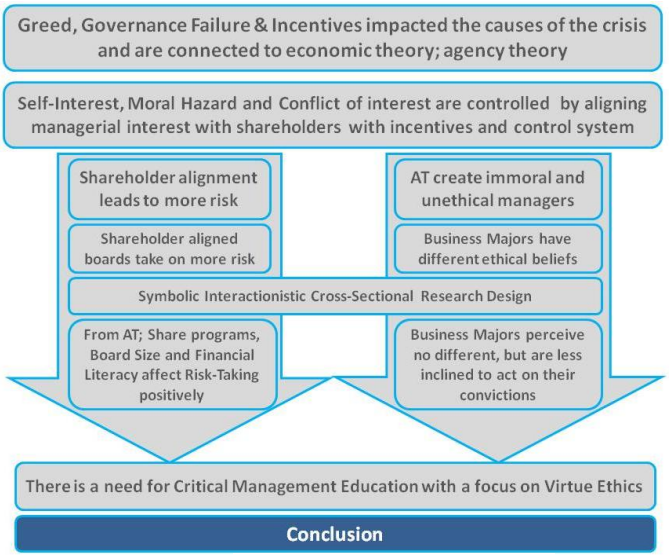

Figure 18 - Structure

Did the agency theory prescriptions of corporate governance and directors' financial literacy impact the risk profile of Scandinavian banks during the Global Financial Crisis? And are there differences in the moral and ethical perceptions of business majors in comparison to other majors?

By asking the questions of whether the prescriptions of AT for CG contributed to risk-taking as well as whether business majors exhibit different moral and ethical perceptions this thesis has addressed the consequences related to CG and sought to investigate the validity of the criticism against AT put forth by academic scholars.

In seeking to understand the side-effects of a dominant theoretical paradigm this thesis has found that some of the AT prescriptions, such as share programs and smaller boards, may indeed lead to higher levels of risk taking. Additionally it was found that directors with financial literacy were more prone to using share based remuneration, and thereby positively impact risk-taking. Yet at the same time it was shown that not all of the AT prescriptions increase risk-taking and therefore the argument that AT prescriptions lead to higher risk-taking can only be partially supported. The second argument against agency theory was the negative impact on moral and ethical perceptions amongst business majors, which was not supported. Rather, it was clear that business majors adhered to the shareholder primacy argument and were less likely to act in accordance with their asseverated moral convictions. Despite the fact that some of the findings were derived within a regulated industry, they highlight certain issues with regards to the effects of AT such as increased proclivity towards risk. In turn, this thesis questioned what the resultant consequences for

management education might be. Here it was argued that the uncritical teaching and application of AT should be questioned, as there may be unintended consequences as seen during the GFC wherein the generally unquestioned application of "best practice" within corporate governance in fact had an adverse impact on society. It may therefore be in the interest of management education to introduce virtue theory, and more generally business ethics, ideally as an integrated part of the broader curriculum as opposed to a stand-alone course (Hartman 2006). In doing so critical inquiry and transparency, particularly in practice, may be further stimulated with respect to choices and processes made. Ultimately it should help to question the application of prevailing best practices, which may be inadequate or have unintended consequences for society, despite their otherwise widespread adoption. As Geraint Anderson (2008 p. 398) almost deridingly notes,

'What we cityboys need to do is to acknowledge the negative impact our endless selfish greed has on society and try and rediscover our more angelic potential.'

This thesis has uncovered a number of interesting points, many of which are perceived to lend themselves to intriguiging aspects for further research. First and foremost however, as noted previously a longitudinal study of morals and ethics on business students. Herein moral development could be followed at the individual level which would likely provide greater insight into understanding the effect of education as well as help to determine how and why strong moral convictions may be left aside in practice. Along the same lines it would be interesting to obtain a more solid picture of the moral and ethical beliefs of directors in relation to their individual background. Furthermore, undertaking the same research direction within a less regulated industry may provide an interesting basis for comparison with respect to the impact and consequences of AT's prominence within CG mechanisms utilized today.

Lastly and maybe most importantly, further research within CGin terms of how ethics could be incorporated into the prescriptions of theory and the potential relationship between the different CG theories and business ethics theories. How ethics can be included herein is fundamentally needed, as the goal of management theory should rather be the inherent integration of ethics, over a reactive analysis of processes and governance frameworks.

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17 Data Analysis Appendix

17.1 Competing Models of Corporate Governance

A number of competing theories exits with regards to agency theory. A common factor amongst most of them is the questioning of the shareholder as the main stakeholder. As such, they include different welfare maximization models (Donaldson 1990, Lan et al. 2010), as they focus on the stakeholders whose welfare is affected by the corporate actions. As such, the principal becomes not only shareholders, but is extended to a larger amount of constituents, as their welfare is affected by the actions of the firm (Bernhut 2004, Heath 2009), as well as have ownership over one or more factors of production within the firm (Fama 1980). However, just as AT is critiqued on numerous grounds, so are these, as e.g. Jensen (2002) and Gomez-Meija et al. (2005) argue that it is impossible to maximize more than one dimension and that there no adequate decision model for choosing between conflicting interests exists. The following three sections present three alternative models (Director Primacy, Stakeholder and Stewardship) and the main criticism against these

17.1.1 Director Primacy Model

Lan et al. (2010) propose a third model much related to the both the stakeholder model and the stewardship model, namely the director primacy model, where shareholders are not considered as the only residual claimant to the firm, but includes multiple constituencies, such as employees, creditors, suppliers, governments etc. The humanistic assumptions are in line with stewardship theory that people can be trusted and can act collectively as well as being driven primarily by intrinsic incentives. Here the firm is viewed as a team, with the board of directors monitoring and distributing rents according to the different contributions of stakeholders. The overarching goal is to maximize the returns enjoyed by all stakeholders rather than minimizing agency costs. This theoretical approach is grounded in the US legal system, where directors are not viewed as the agents of shareholders and where shareholders are not viewed as the owners of the firm, but where directors have responsibility for the firm (Asher et al. 2005). In their model, the principal becomes the firm in itself as a legal person. In line with Jensen's critique (2002)[18] of the stakeholder model, Lan et al. (2010) concur that the difficulty will be to develop a framework for prioritizing amongst competing interests. They define a decision approach that values; team specific investments, sustainability of stakeholder support and stakeholder power. However the empirical usability of the

[18] Jensen, M.C. 2002, "Value Maximization, Stakeholder Theory, and the Corporate Objective Function", Business Ethics Quarterly, vol. 12, no. 2, pp. pp. 235-256.

model is rather limited, and its main benefit becomes that of prescribing.

17.1.2 Stakeholder Model

The stakeholder model proposes that management must take into account multiple interests when making their decisions (Asher et al. 2005, Thomsen 2008). The stakeholder model is a counter response to the agency model of shareholder primacy, by arguing that shareholders in general are disinterested in the management of the firm and that shareholders should not be considered to be the only relevant form of capital. As such, directors must act in the interest of all "capital" providers. Jensen (2002) however argues that a firm implementing a stakeholder approach will be competitively handicapped as the need to balance numerous stakeholder interests, allows for too much room for managerial discretion. Asher et al. (2005) points out to the contrary that the competitive disadvantage is derived from the dominant position of the shareholder model (agency logic), and not related to the managerial appropriation of perks. Jensen (2002) further argues that it is impossible to maximize more than one dimension, and therefore the theory can by definition never work efficiently. Instead value maximization is the preferred goal for its positive influence on social welfare. Lastly stakeholder theory has never been able to effectively and adequately provide a framework or system for evaluating conflicting interests between stakeholders, leaving managers and directors to lead the firm to their own discretion with little accountability over the usage of company resources. He finishes off with arguing that AT and the value maximization principle may not be perfect but it is the best measure available. Gomez-Mejia et al. (2005) argue that the stakeholder perspective is little more than a modification of AT, as it in the process of balancing all interests, still accepts that each stakeholder has diverging interests. As such the stakeholder model becomes little more than a multi-agent and multi-principal system as opposed to the dyadic nature of classical AT.

17.1.3 Stewardship Theory

Another proposed foundation for CG is stewardship theory. The theory is focused on causes for motivation and it proposes that people are all driven by different preferences and motivations and therefore any model of CG must take this into account (Martynov 2009). The humanistic assumptions of stewardship theory are contrary to those of AT, by believing that the manager can be trusted to act in the interest of the organization and will not try to expropriate wealth for him/herself even if possible since his or her interests are already aligned with those of the principal. Thereby, the concept of opportunistic behavior is not present within stewardship theory (Donaldson 1990, Martynov 2009, Davis et al. 1997). Further, the individual places a higher utility

on collective and pro-organizational behavior as opposed to the self-serving rational individual of AT (Davis et al. 1997). The steward will therefore still work towards maximizing shareholder wealth and ensuring the viability of the firm, as this is in the intrinsic interest of the steward, as well as in the interest of all stakeholders (ibid). Due to the fact that the steward can be trusted, a monitoring system or extrinsic incentive system may undermine the steward's motivation to work towards the organizational goals. Martynov (2009) however argues that neither agency nor stewardship model can function independently and that different agents/stewards will respond differently. Furthermore, he argues that the realistic picture of an agent or a steward is one who in real life exhibit behaviors from both logics, but that one can expect more ethical humans to be stewards. As such, the governance system should be tailored to the individual and each actor should be e.g. compensated according to their individual preferences (Daily et al. 1997). The choice of governance system becomes dependent on the accepted risk levels and capability for trust, with AT having the lowest level of trust and risks involved, however with a lower level of value generation, whereas stewardship theory have higher levels of trust and risk, but a larger upside potential in terms of value. Given that one party distrusts the other, the optimal solution therefore becomes an agency approach.

The criticism of stewardship theory falls much in line with the criticism of stakeholder theory. Gomez-Mejia et al. (2005) calls it just another branch of AT, where the agent takes the societal norms and expectations into account, and where the pursuit of self-interest continues in a social context. Additionally, the proposed usage of both agency and stewardship logic in dealing with individuals increases the complexity of the organization and thereby also the costs of CG, consequently lowering the value of the firm. Grundei (2008)[19] argues that the theory borders on the line of naïve and that the high levels of trust may reduce critical questioning of management decisions, and may imply high costs in the case where the steward is not completely trustworthy.

17.2 Adverse Selection

Generally less often referred to; adverse selection is related to the case when the characteristics of the agent are hidden from the principal at the time of the contract creation and acceptance (Hendrikse 2003) . As with the moral hazard, "hidden characteristics" is an information problem (Arrow 1968), opportunism is the underlying behavioral model (Jensen 1994) and adverse selection

[19] Grundei, J. 2008, Are managers agents or stewards of their principals?, Springer Berlin / Heidelberg.

is the actual decision made with regards to the contract (Eisenhardt 1989). As such, adverse selection deals with the situation where the principal does not have information about the exact capabilities of the agent (Shapiro 2005, Demski et al. 1978), however the principal can interpret the acceptance or rejection of the offered contract as information with regards to the capabilities of the agent (Hendrikse 2003, Demski et al. 1978). Thereby, the contract formation becomes critical in ensuring that the right agents are attracted (Prendergast 1999). For example, in the case of risk, a contract can be structured that transfers a certain amount of outcome risk to the agent, this type of contract will hence drive off agents that are too risk averse and induce agents with a matching risk profile to enter the relationship (Hendrikse 2003, Eisenhardt 1989). However as the agent will have a propensity to misrepresent their abilities, the contract may only succeed in getting agents with a lower ability level than expected (Eisenhardt 1989).

17.3 Measures for Governance Variables

Independence

Independence will be assessed in line with previous studies of director independence, hereunder Pathan (2009) who measures it as the percentage of directors who are independent in order to normalize the data (Canavos et al. 1999) . Due to the fact that employee representation is legally required in the Scandinavian countries (Thomsen 2008), the percentage will be taken after having deducted the number of employee representatives. A director is defined as dependent if he or she is affiliated with the firm in other ways than the directorship, be it family, business ties or other (Adams et al. 2010)[20] and has more than a 12 running relationship with the bank. As such,

$$INDEP = \frac{\#INDEPDIRECTORS}{(\#MEMBERS - EMPLOYEES)}\text{ , (equation 9)}$$

Board Size

The board size will be measured as the total number of directors less employee representation, due to the legal requirements in Scandinavia. This way is in line with previous studies of board size, such as Pathan (2009) as well as Alexandre et al. (2009) who use similar measures of board size. This is supported by Hermalin et al. (1988) , who use total board size as a measure in their studies of board composition and its effects. Therefore;

$$BOARDSIZE = \#MEMBERS - EMPLOYEES, \text{ (equation 10)}$$

[20] Adams, R.B., Hermalin, B.E. & Weisbach, M.S. 2010, "The Role of Boards of Directors in Corporate Governance: A Conceptual Framework and Survey", Journal of Economic Literature, vol. 48, no. 1, pp. 58-107.

Less than 3 positions

With regards to the assessment of number of board positions, the measure is based on the advice from the Danish Corporate Governance Codes (DCGC 2005) who argue that a maximum of 3 simultaneous board positions is preferable. This argument was supported by Michael Jensen (1993). The codification of the data will be conducted through assigning a value of 1 to all directors with less than 3 positions, excluding employee representation. Hereafter, the total number will be divided by the size of the board less employees, in order to normalize the data (Canavos 1999). As such;

$$LESS3 = \frac{\#LESS\ THAN\ 3\ POSITIONS}{(\#MEMBERS - EMPLOYEES)}, \text{(equation 11)}$$

Board Shareholding

Jensen (1993) argued that in order to ensure alignment with shareholders, the BOD should hold shares in the company. In order to practically measure this hypothesis, this thesis will follow the set-up of Alexandre et al. (2009), Anderson et al. (2000) and Demsetz et al. (1997) where board shareholding is assessed as a proportion of outstanding shares. Therefore;

$$BOARDHOLD = \frac{\#SHARES\ HELD\ BY\ DIRECTORS}{OUTSTANDING\ SHARES}, \text{(equation 12)}$$

Age

Age is commonly assessed as the average age of the board, as seen with Alexandre et al. (2009) who assess average age of directors in their study of governance mechanisms in banks. This measure is similarly utilized by Cochran et al. (1984), as well as others (e.g. (Bellante et al. 2004, Anbar et al. 2010). Consequentially;

$$AGE = \frac{\sum DIRECTORS'AGE}{(\#MEMBERS - EMPLOYEES)}, \text{(equation 13)}$$

Gender

Following Adams et al. (2009) who investigate the influence of female directors on the board, this thesis will apply a similar measurement. Here the female directors are codified as a dummy variable of 1, and hence calculated as a proportion of the total board.

$$GENDER = \frac{\sum FEMALE\ DIRECTORS}{(\#MEMBERS - EMPLOYEES)}, \text{(equation 14)}$$

Director Culture

The director culture will be assessed through using Hofstede's cultural dimensions (Hofstede 1984). The utilization of the cultural dimensions is not an uncommon approach (Rapp et al. 2011), as

Kreiser et al. (2010)[21] do in their study of risk and culture. Although other nationalities than the three presented below may be present on the BOD, it is expected that there will be an overrepresentation of Scandinavian directors.

Country	Individualism	Uncertainty Avoidance
Denmark	74	23
Norway	69	50
Sweden	71	29

Table 20 - Hofstede Variables for DK, NO & SWE (Hofstede 1984)

The board culture will be calculated based on an average of the dimension scores per director. It is realized that in instances where there are great differences, the average may not be a reliable measure, but given the previous assumption of overrepresentation of Scandinavian directors, and with little differences in dimension scores, it is believed that this will not flaw the data. As such,

$$BOARDUA = \frac{\sum DIRECTORS(UA)}{(\#MEMBERS - EMPLOYEES)}, \text{(equation 15)}$$

$$BOARDINDV = \frac{\sum DIRECTORS(INDV)}{(\#MEMBERS - EMPLOYEES)}, \text{(equation 16)}$$

Bank Size

Saunders et al. (1990) use bank size as a control variable in their study of bank risk taking due to the "too big to fail" argument (Battilossi 2009), as well as due to the possibilities for diversification (Rime 2001). Their utilization of size as an influence on risk is not uncommon, as Seok (2004) uses the same concept in his model of risk. This thesis will do the same though assessing the size of the bank as based in its total assets. It will utilize the measurement applied by Anderson et al. (2000) and Demsetz et al. (1997), namely;

$$BANKSIZE = \ln(total\ assets), \text{(equation 17)}$$

17.4 Survey Structure

Perceptions

Dear Helpful Person

Thank you very much for taking a little bit of time to help me complete my Master Thesis.

The following survey will ask you some very basic questions about your notion of ethics. I encourage you to answer the questions without over thinking the scenario. There are no right or wrong answers.

