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A Little Difference Makes A Big Difference: Essays On The Link Between Top Management Team Traits And Strategic Marketing Decisions

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A LITTLE DIFFERENCE MAKES A BIG DIFFERENCE: ESSAYS ON THE LINK BETWEEN TOP MANAGEMENT TEAM TRAITS AND STRATEGIC MARKETING DECISIONS

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ABSTRACT

The importance of marketing is growing. This is not just a perception: CEOs appear to see its importance as well. Despite the increase in the understood importance of marketing, there still remains a relatively scant amount of research on the impact that can be had by top management team members on a firm's strategic marketing outcomes. The research which follows explores an important question that has previously been comparatively neglected by researchers: What top management team individual differences can impact the strategic marketing outcomes of the firm?

The first essay, based on a multi-industry sample of 325 publicly listed Fortune 500 firms over a five-year period (2003-2008), reveals that CEOs who are more extraverted tend to run companies with greater levels of marketing capabilities. This essay explores the alternative perspectives of extraverted leadership and concludes that an extraverted leader, who is more concerned with social interactions, tends to focus on building relationships, rather than the traditional approaches of beating competitors to market and increasing transactions.

The second essay explores an interesting perspective borrowed from the field of biology: Facial width-to-height ratio. Using recent research from the field of evolution and human behavior as a theoretical foundation, this research looks at physical characteristics as a way for stakeholders to predict the aggressive actions of the firm's top marketing managers. Using this measure of masculinity, this study finds evidence to support the claim that more masculine Chief

Marketing Officers will be more aggressive in their strategic-marketing decision making, spending more on advertising and research and development.

The third and final essay investigates firms' top management teams as a signal to stakeholders during a diversity crisis. Using negative comments of Microsoft CEO Satya Nadella as the empirical context, event-study methodology is implemented in order to examine shareholder value for firms in the technology industry on the day immediately following these inappropriate comments. Results indicate that firms that include an ethnic or gender based minority member as part of their TMT tend to be less impacted by these events than firms that are completely made up of "traditional" male and Caucasian leaders.

DEDICATION

I dedicate this dissertation to all of my friends, family, peers and colleagues who have been supportive during this process. I would like to specifically thank my wife, Julie Nicol, for supporting me financially and putting up with me, my crazy schedule and my little quirks. Your consistent support provided a solid rock for me to stand on and kept me grounded in reality when my intense workload caused me to stray. I am also thankful to my parents, Ian and Laurie, and the rest of my family for supporting my educational and life's journey no matter where it has taken me. Although I am far from home, your love and support is always felt. Also, the prayers, love and encouragement from my sister Meghan, in-laws Sharon, Dave and Katie, and my close friends, specifically, Gareth Munro, Mark Forrest and Luka Perkovic, who have been fundamental in my completion of this process. Finally, to my peers, specifically Robert King, Katie Howie, Dave Marshall and Prachi Gala: Thank you for allowing me to constantly ask for feedback regardless of the life's difficulties and/or how much or how little work you had going on at that time. I truly believe that having others who understand what you are going through and are willing to listen are vital to success in a PhD program.

Thank you to all of those I have mentioned and the others whom I have probably missed. Without all of your support this dream may never have been accomplished.

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I. INTRODUCTION

The world is constantly changing. Businesses are too. Over the last decade, advancements in technology such as the increased availability of Internet access, mobile technology and social media have dramatically increased the power of consumers (Pitt et al. 2002) forcing companies to completely re-think their strategic decisions. In this “digital age” one bad experience with a company not only has the power to reach a small group of close friends and relatives, but can also quickly spread to millions as consumers use social media, blogs, message boards and rating sites to voice their opinions and concerns. This often results in harm to the firm’s stock price (i.e. Acquisti, Friedman and Telang 2006), damage to their corporate reputation (Dean 2004) and the creation of litigation costs (Robertson 2012), all of which could significantly impact the corporation’s bottom line. As a result, the roles and responsibilities most important for corporate boards to consider when appointing or replacing a firm’s top management team members will need revision as they attempt to reflect the changing marketplace. In other words, technology is forcing firms to be willing and able to adjust and adapt in real time to consumer demands resulting in a need for individuals who perform best in these dynamic environments.