[21] Kreiser, P.M., Marino, L.D., Dickson, P. & Weaver, M.K. 2010, "Cultural Influences on Entrepreneurial Orientation: The Impact of National Culture on Risk Taking and Proactiveness in SMEs", Entrepreneurship: Theory & Practice, vol. 34, no. 5, pp. 959-983.

The survey will take 5-8 minutes. The survey is completely anonymous. **Thank you kindly in advance.** **There are 13 questions in this survey**

Basic Information	**Answer**
Which country are you from?	Dropdown
What is your age?	Dropdown
What is your gender?	Dropdown

Education	**Answer**
What is your current or most recently completed educational level?	High school Undergraduate Graduate MBA Other
What is your major?	Dropdown list of specializations
How many years have you spent at University?	Write answer (numerical)

Company Purpose and Compensation	**Answer**
What are the primary responsibilities of the company? (pick max. 3)	Max value for shareholders Satisfy customer needs Produce useful and high-quality goods/services Invest in employees Comply with regulation Create value for local community Be socially and environmentally responsible Collaborate with suppliers
Do you at any point during your career expect to be paid in either company shares and/or stock options	Yes/No

Vignettes	**Perception**	**Answer**
Vignette 1; A loan officer in a bank is paid commission on the loans made. Because of a	Morally Right Ethical	Definitely Not Probably Not

positive market situation more people have applied for loans. These people do not have acceptable credit ratings and will most likely default on the loans. Since the officer's bonus is tied to the value of loans made, he/she makes the loans anyways.	I would do the same My peers would do the same	Not Sure Probably Definitely
Vignette 2: A company has been hit by recession and has seen it as a necessity to lay off a significant amount of workers. The stock market reacts positively to this and at the end of the year, the company posts a sizable profit. The CEO and management earn a large bonus because of this.	Morally Right Ethical I would do the same My peers would do the same	Definitely Not Probably Not Not Sure Probably Definitely
Vignette 3: Another company reduces its environmental standards in order to produce a higher profit. The company still complies with all the relevant regulations and standards. The consequence will be increased pollution in the local community.	Morally Right Ethical I would do the same My peers would do the same	Definitely Not Probably Not Not Sure Probably Definitely

Human Assumptions	Answer
Humans are always rational?	Definitely Not Probably Not Not Sure Probably Definitely
Humans always act in their self-interest?	Definitely Not Probably Not Not Sure Probably Definitely
Humans only do good things for other people because it is in their self-interest?	Definitely Not Probably Not Not Sure Probably Definitely

17.5 Corporate Governance Summary Statistics

Standard Deviation

The average standard deviation for the entire sample was 2,83%, with the highest mean and range being present in Denmark. Norway was found to have the lowest average standard deviation of stock returns. This finding is not surprising given the fact that no Norwegian banks cracked during the crisis, as opposed to Denmark where a number of banks went under (e.g. Roskilde Bank and Amagerbanken). A T-stat comparison shows that the means of the Danish group with both the

Swedish and Norwegian are no different from each other. The Swedish banks however do exhibit different standard deviation from the Norwegian banks, but due to a sample size of 4 little value should be attributed this way.

Standard Deviation						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	,2191	,0049	,2239	,028340	,0279870
Denmark	37	,2191	,0049	,2239	,032695	,0356802
Norway	22	,0197	,0139	,0335	,020726	,0054649
Sweden	4	,0120	,0240	,0360	,029935	,0062620

Table 21 - Standard Deviation for Corporate Governance

T-test of Means of Standard Deviation							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	1,557	57	0,125	0,01197	0,00769	-0,00342	0,02736
DK-SWE	0,153	39	0,879	0,0027604	0,0180661	-0,0337817	0,0393024
NO-SWE	-3,041	24	0,006***	-0,0092088	0,0030280	-0,0154584	-0,0029592

Table 22 - T-test of Standard Deviation for Corporate Governance, *90%, **95%, ***99%

Loan/Deposit Ratios

For the Loan Deposit ratio both Sweden and Norway have higher ratios than Danish Banks, which stated in other words means that Danish banks lend less relative to deposits than their Scandinavian counterparties. When looking at the 95% statistical significance both Norway and Sweden are statistically different from Denmark, but not amongst each other.

Loan Deposit Ratio						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	1,7315	,6340	2,3656	1,368912	,3829713
Denmark	37	1,2887	,6340	1,9227	1,180017	,3192994
Norway	22	,9400	1,0717	2,0118	1,590322	,2615011
Sweden	4	,8905	1,4751	2,3656	1,898436	,3944427

Table 23 - Loan Deposit for Corporate Governance

T-test of Means of L/D							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	-5,092	57	0,000***	-0,41	0,08	-0,057	-0,25
DK-SWE	-4,191	39	0,000***	-0,71	0,17	-1,07	-0,37
NO-SWE	-2,013	24	0,055*	-0,31	0,20	-0,62	0,007

Table 24 - T-test of Loan Deposit Ratio for Corporate Governance, *90%, **95%, ***99%

Board Size

Boards generally consist of 6 members, excluding the employee representatives, but with a standard deviation of almost 2, a 95% confidence interval would allow for boards between the sizes of 2 to 10, as such there is a rather large variation as also seen by the range. The statistical significance is also present with Sweden having larger boards than Norway and Denmark. Norway also statistically has larger boards than Denmark.

Board Size						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	10	3	13	6,08	1,937
Denmark	37	7	3	10	5,27	1,387
Norway	22	5	4	9	6,64	1,399
Sweden	4	5	8	13	10,50	2,082

Table 25 - Board Size for Corporate Governance

T-test of Means of Board Size							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	-3,646	57	0,001***	-1,366	0,375	-2,116	-0,616
DK-SWE	-6,840	39	0,000***	-5,230	0,76	-6,776	-3,683
NO-SWE	-4,735	24	0,000***	-3,86	0,81	-5,548	-2,179

Table 26 - T-test of Board Size for Corporate Governance, *90%, **95%, ***99%

Independence and Less Than 3 Positions

When it comes to the independence of the boards as well as the degree of members with fewer than 3 simultaneous positions it can be seen that all three countries are more or less similar in their degree of independence. In Norway, it is more typical to observe that the CEO is a member of the board, as opposed to Denmark and Sweden where there is strict separation. The main factor causing a loss of independence across all banks is the board member tenure. Here a board member is no longer

independent if he/she has served more than 12 years on the board (Beckett et al. 2011). Statistically, the boards in Denmark, Norway and Sweden show no difference in their degree of independence.
In both Denmark and Norway roughly 50 percent of the directors hold less than 3 positions simultaneously, whereas in Sweden this number is significantly less[22]. These findings are supported statistically where the Swedish directors in general hold more positions than both Norwegian and Danish, who hold the same statistically speaking.

Independence						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	,7500	,2500	1,0000	,800680	,2040746
Denmark	37	,7500	,2500	1,0000	,785972	,2367839
Norway	22	,4286	,5714	1,0000	,841234	,1360166
Sweden	4	,4135	,4615	,8750	,713680	,1832187

Table 27 - Independence for Corporate Governance

Less Than 3 Positions						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	1,0000	,0000	1,0000	,515234	,2491759
Denmark	37	1,0000	,0000	1,0000	,531499	,2536730
Norway	22	,8889	,1111	1,0000	,535768	,2385661
Sweden	4	,2846	,1000	,3846	,251836	,1170817

Table 28 - Less than 3 for Corporate Governance

T-test of Means of Independence							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	-0,999	57	0,322	-0,055	0,055	-0,166	0,055
DK-SWE	0,589	39	0,559	0,072	0,122	-0,175	0,320
NO-SWE	1,644	24	0,113	0,127	0,077	-0,326	0,287

Table 29 - T-test of Independence for Corporate Governance, *90%, **95%, ***99%

[22] Swedish listed banks are on average larger than Danish and Norwegian. Larger banks in general exhibit a higher degree of "high profile" members who are likely to hold numerous positions at the same time.

T-test of Means of Less Than 3 positions							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	-0,064	57	0,949	-0,004	0,006	-0,138	0,129
DK-SWE	2,161	39	0,037**	0,2796	0,1294	0,0179	0,541
NO-SWE	2,302	24	0,030**	0,2839	0,1233	0,0293	0,538

Table 30 - T-test of Less Than 3 Positions for Corporate Governance, *90%, **95%, ***99%

Knowledge, Education, Employment and Board Experience

The average level of the composite measure for knowledge is 40.53%, with Sweden being the country with the highest measure, and the only group that is statically significant. The picture with regards to education is more interesting as directors in both Sweden and Norway are more educated in finance and accounting, respectively 41.3% and 21.6%, and also statistically significant. This trend can also be seen in employment history of board members, but here only the relationship higher Swedish levels in comparison to Denmark are statistically relevant. With regards to board experience all three countries exhibit high levels of board experience for all directors with range of 84 to 94%, with the difference between Denmark and Norway being the only significant one.

Knowledge						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	,5333	,2000	,7333	,405346	,1155184
Denmark	37	,5333	,2000	,7333	,379376	,1088646
Norway	22	,3631	,2083	,5714	,416745	,0995859
Sweden	4	,2750	,4583	,7333	,582882	,1133599

Table 31 - Knowledge for Corporate Governance

Education						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	,0000	,7143	,152547	,2030449	,2491759
Denmark	37	,6667	,0000	,6667	,086712	,1658250
Norway	22	,7143	,0000	,7143	,215909	,2175361
Sweden	4	,2885	,2500	,5385	,413024	,1320547

Table 32 - Education for Corporate Governance

Employment						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	,7000	,0000	,7000	,169962	,1825523
Denmark	37	,6000	,0000	,6000	,130727	,1711017
Norway	22	,5714	,0000	,5714	,196014	,1650054
Sweden	4	,5462	,1538	,7000	,389598	,2419601

Table 33 - Employment for Corporate Governance

Board Experience						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	,7143	,2857	1,0000	,893531	,1476470
Denmark	37	,4000	,6000	1,0000	,920689	,1128288
Norway	22	,7143	,2857	1,0000	,838312	,1921878
Sweden	4	,1250	,8750	1,0000	,946023	,0638626

Table 34 - Board Experience for Corporate Governance

T-test of Means of Knowledge							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	-1,315	57	0,194	-0,037	0,0284	-0,094	0,0195
DK-SWE	-3,540	39	0,001***	-0,203	0,057	-0,319	-0,087
NO-SWE	-3,014	24	0,006***	-0,166	0,0551	-0,2799	-0,052

Table 35 - T-test of Knowledge for Corporate Governance, *90%, **95%, ***99%

T-test of Means of Education							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	-2,572	57	0,013**	-0,129	0,0502	-0,229	-0,0286
DK-SWE	-3,792	39	0,001***	-0,326	0,0860	-0,500	-0,152
NO-SWE	-1,737	24	0,095*	-0,197	0,1134	-0,431	0,0371
T-test of Means of Employment							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	-1,436	39	0,156	-0,065	0,0454	-0,156	0,0257
DK-SWE	-2,770	39	0,009***	-0,258	0,0934	-0,448	-0,698
NO-SWE	-2,018	24	0,055*	-0,193	0,0959	-0,391	0,004

Table 36 T-test of Education and employment for Corporate Governance, *90%, **95%, ***99%

T-test of Means of Board Experience							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	2,080	57	0,042**	0,0823	0,0396	0,0030	0,0161
DK-SWE	-0,438	39	0,664	-0,025	0,0578	-0,142	0,0916
NO-SWE	-1,094	24	0,285	-0,107	0,0984	-0,310	0,0955

Table 37 - T-test of Board Experience for Corporate Governance, *90%, **95%, ***99%

Board Shareholding

The information on board shareholding in ultimo 2006 was unreliable at best, as numerous banks did not supply the exact amount of shares for directors, given the fact that they did supply the information at all. Only 37 banks provided information about board shareholdings, translating into

58%. Of these banks, 40% have reported that no board members hold shares. Additionally, when regressing the available data on board shareholdings, both in the full model and through backward elimination, the variable comes up insignificant, and is removed at an early stage in the backward process.

Age and Female Directors

The boards are generally the same age across all three countries, with the average age varying from 52.6 to 55.6 years. The difference between Norway and Denmark is the only statistically significant one; meaning that Danish boards are in general older. On the female side, it is observed not surprisingly that the degree of female directors is larger in both Norway and Sweden, also with statistically significance at 99%.

Age						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	16,4286	47,5714	64,0000	54,556921	3,6878770
Denmark	37	15,2000	48,8000	64,0000	55,621557	3,4472436
Norway	22	11,0286	47,5714	58,6000	52,643831	3,5453616
Sweden	4	6,9318	52,2500	59,1818	55,231031	3,0103522

Table 38 - Age for Corporate Governance

Female Directors						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	,7500	,0000	,7500	,173322	,1827311
Denmark	37	,4000	,0000	,4000	,057239	,1115723
Norway	22	,5833	,1667	,7500	,347547	,1356429
Sweden	4	,1750	,2000	,3750	,288855	,0728723

Table 39 - Female Directors for Corporate Governance

T-test of Means of Age							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	3,174	57	0,002***	2,977	0,937	1,099	4,855
DK-SWE	0,217	39	0,829	0,390	1,797	-3,245	4,026
NO-SWE	-1,367	24	0,184	-2,587	1,893	-6,494	1,320

T-test of Means of Female Directors							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	-8,912	39	0,000***	-0,290	0,0325	-0,355	-0,225
DK-SWE	-4,034	39	0,000***	-0,231	0,0574	-0,347	-0,115
NO-SWE	0,834	24	0,413	0,0586	0,0703	-0,086	0,2039

Table 40 - T-test of Age and Female Director % for Corporate Governance, *90%, **95%, ***99%

Individualism and Uncertainty Avoidance

The two Hofstede parameters Individualism and Uncertainty avoidance exhibits very low degrees of standard deviation within the respective countries. An example can be seen with Denmark where the BODs are completely Danish, besides Grønlandsbanken[23]. The overall standard deviation is therefore largely affected by the cross-cultural differences and not due to intra board differences. Sweden is the country with the "largest" international representation on their boards. Not surprisingly these differences are all significant.

Individualism

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	5,0000	69,0000	74,0000	72,036033	2,4110080
Denmark	37	,0000	74,0000	74,0000	74,000000	,0000000
Norway	22	,7143	69,0000	69,7143	69,032468	,1522862
Sweden	4	3,7000	69,0000	72,7000	70,388942	1,6205735

Table 41 - Individualism for Corporate Governance

Uncertainty Avoidance

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	36,1250	32,8750	69,0000	60,428335	10,8247158
Denmark	37	,0000	69,0000	69,0000	69,000000	,0000000
Norway	22	2,7143	50,0000	52,7143	50,123377	,5786877
Sweden	4	15,3977	32,8750	48,2727	37,817701	7,2589431

Table 42 - Uncertainty Avoidance for Corporate Governance

T-test of Means of Individualism

Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	199,615	57	0,000***	4,967	0,024	4,917	5,017
DK-SWE	15,264	39	0,000***	3,611	0,236	3,132	4,089
NO-SWE	-4,227	24	0,000***	-1,356	0,320	-2,018	-0,694

T-test of Means of Uncertainty Avoidance

Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	199,615	39	0,000***	18,876	0,094	18,68	19,06
DK-SWE	29,427	39	0,000***	31,182	1,059	29,03	33,32
NO-SWE	8,631	24	0,000***	12,305	1,425	9,363	15,24

Table 43 - T-test of Individualism and Uncertainty Avoidance for Corporate Governance, , *90%, **95%, ***99%

[23] Grønlandsbanken has both directors from Greenland and the Faroe Island, but since Hofstede did not investigate these areas, this bank has been removed from this specific analysis.

Stock Option and Share Programs

As stock option and share programs were qualified as dummy variables, the mean is the percentage of listed banks that use such programs. Norwegian banks are less inclined to use these programs, than both Danish and especially Swedish banks. The only statistical significant difference can be found between the Norwegian and Swedish banks.

Options and Shares						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total	63	1	0	1	,35	,481
Denmark	37	1	0	1	,38	,492
Norway	22	1	0	1	,23	,429
Sweden	4	1	0	1	,75	,500

Table 44 - Stock Programs for Corporate Governance

T-test of Means of Stocks							
Equal Variances Assumed	T	Df	Sig (2-tail)	Mean dif.	Std. Error	Confidence Interval (95%)	
						Lower	Upper
DK-NO	1,195	57	0,237	0,151	0,126	-0,102	0,404
DK-SWE	-1,434	39	0,159	-0,372	0,259	-0,896	0,153
NO-SWE	-2,193	24	0,038**	-0,523	0,238	-1,015	-0,031

Table 45 - T-test of Dummy Shares for Corporate Governance, *90%, **95%, ***99%

17.6 Collinearity Statistics Full Models

Model 1 & 3	Collinearity	
	Tolerance	VIF
INDEP	0,752	1,330
BOARDSIZE	0,354	2,828
3LESS	0,593	1,686
KNOWLEDGE	0,494	2,022
AGE	0,761	1,315
FEMALE	0,363	2,753
BOARDUA	0,131	7,642
BOARDINDV	0,140	7,150
DummyShares	0,669	1,495
BANKSIZE	0,207	4,823

Table 46 - Collinearity of Model 1 & 3

Model 2 & 4	Collinearity	
	Tolerance	VIF
INDEP	0,742	1,347
BOARDSIZE	0,302	3,315
3LESS	0,544	1,839
EDUCATION	0,331	3,017
EMPLOYMENT	0,445	2,249
BOARDEXPERIENCE	0,695	1,438
AGE	0,639	1,565
FEMALE	0,360	2,776
BOARDUA	0,127	7,872
BOARDINDV	0,137	7,318
DummyShares	0,652	1,533
BANKSIZE	0,206	4,858

Table 47 - Collinearity of Model 2 & 4,

17.7 Collinearity Statistics Backward Model 1 to 4

Model 1	Collinearity	
	Tolerance	VIF
BOARDSIZE	0,930	1,075
DummyShares	0,930	1,075

Table 48 - Collinearity Backward Model 1

Model 2	Collinearity	
	Tolerance	VIF
EDUCATION	0,574	1,743
EMPLOYMENT	0,567	1,762
DummyShares	0,833	1,200

Table 49 - Collinearity Backward Model 2

Model 3	Collinearity	
	Tolerance	VIF
INDEP	0,802	1,247
BOARDSIZE	0,386	2,589
KNOWLEDGE	0,512	1,955
AGE	0,768	1,302
FEMALE	0,371	2,696
BOARDINDV	0,382	2,619
BANKSIZE	0,311	3,217

Table 50 - Collinearity Backward Model 3

Model 4	Collinearity	
	Tolerance	VIF
INDEP	0,807	1,239
BOARDSIZE	0,351	2,853
EDUCATION	0,448	2,232
AGE	0,683	1,464
FEMALE	0,369	2,713
BOARDINDV	0,357	2,801
DummyShares	0,670	1,493
BANKSIZE	0,349	2,864

Table 51 - Collinearity Backward Model 4

17.8 Board Size, Education, Employment, Shares & Bank Size

Board Size	Coefficient	P-value
BANKSIZE	0,684	0,000***
R^2/ Adj R^2		0,468/0,459
F-statistics/sig		53,580/0,000***

Table 52 - Influence of Bank size on Board Size, *90%, **95%, ***99%

Education	Coefficient	P-value
BANKSIZE	0,571	0,000***
R^2/ Adj R^2		0,326/0,315
F-statistics/sig		29,453/0,000***
Employment	Coefficient	P-value
BANKSIZE	0,579	0,000***
R2/ Adj R2		0,335/0,324
F-statistics/sig		30,685/0,000***

Table 53 - Influence of Bank size on Education and Employment , *90%, **95%, ***99%

DummyShares	Coefficient	P-value
BANKSIZE	0,486	0,000***
R^2/ Adj R^2		0,236/0,223
F-statistics/sig		18,815/0,000***

Table 54 - Influence of Bank size on DummyShares *90%, **95%, ***99%

17.9 Control for Board Size with Education, Employment & Shares

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,032	,025		1,246	,218
	EDUCATION	-,065	,024	-,474	-2,690	,009
	EMPLOY	,063	,025	,414	2,522	,014
	BOARD	-,010	,025	-,054	-,408	,685
	TOTAL ASSETS	-5,784E-5	,002	-,004	-,025	,980
	STOCKS	,016	,008	,277	2,025	,048
2	(Constant)	,031	,022		1,421	,161
	EDUCATION	-,066	,022	-,476	-2,921	,005
	EMPLOY	,063	,024	,412	2,640	,011
	BOARD	-,010	,024	-,054	-,439	,662
	STOCKS	,016	,008	,276	2,140	,037
3	(Constant)	,022	,005		4,694	,000
	EDUCATION	-,062	,021	-,453	-2,952	,005
	EMPLOY	,062	,024	,406	2,627	,011
	STOCKS	,016	,007	,271	2,124	,038

a. Dependent Variable: Std dev

Table 55 - Backward Elimination of Board Size, Education, Employment & Dummy Shares, *90%, **95%, ***99%

17.10 Sample Nationality

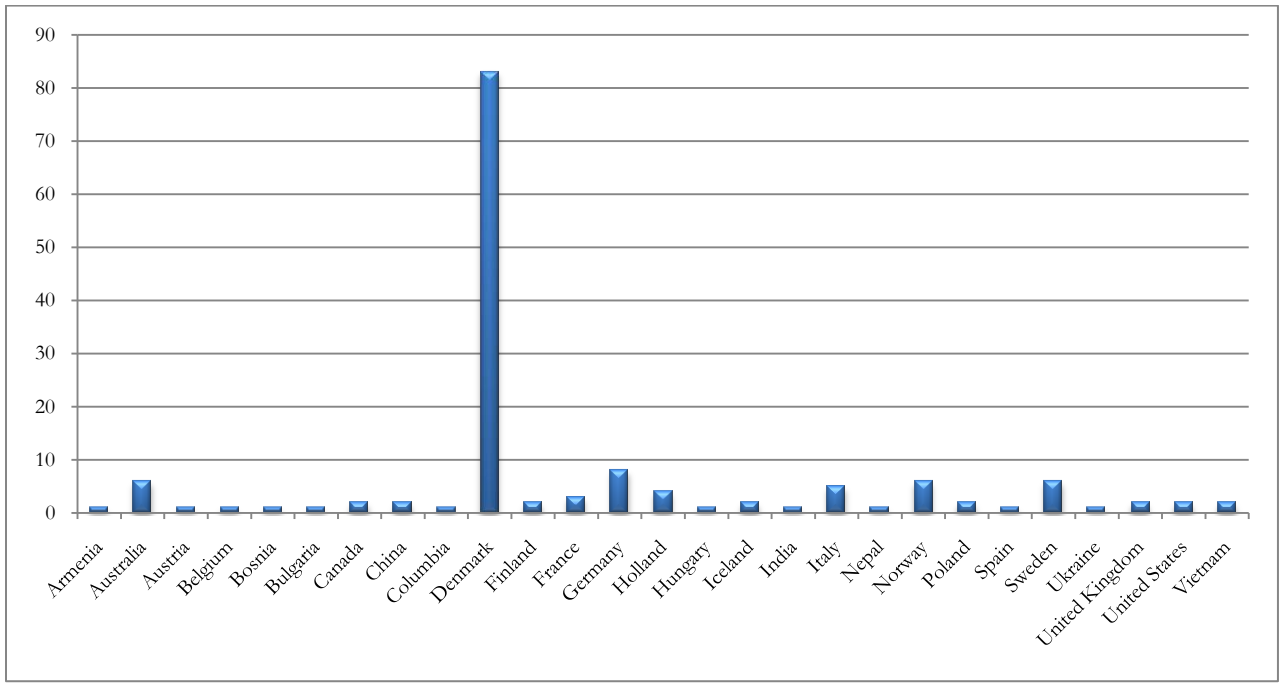

Figure 19 - Nationalities in Sample of Survey

17.11 Sample Gender

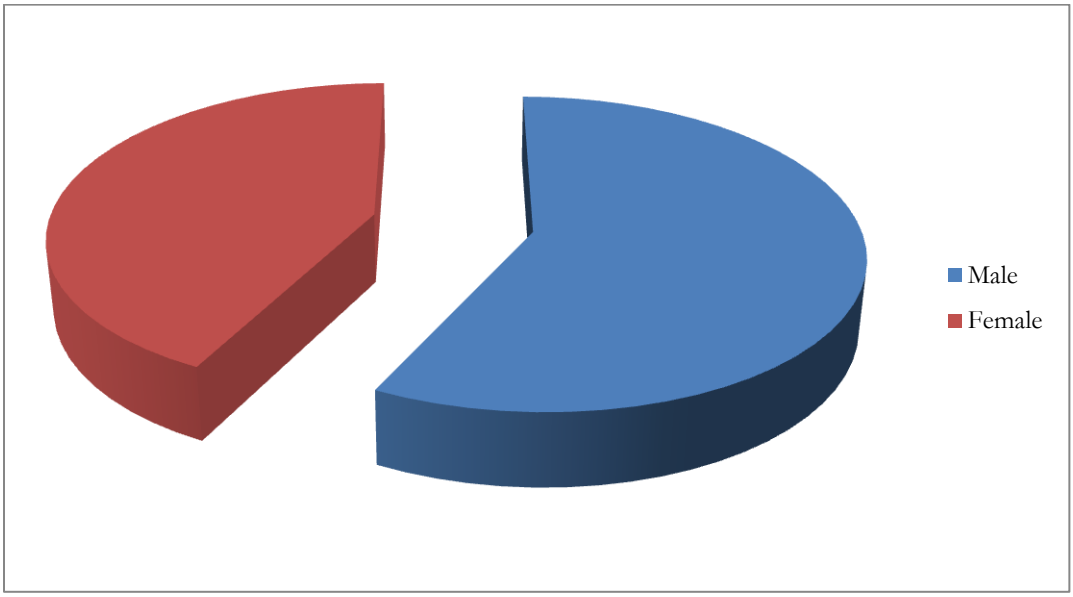

Figure 207 - Gender Breakdown for Survey

17.12 Purpose of the Company Additional Stats

Numerical									
	ALL			Business			Other		
Primary Purpose	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3
Max Value for Shareholders	63	17	18	55	14	13	8	3	5
Satisfy Customer Needs	43	36	25	21	**28**	17	22	8	8
Produce useful and high-quality goods/services	20	30	21	10	16	14	10	14	7
Invest in employees	5	13	26	3	6	21	2	7	5
Comply with regulation	5	19	9	3	10	6	2	9	3
Create value for local community	4	12	12	3	8	6	1	4	6
Be socially and environmentally responsible	8	17	33	4	15	21	4	2	12
Collaborate with suppliers	0	4	4	0	2	1	0	2	3
Sum	148	148	148	99	99	99	49	49	49

Percentage	ALL			Business			Other		
	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3
Max Value for Shareholders	43%	11%	12%	56%	14%	13%	16%	6%	10%
Satisfy Customer Needs	29%	24%	17%	21%	28%	17%	45%	16%	16%
Produce useful and high-quality goods/services	14%	20%	14%	10%	16%	14%	20%	29%	14%
Invest in employees	3%	9%	18%	3%	6%	21%	4%	14%	10%
Comply with regulation	3%	13%	6%	3%	10%	6%	4%	18%	6%
Create value for local community	3%	8%	8%	3%	8%	6%	2%	8%	12%
Be socially and environmentally responsible	5%	11%	22%	4%	15%	21%	8%	4%	24%
Collaborate with suppliers	0%	3%	3%	0%	2%	1%	0%	4%	6%

Table 56 - Numerical and Percentage for Purpose of Company

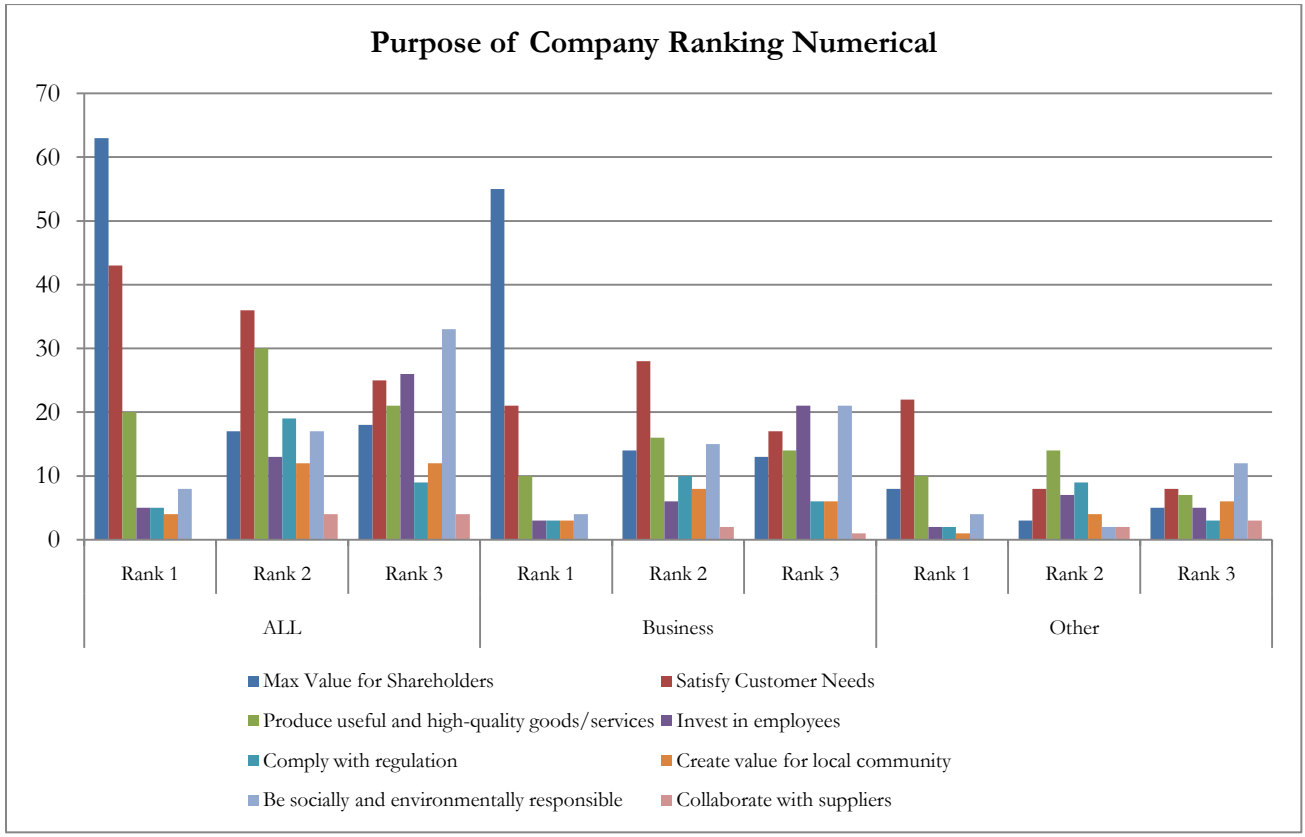

Figure 21 - Purpose of Company Numerical Representation

17.13 Compensation and Ranking, Grouped by Education

Primary Responsibility for the Firm and Compensation										
			Max Value for Shareholders	Satisfy Customer Needs	Produce useful and high-quality goods/services	Invest in employ-eyes	Comply with regulation	Create value for local community	Be socially and environmentally responsible	**Total**
Other	**Compensation**	**No**	4	17	8	0	2	1	4	36
		Yes	4	5	2	2	0	0	0	13
		Total	8	22	10	2	2	1	4	49
Business	**Compensation**	**No**	4	1	3	0	1	3	0	12
		Yes	51	20	7	3	2	0	4	87
		Total	55	21	10	3	3	3	4	99

Table 57 - Grouping of Primary Ranking and Compensation

X^2-Test	OTHER			BUSINESS		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)
Pearsons Chi-Square	10,079	6	0,098*	29,265	6	0,000***
Likelihood Ratio	12,016	6	0,062*	20,381	6	0,002***

Table 58 - Chi Square of Primary Ranking and Compensation, *90%, **95%, ***99%

17.14 Humanistic Assumptions in Numbers

Numbers									
	RATIONAL			SELF-INTEREST			ALTRUISTIC		
	ALL	**BUS**	**OTHER**	**ALL**	**BUS**	**OTHER**	**ALL**	**BUS**	**OTHER**
Definitely not	91	60	31	14	7	7	21	14	7
Probably not	30	23	7	34	23	11	30	18	12
Not sure	3	2	1	11	5	6	15	9	6
Probably	6	3	3	56	43	13	44	32	12
Definitely	2	1	1	17	11	6	22	16	6
Sum	132	89	43	132	89	43	132	89	43

Percentage									
	RATIONAL			SELF-INTEREST			ALTRUISTIC		
	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER
Definitely not	69%	67%	72%	11%	8%	16%	16%	16%	16%
Probably not	23%	26%	16%	26%	26%	26%	23%	20%	28%
Not sure	2%	2%	2%	8%	6%	14%	11%	10%	14%
Probably	5%	3%	7%	42%	48%	30%	33%	36%	28%
Definitely	2%	1%	2%	13%	12%	14%	17%	18%	14%