Accordingly, the importance of marketing to the firm has also increased in importance. In many firms there has already and will continue to be more significant changes as these technologies continue to expand and adjust how organizations interact with their customers. Along with the internal changes to increase collaboration, there has been an external adjustment to the view of top management and firm level collaboration. Marketing has historically been considered the part of the firm whose job it was to advertise – a one-way path telling consumers and customers what the company can offer them. Now, marketing is considered the part of the firm bridging the divide between the corporation and its customers – through two-way interactions. As more and more firms move further away from mass marketing and closer towards customized, individual marketing efforts, the importance of developing a more humanized brand and moving customers to loyal followers is greatly increasing (Sashi 2012; Srinivasan and Moorman 2005; Morhart, Herzog and Tomczak 2009). Furthermore, the access to technology and "big data" has given corporations newfound ability to measure these marketing related metrics allowing them to more closely monitor the value of their strategic marketing decisions (Bughin, Chui and Manyika 2010). In other words, the importance of marketing to the firm, in terms of tangible outcomes, is becoming much clearer. As the aforementioned marketplace dynamics change, the skills and traits necessary for individuals in the firm responsible for strategic marketing decisions grows larger. For this reason, many organizations are interested in one overarching question: Who should lead this change?

To investigate this overarching question, the research which follows looks at the individuals typically charged with these responsibilities: members of the firm's top management team (hereafter TMT). As outlined above, it has never been more important to understand and be able to evidence the specific characteristics and mindset of firm executives as they impact the important viewpoints and strategic decisions of the leaders of organizations (England 1967), presumably resulting in varying levels of success. The existing research offers plenty of investigation into the impact of individual differences between top managers (see Hiller and Beauchesne 2014, for an overview) however, there still exists a number of important limitations to the research in this field.

First, although there has been plenty of research investigating TMT individual differences on firm performance outcomes, very little of the existing research investigates these differences in terms of their implications for the field of marketing or strategic marketing related outcomes. Admittedly, research does exist which investigates the impact of individual differences of the CEO on a firms spending on innovation (i.e. Gerstner et al. 2013) however, very few have investigated other marketing specific outcomes (such as advertising, CSR etc.).

Secondly, although some research on CEO personality has been performed (i.e. Peterson et al. 2003; Gibson, Hannon and Blackwell 2009; Nadkarni and Herrman 2010; Ciavarella et al. 2004) an investigation into the role of personality on any member other than the CEO has not been specifically considered. The first study to focus on the big five personality traits of the members of a firm's TMT (Peterson et al. 2003) found that differences in TMT member personality does indeed impact TMT dynamics and decision-making. These interesting findings have curiously not driven (to this point) any further investigation into the personality of any other specific member of the TMT (outside of the CEO). Even though a few studies exist which have looked into the role of individual differences of the firm's Chief Marketing Officer (CMO) or TMT member charged with the role of marketing, they have tended to focus on individual differences in environmental and/or organizational variables such as presence, power and influence (i.e. Jaworski and Kohli 1993; Nath and Mahajan 2011; Barker and Mueller 2002; Kashmiri and Brower 2016). Accordingly, the question of personality is one that needs significant investigation given that the influx of technology and consumer power requires greater levels of direct involvement with a firm's customer: a role typically occupied by those in the firm's marketing department.

Thirdly, despite the interest from fields of research such as sociology and psychology (see Gomulya et al 2015), there currently exists no research to my knowledge in the field of marketing which investigates physical characteristics of TMT members as signals of characteristics or traits. Sociological theory suggests that some of these physical traits of an individual's bone structure are predictive of their personality (Carré and McCormick 2009). For example, a study performed by Lewis, Lefevre and Bates (2012) suggests that the facial width-to-height ratio of U.S. presidents was predictive of their drive for achievement. This more recent stream of research has been used in the field of management borrowing these ideas from the fields of psychology and sociology as visible characteristics of an individual's facial structure may provide evidence both to shareholders and practitioners alike. In other words, these physical traits can help to predict the strategic decisions that certain individuals may make differently than their counterparts. Despite the recent interest in the field of management, research on this new and innovative measure has not yet been investigated in the field of marketing.

In investigating these and other major limitations of existing research, the three essays which follow use three different perspectives to capture the important impact which can result from individual differences in TMTs and their members. Unlike previous research, these studies were approached using marketing outcomes as the focus. Using upper echelon theory for theoretical support, the essays which follow hope to answer these aforementioned limitations and drive future marketing research investigating the characteristics and traits of TMT members.

Essay 1

Essay 1 investigates the personality trait of extraversion in the firm's chief decision-makers. Keeping in mind the role of trait activation theory, I focus on three main strategic marketing outcomes: innovative behaviors, marketing effectiveness and corporate social awareness. The results of this essay suggest that these extraverted CEOs tend to run firms with higher marketing effectiveness. This superior performance outcome is partially mediated by the firm's organizational proactiveness orientation suggesting that more extraverted CEOs run less proactive organizations and as a result have more effective and efficient use of their marketing resources and processes.