Table 59 - Humanistic Assumptions in number and percentage

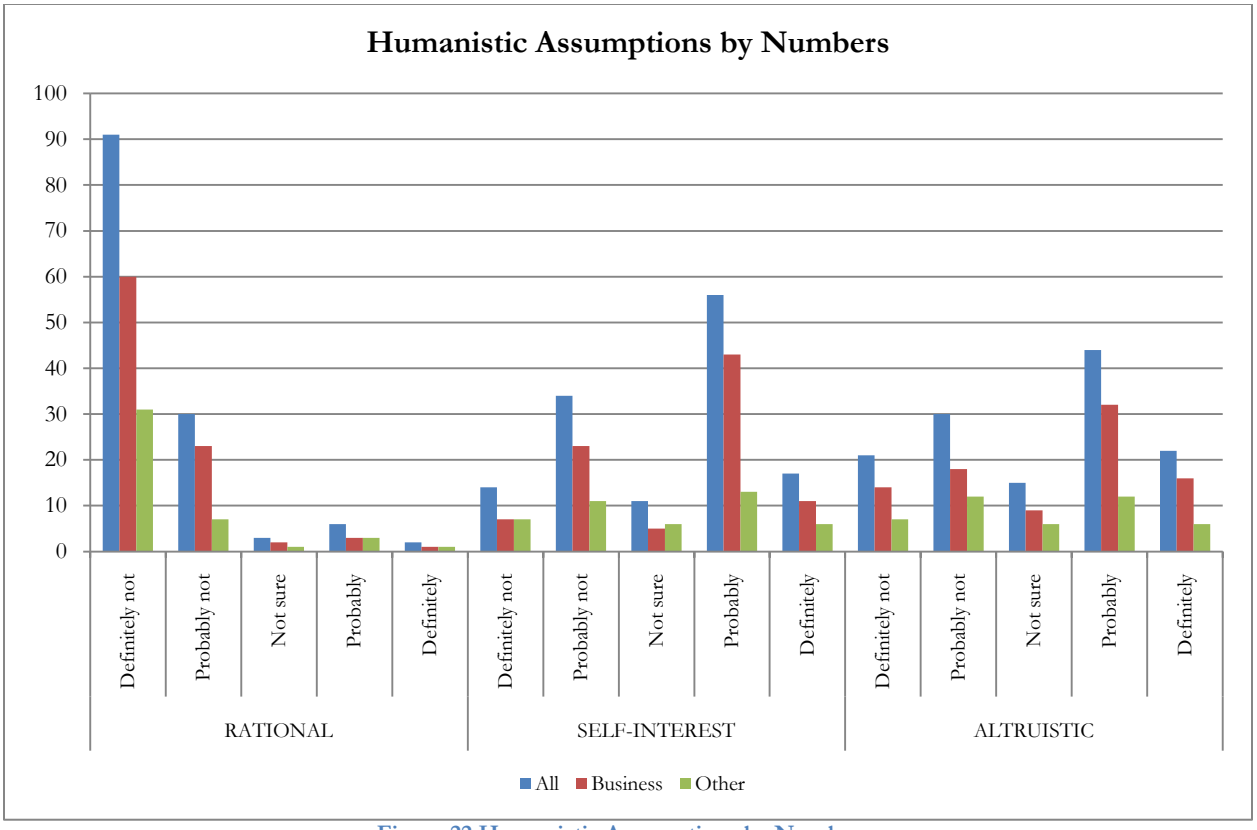

Figure 22 Humanistic Assumptions by Numbers

17.14.1 Intragroup test of responses – Rationality

Responses of "Definitely not" and "Probably not" are grouped as well as "Probably" and "Definitely" are also grouped. The two groups are compared for differences in size.

X^2-Test	Intragroup test of Rationality		
	Value	Df	Sig (2-sided)
Pearsons Chi-Square	264,000	8	0,000***
Likelihood Ratio	88,616	8	0,000***

Table 60 - Chi Square test of Intragroup Rationality, *90%, **95%, ***99%

17.14.2 Intragroup test of responses – Self-interest

X^2-Test	Intragroup test of Self-Interest		
	Value	Df	Sig (2-sided)
Pearsons Chi-Square	264,000	8	0,000***
Likelihood Ratio	238,264	8	0,000***

Table 61 - Chi Square test of Intragroup Self Interest, *90%, **95%, ***99%

17.14.3 Intragroup test of responses – Altruism

X^2-Test	Intragroup test of Altruism		
	Value	Df	Sig (2-sided)
Pearsons Chi-Square	264,000	8	0,000***
Likelihood Ratio	253,738	8	0,000***

Table 62 - Chi Square of Intragroup Altruism, *90%, **95%, ***99%

17.15 Vignette 1

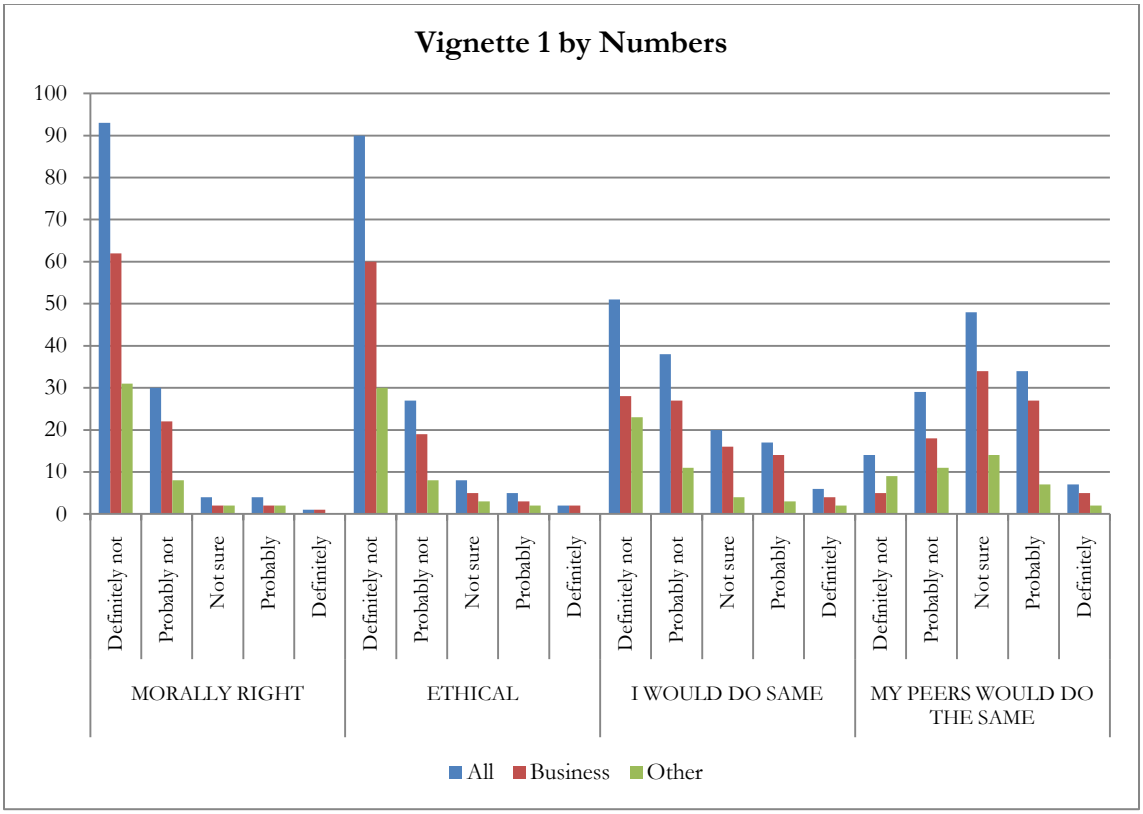

Figure 23 - Vignette 1 - by numbers

Vignette 1

Numbers

	MORALLY RIGHT			ETHICAL			I WOULD DO SAME			PEERS WOULD DO SAME		
	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER
Definitely not	93	62	31	90	60	30	51	28	23	14	5	9
Probably not	30	22	8	27	19	8	38	27	11	29	18	11
Not sure	4	2	2	8	5	3	20	16	4	48	34	14
Probably	4	2	2	5	3	2	17	14	3	34	27	7
Definitely	1	1	0	2	2	0	6	4	2	7	5	2
Sum	132	89	43	132	89	43	132	89	43	132	89	43

Percentage

	MORALLY RIGHT			ETHICAL			I WOULD DO SAME			PEERS WOULD DO SAME		
	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER
Definitely not	70%	70%	72%	68%	67%	70%	39%	31%	53%	11%	6%	21%
Probably not	23%	25%	19%	20%	21%	19%	29%	30%	26%	22%	20%	26%
Not sure	3%	2%	5%	6%	6%	7%	15%	18%	9%	36%	38%	33%
Probably	3%	2%	5%	4%	3%	5%	13%	16%	7%	26%	30%	16%
Definitely	1%	1%	0%	2%	2%	0%	5%	4%	5%	5%	6%	5%

Table 63 - Vignette 1 - number and percentage

17.15.1 Difference between Morally Right & My Actions

Business Only

Wilcoxen Signed Ranks Test (WSR) - Morally Right vs. My Actions				
		N	Mean Rank	Sum of Ranks
Vignette 1 (I would) – Vignette 1 (Morally)	Negative Ranks	4[a]	16,50	66,00
	Positive Ranks	51[b]	28,90	1474,00
	Ties	34[c]		
	Total	89		

a. Vignette 1 (My actions) < Vignette 1 (Morally right)
b. Vignette 1 (My actions) >Vignette 1 (Morally right)
c. Vignette 1 (My actions) = Vignette 1 (Morally right)

Test Statistics - WSR Test – Vignette 1	
	Vignette 1 (I would) – Vignette 1 (Morally)
Z	-6,059
Asymp. Sig. (2-tailed)	0,000***

Table 64 - Wilcoxen Signed Ranks Test Morally Right vs. My Actions - Vignette 1, Business Major, *90%, **95%, ***99%

Sign Test - Vignette 1- Morally Right vs. My Actions – Frequencies		
		N
Vignette 1 (I would) – Vignette 1 (Morally)	Negative Differences[a]	4
	Positive Differences[b]	51
	Ties[c]	34
	Total	89

a. Vignette 1 (My actions) < Vignette 1 (Morally right)
b. Vignette 1 (My actions) >Vignette 1 (Morally right)
c. Vignette 1 (My actions) = Vignette 1 (Morally right)

Test Statistics - Sign Test – Vignette 1	
	Vignette 1 (I would) – Vignette 1 (Morally)
Z	-6,203
Asymp. Sig. (2-tailed)	0,000***

Table 65 - Sign Test - Vignette 1, Business Major, *90%, **95%, ***99%

Average Morally Right	Average I would do same	Average Difference
1,404	1,018	1,69

Table 66 - Average Change for Morality to Action, Vignette 1, Business major

Other

WSR Test - Morally Right vs. My Actions				
		N	Mean Rank	Sum of Ranks
Vignette 1 (I would) – Vignette 1 (Morally)	Negative Ranks[a]	3	10,00	30,00
	Positive Ranks[b]	16	10,00	160,00
	Ties[c]	24		
	Total	43		

a. Vignette 1 (My actions) < Vignette 1 (Morally right)
b. Vignette 1 (My actions) >Vignette 1 (Morally right)
c. Vignette 1 (My actions) = Vignette 1 (Morally right)

Vignette 1 - Test Statistics WSR Test	
	Vignette 1 (I would) – Vignette 1 (Morally)
Z	-2,724
Asymp. Sig. (2-tailed)	0,006***

Table 67 - Wilcoxen Signed Ranks Test Morally Right vs. My Actions - Vignette 1, Other major *90%, **95%, ***99%

Sign Test - Vignette 1- Morally Right vs. My Actions – Frequencies		
		N
Vignette 1 (I would) – Vignette 1 (Morally)	Negative Differences[a]	3
	Positive Differences[b]	16
	Ties[c]	24
	Total	43

a. Vignette 1 (My actions) < Vignette 1 (Morally right)
b. Vignette 1 (My actions) >Vignette 1 (Morally right)
c. Vignette 1 (My actions) = Vignette 1 (Morally right)

Test Statistics Sign Test – Vignette 1	
	Vignette 1 (I would) – Vignette 1 (Morally)
Asymp. Sig. (2-tailed)	0,004***

Table 68 - Sign Test - Vignette 1, Other Major, *90%, **95%, ***99%

Average Morally Right	Average I would do same	Average Difference
1,418	1,837	1,17

Table 69 - Average Change for Morality to Action, Vignette 1, Other major

17.15.2 Difference between Morally Right & Ethical

WSR - Vignette 1 - Morally Right vs. Ethical

		N	Mean Rank	Sum of Ranks
Vignette 1 (Ethical) – Vignette 1 (Morally)	Negative Ranks[a]	13	16,58	215,50
	Positive Ranks[b]	20	17,27	345,50
	Ties[c]	99		
	Total	132		

a. Vignette 1 (Ethical) < Vignette 1 (Morally right)
b. Vignette 1 (Ethical) >Vignette 1 (Morally right)
c. Vignette 1 (Ethical) = Vignette 1 (Morally right)

Vignette 1 - Test Statistics WSR Test

	Vignette 1 (Ethical) – Vignette 1 (Morally)
Z	-1,228
Asymp. Sig. (2-tailed)	0,220

Table 70 - Wilcoxen Signed Ranks Test, Vignette 1, Moral to Ethical, *90%, **95%, ***99%

17.16 Vignette 2

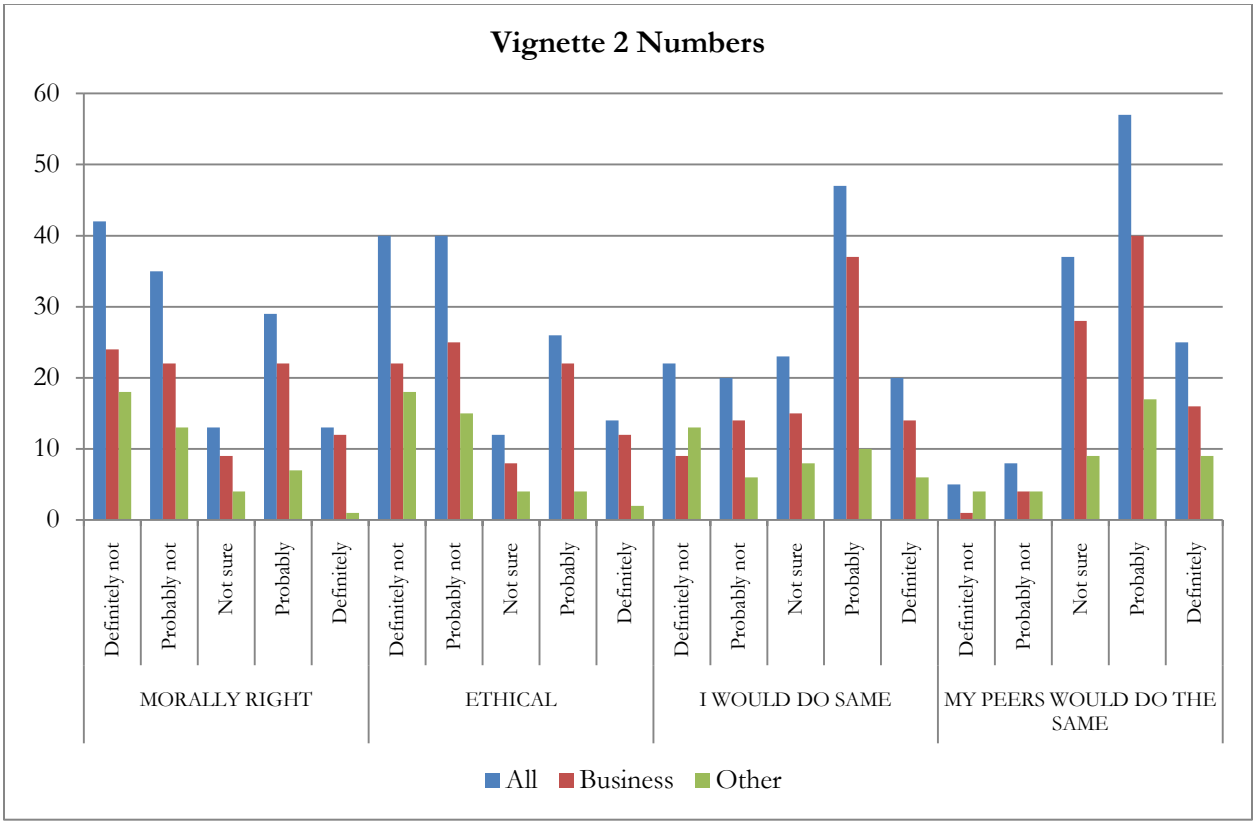

Figure 248 - Vignette 2 in Numbers

Vignette 2

	MORALLY RIGHT			ETHICAL			I WOULD DO SAME			PEERS WOULD DO SAME		
	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER
Definitely not	42	24	18	40	22	18	22	9	13	5	1	4
Probably not	35	22	13	40	25	15	20	14	6	8	4	4
Not sure	13	9	4	12	8	4	23	15	8	37	28	9
Probably	29	22	7	26	22	4	47	37	10	57	40	17
Definitely	13	12	1	14	12	2	20	14	6	25	16	9
	132	89	43	132	89	43	132	89	43	132	89	43

	MORALLY RIGHT			ETHICAL			I WOULD DO SAME			PEERS WOULD DO SAME		
	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER
Definitely not	32%	27%	42%	30%	25%	42%	17%	10%	30%	4%	1%	9%
Probably not	27%	25%	30%	30%	28%	35%	15%	16%	14%	6%	4%	9%
Not sure	10%	10%	9%	9%	9%	9%	17%	17%	19%	28%	31%	21%
Probably	22%	25%	16%	20%	25%	9%	36%	42%	23%	43%	45%	40%
Definitely	10%	13%	2%	11%	13%	5%	15%	16%	14%	19%	18%	21%

Table 71 - Vignette 2 Number and Percentages

17.16.1 Difference between Morally Right & My Actions

Business Only

WSR Test - Vignette 2 - Morally Right vs. My Actions				
		N	Mean Rank	Sum of Ranks
Vignette 2 (I would) – Vignette 2 (Morally)	Negative Ranks[a]	8	18,38	147,00
	Positive Ranks[b]	40	25,73	1029,00
	Ties[c]	41		
	Total	89		

a. Vignette 2 (My actions) < Vignette 2 (Morally right)
b. Vignette 2 (My actions) >Vignette 2 (Morally right)
c. Vignette 2 (My actions) = Vignette 2 (Morally right)

Vignette 2 - Test Statistics WSR Test	
	Vignette 2 (I would) – Vignette 2 (Morally)
Z	-4,633
Asymp. Sig. (2-tailed)	0,000***

Table 72 - Wilcoxen Signed Ranks Test Morally Right vs. My Actions - Vignette 2, Business Major, *90%, **95%, ***99%

Sign Test - Vignette 2 - Morally Right vs. My Actions – Frequencies		
		N
Vignette 2 (I would) – Vignette 2 (Morally)	Negative Differences[a]	8
	Positive Differences[b]	40
	Ties[c]	41
	Total	89

a. Vignette 2 (My actions) < Vignette 2 (Morally right)
b. Vignette 2 (My actions) >Vignette 2 (Morally right)
c. Vignette 2 (My actions) = Vignette 2 (Morally right)

Vignette 2 - Test Statistics Sign Test	
	Vignette 2 (I would) – Vignette 2 (Morally)
Asymp. Sig. (2-tailed)	0,000***

Table 73 - Sign Test Morally Right vs. My Actions - Vignette 2, Business Major, *90%, **95%, ***99%

Average Morally Right	Average I would do same	Average Difference

2,730	3,370	0,6404

Table 74 - Average Change for Morality to Action, Vignette 2, Business major

Other

WSR Test - Vignette 2 - Morally Right vs. My Actions

		N	Mean Rank	Sum of Ranks
Vignette 2 (I would) – Vignette 2 (Morally)	Negative Ranks[a]	4	11,50	46,00
	Positive Ranks[b]	21	13,29	279,00
	Ties[c]	18		
	Total	43		

a. Vignette 2 (My actions) < Vignette 2 (Morally right)
b. Vignette 2 (My actions) >Vignette 2 (Morally right)
c. Vignette 2 (My actions) = Vignette 2 (Morally right)

Vignette 2 - Test Statistics WSR Test

	Vignette 2 (I would) – Vignette 2 (Morally)
Z	-3,221
Asymp. Sig. (2-tailed)	0,001***

Table 75 - Wilcoxen Signed Ranks Test Morally Right vs. My Actions - Vignette 2, Other Major, *90%, **95%, ***99%

Sign Test - Vignette 2 - Morally Right vs. My Actions – Frequencies

		N
Vignette 2 (I would) – Vignette 2 (Morally)	Negative Differences[a]	4
	Positive Differences[b]	21
	Ties[c]	18
	Total	43

a. Vignette 2 (My actions) < Vignette 2 (Morally right)
b. Vignette 2 (My actions) >Vignette 2 (Morally right)
c. Vignette 2 (My actions) = Vignette 2 (Morally right)

Vignette 2 - Test Statistics Sign Test

	Vignette 2 (I would) – Vignette 2 (Morally)
Asymp. Sig. (2-tailed)	0,001***

Table 76 - Sign Test Morally Right vs. My Actions - Vignette 2, Other Major, *90%, **95%, ***99%

Average Morally Right	Average I would do same	Average Difference
2,069	2,767	0,6976

Table 77 - Average Change for Morality to Action, Vignette 2, Other major

17.16.2 Difference between Morally Right & Ethical

WSR - Vignette 2 - Morally Right vs. Ethical

		N	Mean Rank	Sum of Ranks
Vignette 2 (Ethical) – Vignette 2 (Morally)	Negative Ranks[a]	18	16,39	295,00
	Positive Ranks[b]	15	17,73	266,00
	Ties[c]	99		
	Total	132		

a. Vignette 2 (Ethical) < Vignette 2 (Morally right)
b. Vignette 2 (Ethical) >Vignette 2 (Morally right)
c. Vignette 2 (Ethical) = Vignette 2 (Morally right)

Vignette 2 - Test Statistics WSR Test

	Vignette 2 (Ethical) – Vignette 2 (Morally)
Z	-0,266
Asymp. Sig. (2-tailed)	0,790

Table 78 - Wilcoxen Signed Ranks Test, Vignette 2, Moral to Ethical, *90%, **95%, ***99%

Sign Test - Vignette 2 - Morally Right vs. Ethical – Frequencies

		N
Vignette 2 (Ethical) – Vignette 2 (Morally)	Negative Differences[a]	18
	Positive Differences[b]	15
	Ties[c]	99
	Total	132

a. Vignette 2 (Ethical) < Vignette 2 (Morally right)
b. Vignette 2 (Ethical) >Vignette 2 (Morally right)
c. Vignette 2 (Ethical) = Vignette 2 (Morally right)

Vignette 2 - Test Statistics Sign Test	
	Vignette 2 (Ethical) – Vignette 2 (Morally)
Z	-0,348
Asymp. Sig. (2-tailed)	0,728

Table 79 - Sign Test, Vignette 2, Moral to Ethical, *90%, **95%, ***99%

17.17 Vignette 3

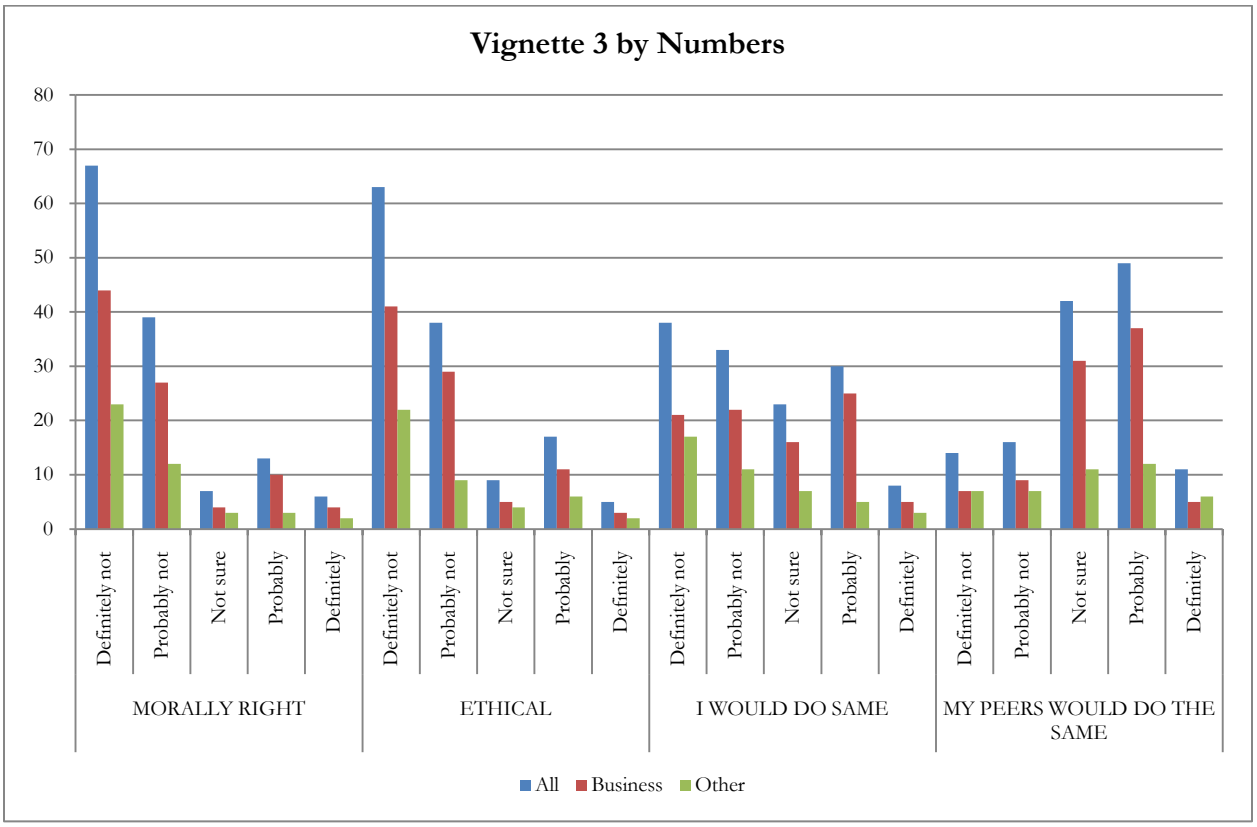

Figure 25 - Vignette 3 by numbers

Vignette 3												
	MORALLY RIGHT			ETHICAL			I WOULD DO SAME			PEERS WOULD DO SAME		
	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER
Definitely not	67	44	23	63	41	22	38	21	17	14	7	7
Probably not	39	27	12	38	29	9	33	22	11	16	9	7
Not sure	7	4	3	9	5	4	23	16	7	42	31	11
Probably	13	10	3	17	11	6	30	25	5	49	37	12
Definitely	6	4	2	5	3	2	8	5	3	11	5	6
	132	89	43	132	89	43	132	89	43	132	89	43

Percentage	MORALLY RIGHT			ETHICAL			I WOULD DO SAME			PEERS WOULD DO SAME		
	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER	ALL	BUS	OTHER
Definitely not	51%	49%	53%	48%	46%	51%	29%	24%	40%	11%	8%	16%
Probably not	30%	30%	28%	29%	33%	21%	25%	25%	26%	12%	10%	16%
Not sure	5%	4%	7%	7%	6%	9%	17%	18%	16%	32%	35%	26%
Probably	10%	11%	7%	13%	12%	14%	23%	28%	12%	37%	42%	28%
Definitely	5%	4%	5%	4%	3%	5%	6%	6%	7%	8%	6%	14%

Table 80 - Vignette 3 in Numbers and Percentage

17.17.1 Difference between Morally Right & My Actions

Business Only

WSR Test - Vignette 3 - Morally Right vs. My Actions

		N	Mean Rank	Sum of Ranks
Vignette 3 (I would) – Vignette 3 (Morally)	Negative Ranks[a]	2	14,00	28,00
	Positive Ranks[b]	44	23,93	1053,00
	Ties[c]	43		
	Total	89		

a. Vignette 3 (My actions) < Vignette 3 (Morally right)
b. Vignette 3 (My actions) >Vignette 3 (Morally right)
c. Vignette 3 (My actions) = Vignette 3 (Morally right)

Vignette 3 - Test Statistics Wilcoxen Signed Ranks Test

	Vignette 3 (I would) – Vignette 3 (Morally)
Z	-5,759
Asymp. Sig. (2-tailed)	0,000***

Table 81 - Wilcoxen Signed Ranks Test Morally Right vs. My Actions - Vignette 3, Business Major, *90%, **95%, ***99%

Sign Test - Vignette 3 - Morally Right vs. My Actions – Frequencies

		N
Vignette 3 (I would) – Vignette 3 (Morally)	Negative Differences[a]	2
	Positive Differences[b]	44
	Ties[c]	43
	Total	89

a. Vignette 3 (My actions) < Vignette 3 (Morally right)
b. Vignette 3 (My actions) >Vignette 3 (Morally right)
c. Vignette 3 (My actions) = Vignette 3 (Morally right)

Vignette 3 - Test Statistics Sign Test	
	Vignette 3 (I would) – Vignette 2 (Morally)
Z	-6,045
Asymp. Sig. (2-tailed)	0,000***

Table 82 - Sign Test Morally Right vs. My Actions - Vignette 3, Business Major, *90%, **95%, ***99%

Average Morally Right	Average I would do same	Average Difference
1,910	2,674	0,764

Table 83 - Average change, Vignette 3, Business Major, Morally Right vs. My actions

Other

WSR Test - Vignette 3 - Morally Right vs. My Actions				
		N	Mean Rank	Sum of Ranks
Vignette 3 (I would) – Vignette 3 (Morally)	Negative Ranks[a]	3	7,00	21,00
	Positive Ranks[b]	15	10,00	150,00
	Ties[c]	25		
	Total	43		

a. Vignette 3 (My actions) < Vignette 3 (Morally right)
b. Vignette 3 (My actions) >Vignette 3 (Morally right)
c. Vignette 3 (My actions) = Vignette 3 (Morally right)

Vignette 3 - Test Statistics Wilcoxen Signed Ranks Test	
	Vignette 3 (I would) – Vignette 3 (Morally)
Z	-2,946
Asymp. Sig. (2-tailed)	0,003***

Table 84 - Wilcoxen Signed Ranks Test Morally Right vs. My Actions - Vignette 3, Other Major, *90%, **95%, ***99%

Sign Test - Vignette 3 - Morally Right vs. My Actions – Frequencies		
		N
Vignette 3 (I would) – Vignette 3 (Morally)	Negative Differences[a]	3
	Positive Differences[b]	15
	Ties[c]	25
	Total	43

a. Vignette 3 (My actions) < Vignette 3 (Morally right)
b. Vignette 3 (My actions) >Vignette 3 (Morally right)
c. Vignette 3 (My actions) = Vignette 3 (Morally right)

Vignette 3 - Test Statistics Sign Test	
	Vignette 3 (I would) – Vignette 2 (Morally)
Asymp. Sig. (2-tailed)	0,008***

Table 85 - Sign Test Morally Right vs. My Actions - Vignette 3, Other Major, *90%, **95%, ***99%

Average Morally Right	Average I would do same	Average Difference
1,813	2,209	0,395

Table 86 - Average Change, Vignette 3, Other Major, Morally Right vs. My Actions

17.17.2 Difference between Morally Right & Ethical

WSR - Vignette 3 - Morally Right vs. Ethical				
		N	Mean Rank	Sum of Ranks
Vignette 3 (Ethical) – Vignette 3 (Morally)	Negative Ranks[a]	9	9,72	87,50
	Positive Ranks[b]	14	13,46	188,50
	Ties[c]	109		
	Total	132		

a. Vignette 3 (Ethical) < Vignette 3 (Morally right)
b. Vignette 3 (Ethical) >Vignette 3 (Morally right)
c. Vignette 3 (Ethical) = Vignette 3 (Morally right)

Vignette 3 - Test Statistics Wilcoxen Signed Ranks Test	
	Vignette 3 (Ethical) – Vignette 3 (Morally)
Z	-1,604
Asymp. Sig. (2-tailed)	0,109

Table 87 - Wilcoxen Signed Ranks Test, Vignette 3, Moral to Ethical, *90%, **95%, ***99%

Sign Test Vignette 3 - Morally Right vs. Ethical – Frequencies		
		N
Vignette 3 (Ethical) – Vignette 3 (Morally)	Negative Differences[a]	9
	Positive Differences[b]	14
	Ties[c]	109
	Total	132

a. Vignette 3 (Ethical) < Vignette 3 (Morally right)
b. Vignette 3 (Ethical) >Vignette 3 (Morally right)
c. Vignette 3 (Ethical) = Vignette 3 (Morally right)

Vignette 3 - Test Statistics Sign Test	
	Vignette 3 (Ethical) – Vignette 3 (Morally)
Asymp. Sig. (2-tailed)	0,405

Table 88 - Sign Test, Vignette 3, Moral to Ethical, *90%, **95%, ***99%

17.18 Age, Morals & Ethics

Age was divided in the following groups:

Age	Assigned Value
15-19	1
20-24	2
25-29	3
30-34	4
35-39	5
40-44	6
45-49	7
50-54	8
55-59	9

Table 89 - Age Groups for Control testing

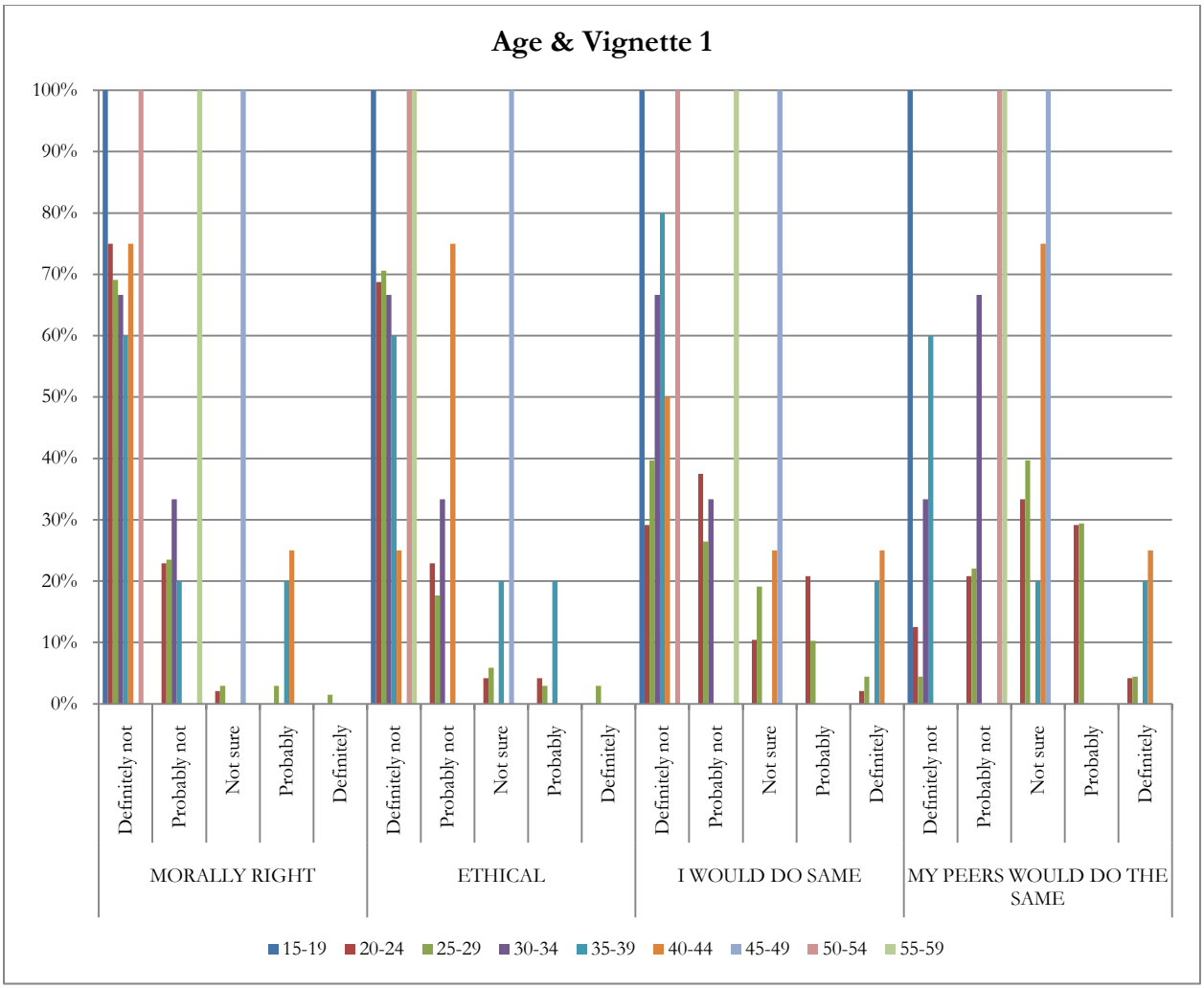

Figure 26 - Age and Vignette 1

Vignette 1	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	51,674	32	0,015**	33,61	32	0,389	33,576	32	0,391	50,46	32	0,020**
Likelihood Ratio	23,384	32	0,866	22,649	32	0,889	33,913	32	0,375	43,05	32	0,092*

Table 90 - Chi Square - Age and Vignette 1, *90% Significance, **95% Significance, ***99% Significance

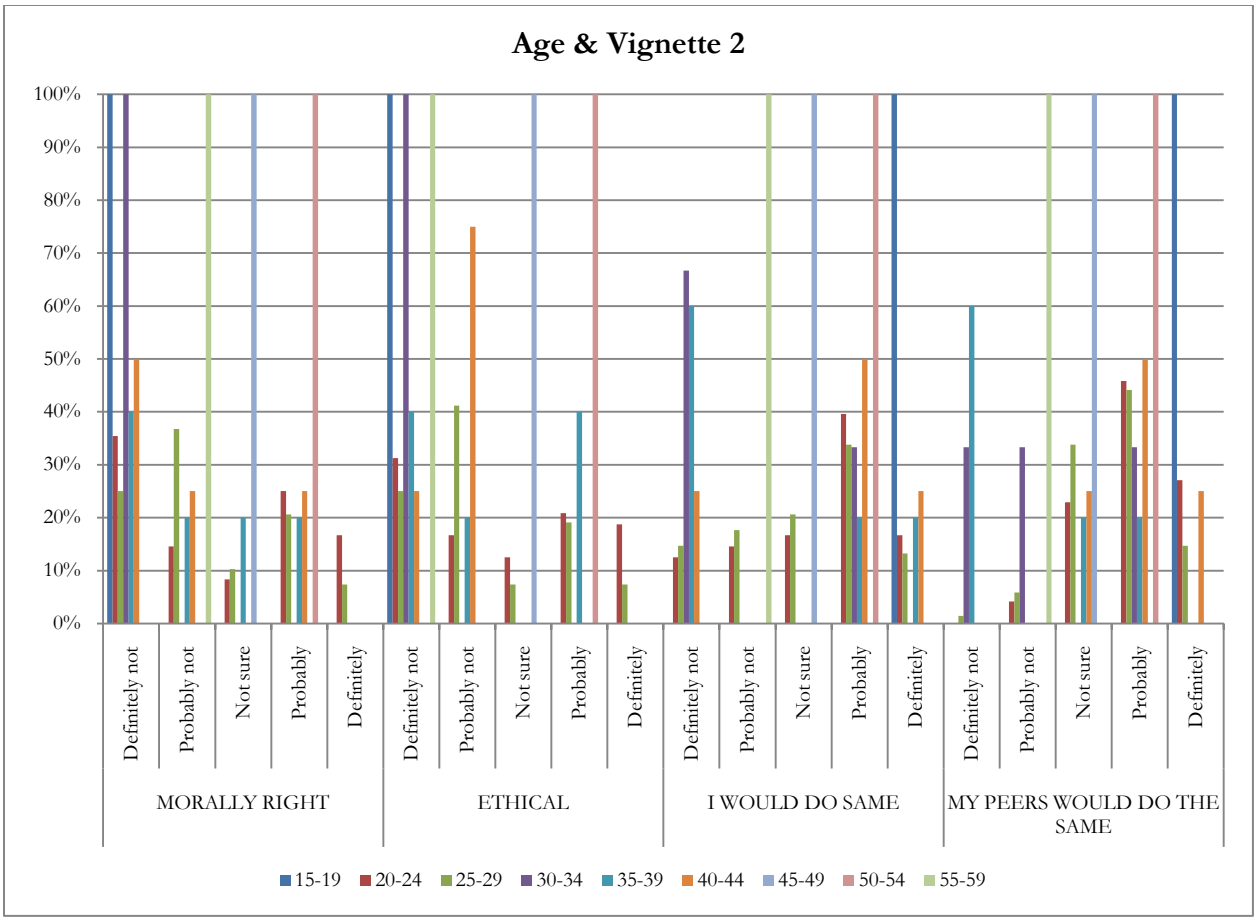

Figure 279 - Age and Vignette 2

Vignette 2	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	36,023	32	0,289	42,99	32	0,093*	35,189	32	0,320	86,71	32	0,00***
Likelihood Ratio	32,488	32	0,443	38,78	32	0,191	30,661	32	0,534	44,40	32	0,071*

Table 91 - Chi Square - Age and Vignette 2, *90% Significance, **95% Significance, ***99% Significance

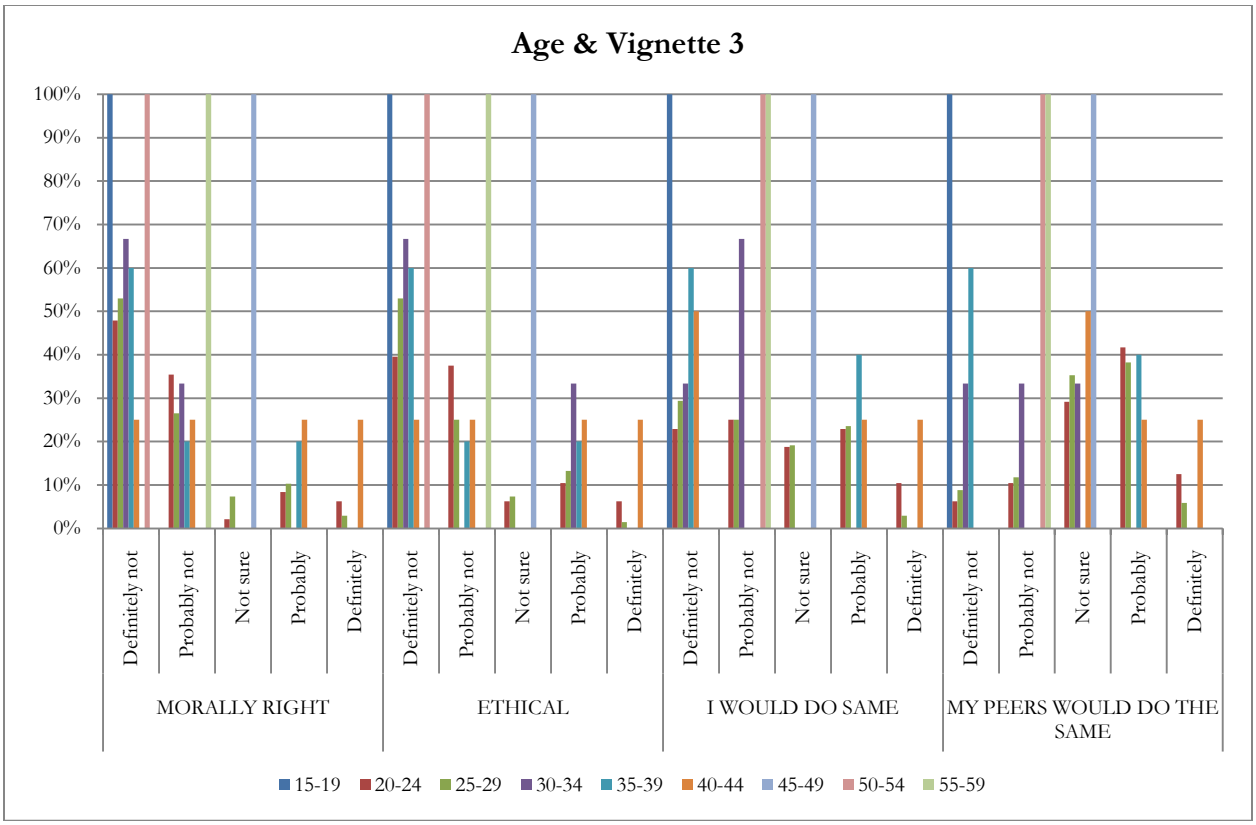

Figure 2810 - Age and Vignette 3

Vignette 3	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	32,781	32	0,429	32,34	32	0,450	29,534	32	0,592	49,28	32	0,026**
Likelihood Ratio	20,961	32	0,933	23,90	32	0,848	31,035	32	0,515	36,94	32	0,251

Table 92 - Chi Square - Age and Vignette 3, *90% Significance, **95% Significance, ***99% Significance

17.19 Gender, Morals & Ethics

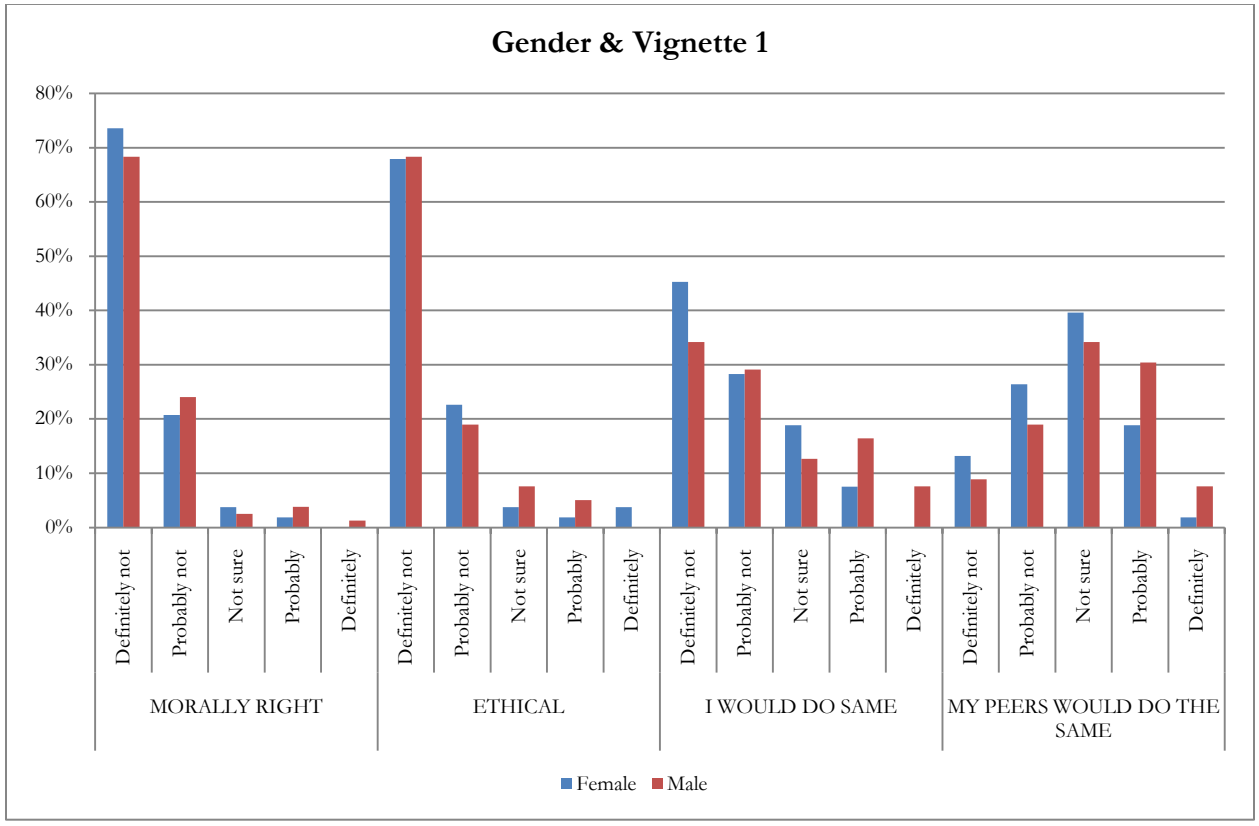

Figure 29 - Gender and Vignette 1

Vignette 1	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	1,489	4	0,829	4,798	4	0,309	7,807	4	0,099*	5,201	4	0,267
Likelihood Ratio	1,867	4	0,760	5,597	4	0,231	10,053	4	0,040**	5,534	4	0,237

Table 93 - Chi Square - Gender and Vignette 1, *90% Significance, **95% Significance, ***99% Significance

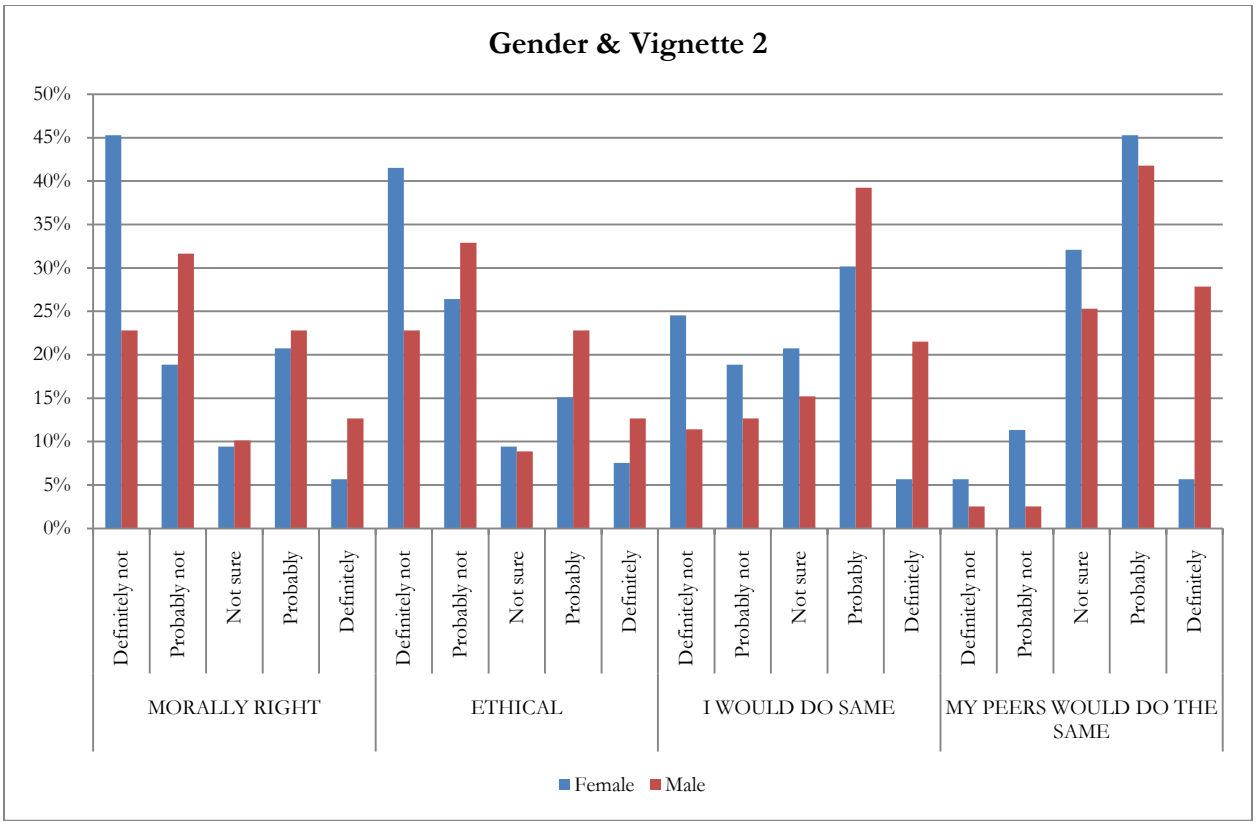

Figure 30 - Gender and Vignette 2

Vignette 2	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	8,651	4	0,070*	5,857	4	0,210	10,650	4	0,031**	13,715	4	0,008***
Likelihood Ratio	8,728	4	0,068*	5,840	4	0,211	11,310	4	0,023**	15,121	4	0,004***

Table 94 - Chi Square - Gender and Vignette 2, *90% Significance, **95% Significance, ***99% Significance

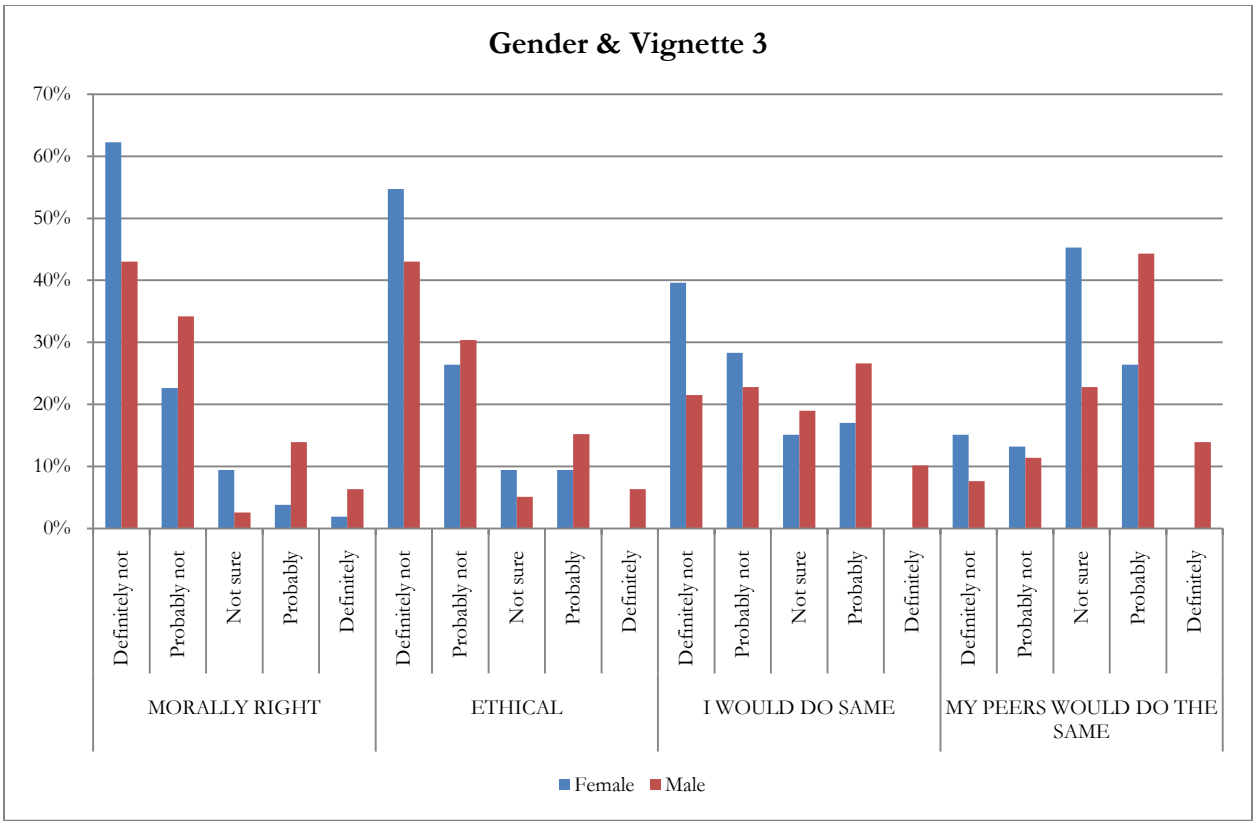

Figure 31 - Gender and Vignette 3

Vignette 3	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	11,284	4	0,024**	6,139	4	0,189	10,927	4	0,027**	16,928	4	0,002***
Likelihood Ratio	11,879	4	0,018**	7,918	4	0,095*	13,732	4	0,008***	20,790	4	0,000***

Table 95 - Chi Square - Gender and Vignette 3, *90% Significance, **95% Significance, ***99% Significance

17.20 Educational Level, Morals & Ethics

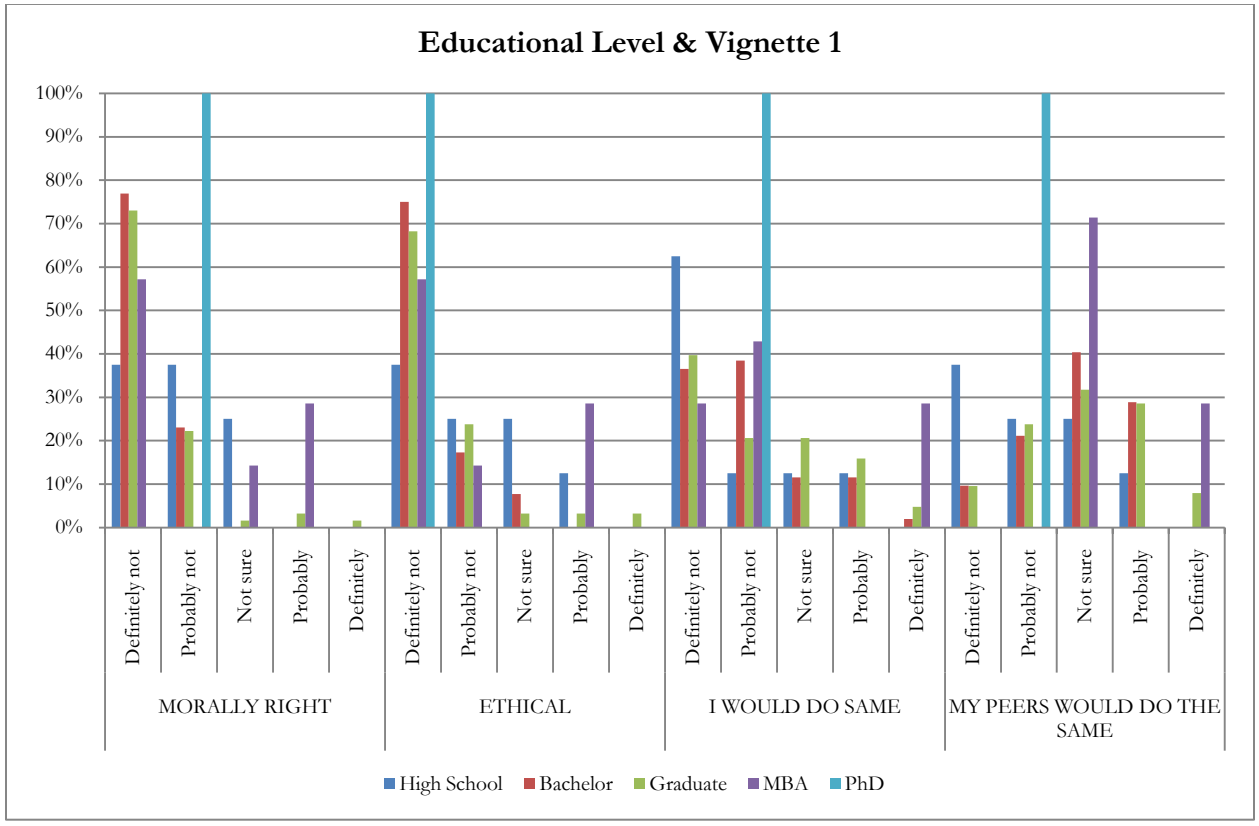

Figure 32 - Educational level and Vignette 1

Vignette 1	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	43,163	16	0,000***	26,207	16	0,051*	22,468	16	0,129	28,651	16	0,026**
Likelihood Ratio	29,432	16	0,021**	20,621	16	0,194	20,033	16	0,219	29,095	16	0,023**

Table 96 - Chi Square – Educational Level and Vignette 1, *90% Significance, **95% Significance, ***99% Significance

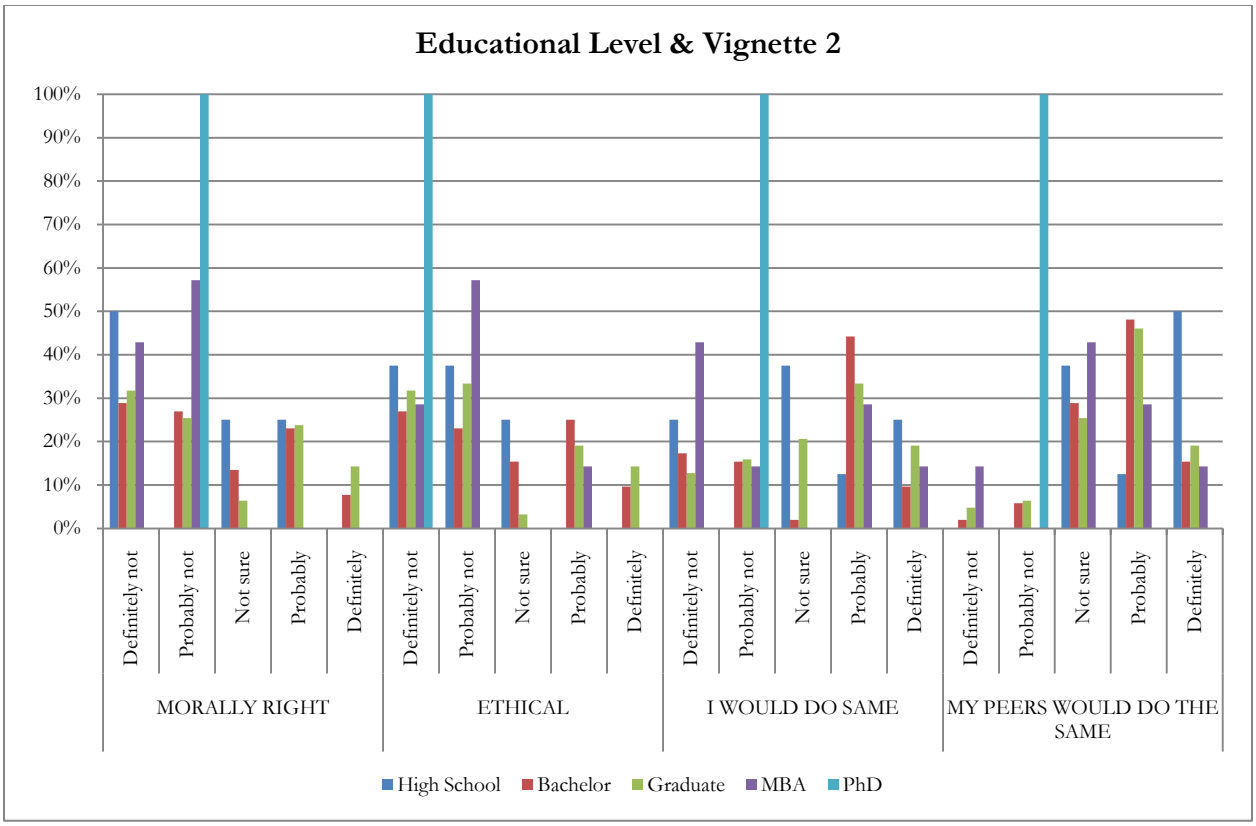

Figure 33 - Educational Level and Vignette 2

Vignette 2	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	17,303	16	0,366	17,935	16	0,328	19,204	16	0,258	27,350	16	0,038**
Likelihood Ratio	21,618	16	0,156	21,170	16	0,172	18,880	16	0,275	17,295	16	0,367

Table 97 - Chi Square – Educational Level and Vignette 2, *90% Significance, **95% Significance, ***99% Significance

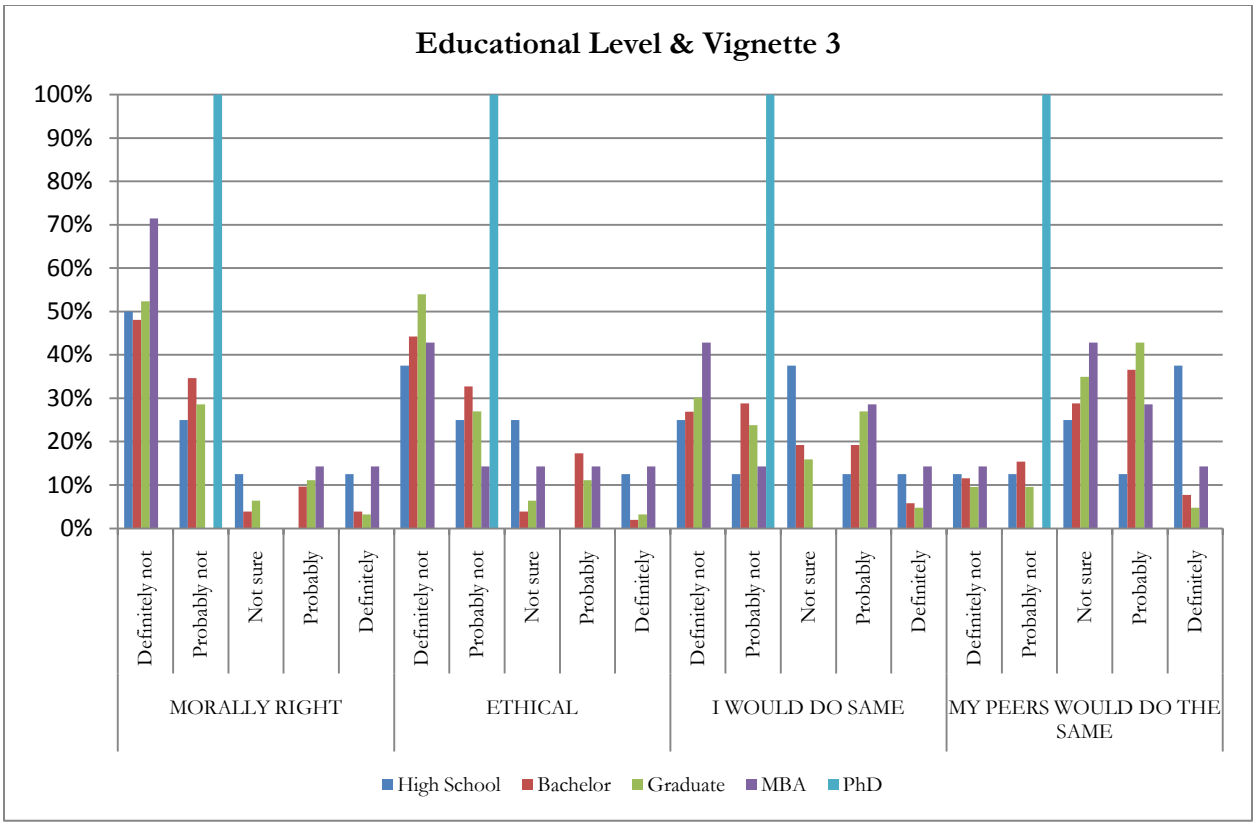

Figure 3411 - Educational Level and Vignette 3

Vignette 3	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	11,068	16	0,805	15,511	16	0,488	10,782	16	0,823	21,268	16	0,168
Likelihood Ratio	13,183	16	0,659	13,655	16	0,624	11,139	16	0,801	15,843	16	0,464

Table 98 - Chi Square – Educational Level and Vignette 3, *90% Significance, **95% Significance, ***99% Significance

17.21 Time Spent at University & Vignettes

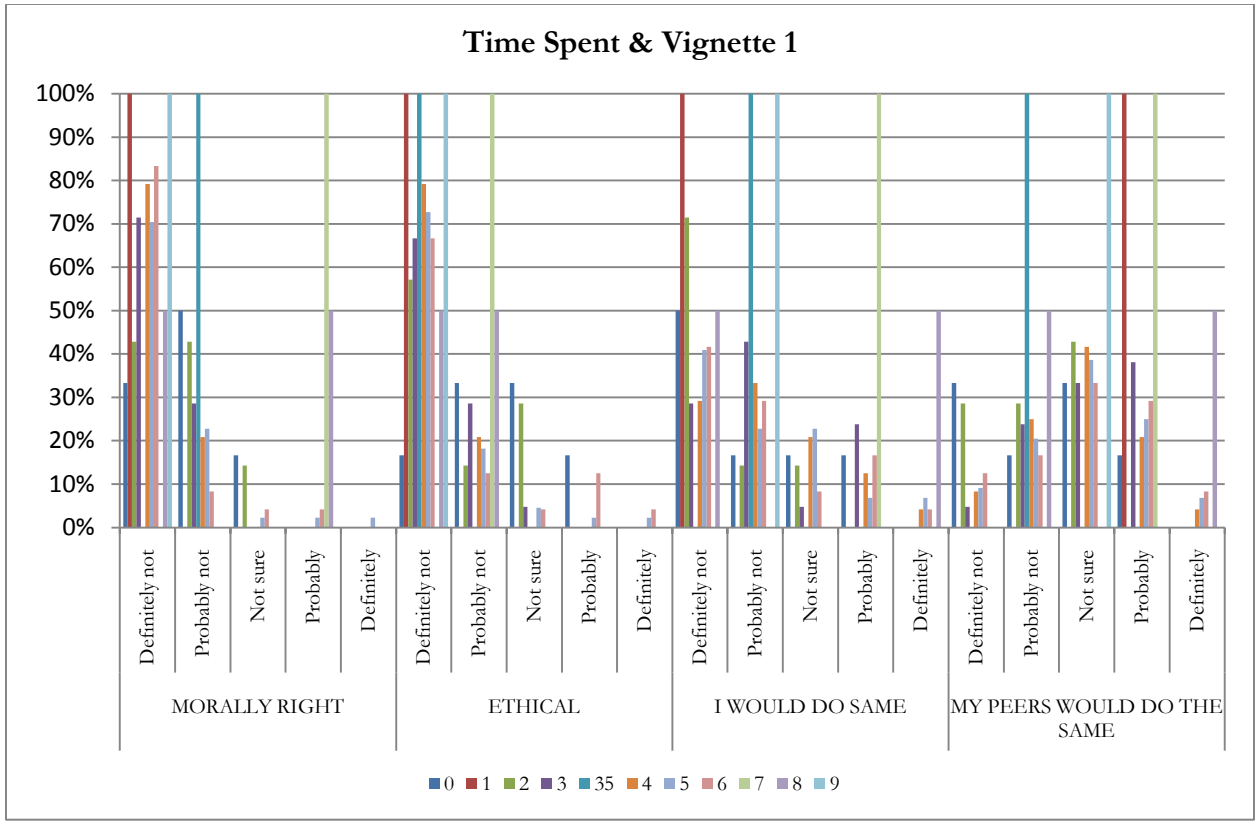

Figure 35 - Time Spent at Uni and Vignette 1

Vignette 1	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	72,013	40	0,001***	38,519	40	0,537	40,888	40	0,431	34,000	40	0,736
Likelihood Ratio	37,089	40	0,602	34,035	40	0,735	35,938	40	0,654	31,698	40	0,823

Table 99 - Chi Square – Time Spent at Uni and Vignette 1, *90% Significance, **95% Significance, ***99% Significance

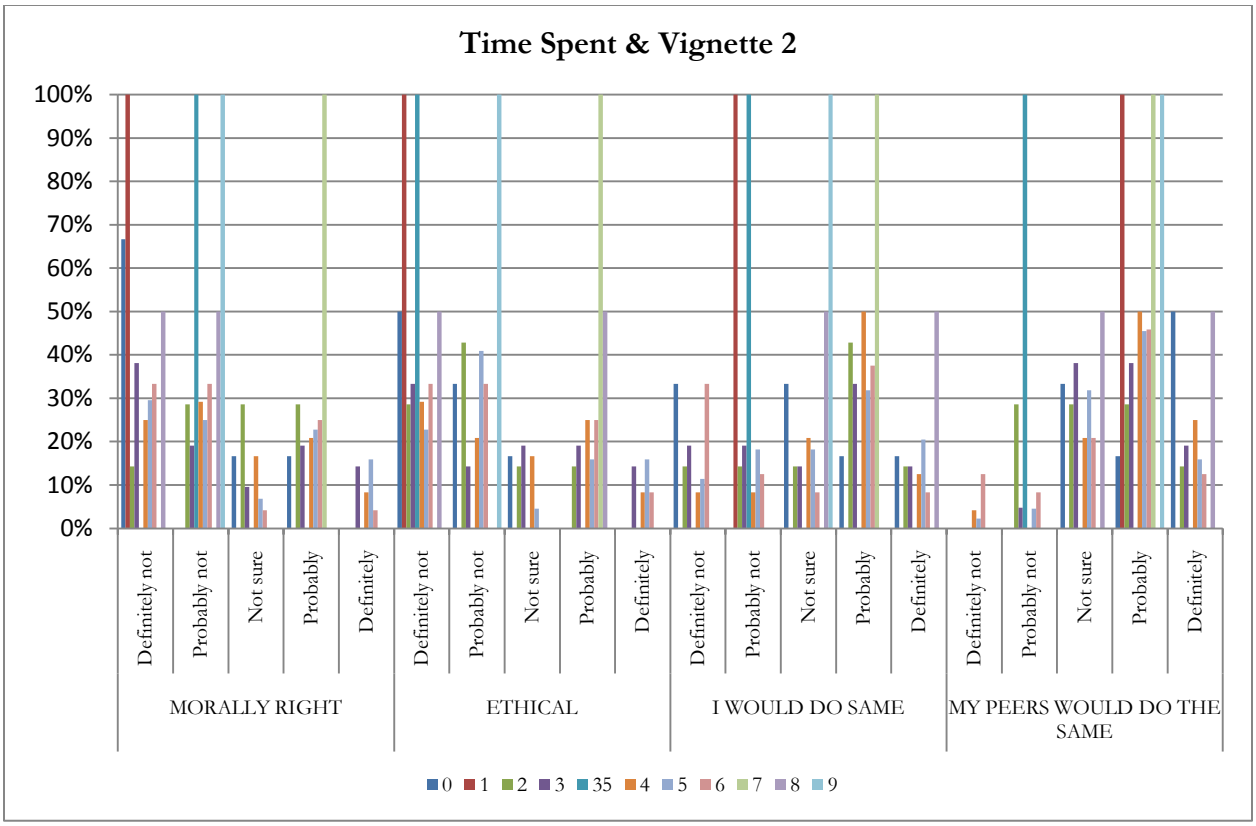

Figure 36 - Time Spent at Uni and Vignette 2

Vignette 2	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	28,640	40	0,910	32,414	40	0,798	37,359	40	0,590	44,416	40	0,291
Likelihood Ratio	30,349	40	0,865	36,614	40	0,623	33,411	40	0,760	34,236	40	0,727

Table 100 - Chi Square – Time Spent at Uni and Vignette 2, *90% Significance, **95% Significance, ***99% Significance

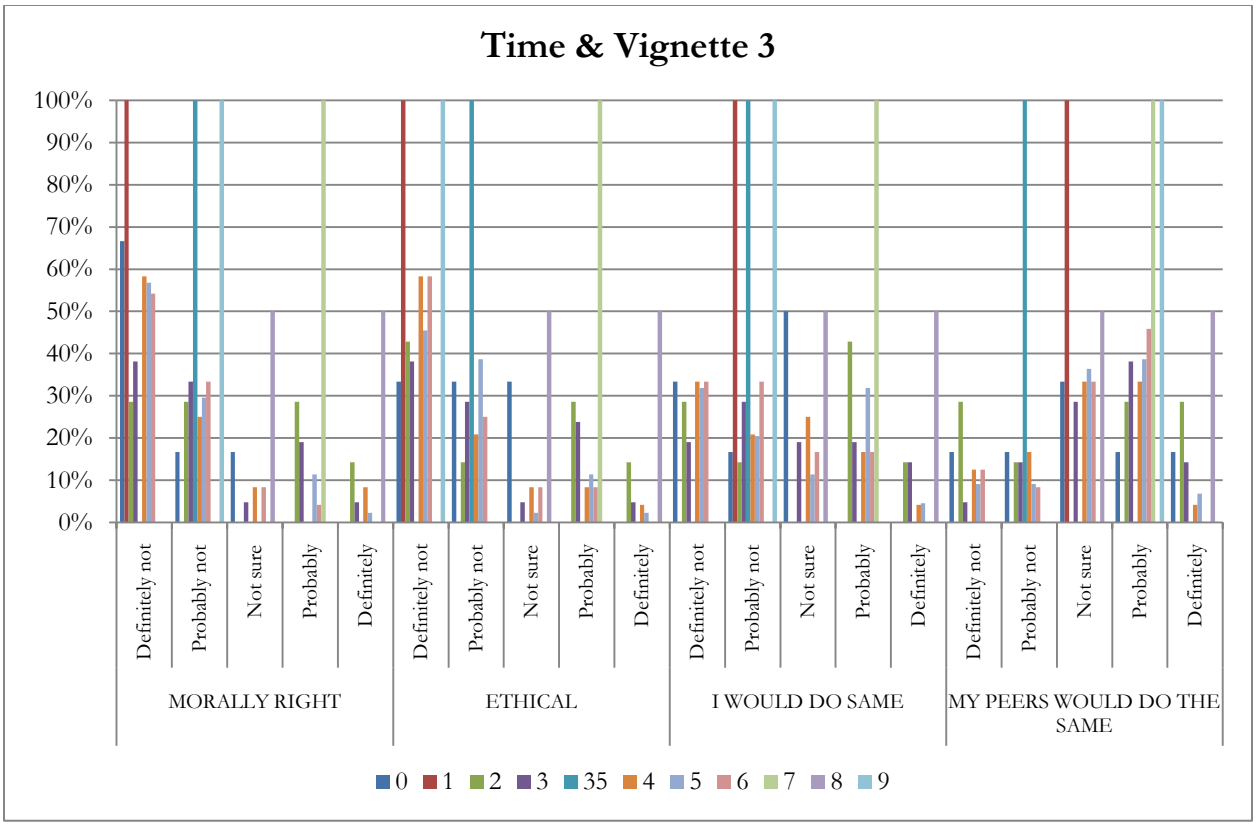

Figure 3712 - Time Spent at Uni and Vignette 3

Vignette 3	1.MORALLY RIGHT			2.ETHICAL			3."I WOULD DO"			4."PEERS WOULD DO"		
	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2-sided)	Value	Df	Sig (2sided)
Pearsons Chi-Square	53,566	40	0,074*	51,228	40	0,110	41,528	40	0,404	34,367	40	0,721
Likelihood Ratio	45,364	40	0,258	38,381	40	0,543	39,746	40	0,482	33,322	40	0,763

Table 101 - Chi Square – Time Spent at Uni and Vignette 3, *90% Significance, **95% Significance, ***99% Significance

17.22 Aristotle's Virtues & Agency Theory

Sphere of Action or Feeling	Excess	Mean	Deficiency
Fear and confidence	Rashness	Courage	Cowardice
Pleasure and pain	Licentiousness	Temperance	Insensibility
Getting and spending (minor)	Prodigality	Liberality	Illiberality
Getting and spending	Vulgarity	Magnificence	Pettiness

(major)			
Honor and dishonor (major)	Vanity	Magnanimity	Pusillanimity
Honor and dishonor (minor)	Ambition	Proper ambition	Unambitiousness
Anger	Irascibility	Patience	Lack of spirit
Self-expression	Boastfulness	Truthfulness	Understatement
Conversation	Buffoonery	Wittiness	Boorishness
Social conduct	Obsequiousness/ Flattery	Friendliness	Cantankerousness
Shame	Shyness	Modesty	Shamelessness
Indignation	Envy	Righteous Indignation	Malicious Enjoyment

Table 102- Aristotle's Virtues (Aristotle 2004)

Virtue	Relevance for Agency Theory
Courage	Courage has an important function to business as it relates to both leadership and contemplation (Bragues 2006). However when comparing with AT, it is also the capability to invest in the right kinds of projects – positive NPV projects.
Temperance	Temperance is additionally fundamental to business as also noted by Bragues (2006), and also relevant for corporate governance, as it relates to both growth of the firm and to remuneration as well as other areas of governance. With regards to the growth of the firm it can be seen slightly in line with the capability of courage to choose right. The virtue of temperance can as such be seen as the capability for self-control in choice. It also addresses the remuneration through addressing the degree of perks that e.g. management will utilize, by instilling self-control into the being.
Liberality	Liberality or generosity is the virtue that regulates money spending. Again relevant to corporate governance and agency theory, liberality can be seen as distributing sound dividends, having decent salaries, and being generous with resources within the firm for investment. Contrary to AT generosity may however also mean a certain extent of corporate social responsibility. However the virtues are clear in the fact that one can only be generous when there is a certain pre-established level of wealth.
Magnificence	Directly relatable to the spending of money, magnificence can be related to the concepts of managerial perks, as well as investing in corporate headquarters etc. It argues for it to be at a moderate level. Therefore a board working from the perspective of magnificence will control expenditures to an appropriate level and not lavish out on unnecessary expenditures.
Magnanimity	Magnanimity deals with a truthful representation of the self in terms of what one is worth. Here the agency theoretical concept of adverse selection and information asymmetries could be alleviated.

Proper Ambition	Desires must be proper and so must risk taking be. The virtues of proper ambition can be related to risk taking, as the firm and managers must be ambitious enough to take risks and drive the firm forward, however at the same time it should not do so at an extreme level.
Patience	The patient manager will await the proper investment decision that maximizes the NPV of that investment, and he will not be driven by his emotions and feelings of what a good investment is but rather focus on getting it right. Although patience for Aristotle dealt more with anger, the virtue is relevant for feelings as well.
Truthfulness	A truthful manager will be honest about his performance and will help reduce informational asymmetries. It will be honest about the risks and investments it makes, both internally and externally. Although external truthfulness in marketing may lead to slightly lower financial results, deceitful marketing is not only illegal but will most likely also hurt the company more in the long run.
Wittiness	Communication between people is also part of the virtues, and wittiness deals as much with tact as it does with the verbal communication. As such it is about listening and behaving in a suitable manner. The relationship with AT is probably weak at best, but tact is most likely not contradictory to the prescriptions of agency theory.
Friendliness	As wittiness is about the verbal dealings with people, friendliness is more about the social dealings with people, and behaving in a suitable manner. Although this can neither be strongly related to the concept of AT, it seems unlikely to contradict it.
Modesty	The modest person does not show off and is appreciative of what he has gained. It does not necessarily mean that he does not pursue more. Modesty however is more of a feeling that a virtuous disposition.
Righteous Indignation	The capability to be angry at the right times has little or no relevance to agency theory.

Table 103 - Virtues and Agency Theory - A Comparison – Own Creation, inspired by Bragues (2006)