Essay 2

The second essay looks to address the second limitation discussed above by focusing on another member of a firm's TMT who is highly influential in marketing decision making: the chief marketing officer (CMO hereafter). This first investigation into the personality of the individuals charged with this role takes the approach of using an observable characteristic of facial width-to-height ratio (fWHR) as an indicator of the individual's masculine tendencies. Using a sample of 97 male top marketing managers from Fortune 500 firms, the findings from this essay suggest that fWHR can be a significant predictor of marketing outcomes associated with a more aggressive, competitive and risk-taking CMO. More closely, the masculine tendencies of the firm's head of marketing can be used to predict increased levels of advertising and R&D spending and a greater number of new product introductions. The significant findings in this research will hopefully influence future studies and applications of the fWHR measure in the field of marketing.

Essay 3

While the first two essays of this dissertation explore individual differences of TMT members on their respective organizations marketing outcomes, the third and final essay, explores the impact of individual differences during a major public relations crisis. Using the derogatory comments made by Microsoft CEO Satya Nadella during the Grace Hopper Celebration of Women in Computing conference in 2014 as the focal negative diversity event, individual TMT member differences are investigated as indicators which help to predict the resulting increased shareholder value for other firms in the technology industry. More specifically, the third essay finds that signals of TMT diversity in a firm indicate to investors the likelihood of the crisis occurring at their firm.

Conclusion

Together these three essays have important practical implications for corporate boards, investors and both current and future employees. They also have important implications for the literature in marketing and top management team literature bases including but not limited to the areas of innovation, CSR, advertising, marketing capabilities, marketing effectiveness and firm valuation. These implications are discussed in the essays below.

II. ESSAY ONE: STRAIGHT FROM THE HORSES MOUTH: THE IMPACT OF CEO EXTRAVERSION ON STRATEGIC MARKETING OUTCOMES

Introduction

"The leader of the past was a person who knew how to tell.
The leader of the future will be a person who knows how to ask."
-Peter Drucker (1993)

The inception of today's technological domain is enabling and instigating a movement, driven by the power of consumers, where organizations are more likely to consider replacing their typical hierarchies with flatter and more flexible ones. Driven by the success and media driven glorification of major tech firms in silicon-valley who are embracing this new efficient and dynamic culture, many large organizations are also developing coinciding online communities whereby employees of the firm are empowered and educated to be involved in idea development, innovation and teambuilding. For example, Adidas has implemented a new "Innovation Academy" where employees can voluntarily join and contribute to the community through weekly exercises, assignments and discussions. Communities such as the one begun by Adidas are being designed as a way to put the knowledge of all of the individuals in the organization to use. Accordingly, media seems to suggest that organizations where the CEO or top management team leads a monarchical or oligarchical ship seem to be slowly becoming less and less prevalent. As firms discover and begin to understand the value of organizational social capital driven by technologies influence on consumer power, many top management teams are learning and adapting their corporate governance and strategic planning to build and support this new structure.

As this shift occurs the roles and responsibilities required by lead decision-makers are changing as well. Their ability to ask the appropriate questions and listen is seemingly becoming more and more important. This leads to a question: What is it about certain CEOs today that provides them a competitive edge over their peers in this new environment?

The importance of personality has been evidenced in the management literature in terms of its impact on team decision-making processes (Peterson et al. 2003), leadership styles (Resick et al. 2009), and organizational culture (Giberson et al. 2009). Despite the prevalence of this research on differences between CEOs, there exists a couple of important limitations. First, research investigating the impact on *marketing outcomes* due to differences in CEO character traits is relatively scant. Second, the marketing capabilities literature has yet to investigate how individual differences of CEOs might influence their marketing effectiveness. This may be due in part to the difficulty in obtaining direct measures of upper echelon leaders' personality traits. Since a CEOs personality plays a role in their perceptions and decision-making (England 1967), the research which follows seemingly provides a nuanced angle that is worthy of investigation in the field of marketing.

To begin the exploration into the impact of top managers' personality, it is important to determine when and where that personality trait will have an impact. Trait activation theory provides an explanation for us suggesting that personality traits remain dormant unless provoked to action by a situation relevant to that trait (Tett and Burnett 2003). For this reason, the research which follows examines one personality variable in particular – extraversion – as a possible explanation to the question posed above. Accordingly, the primary purpose of this study is to determine whether or not the personality trait of extraversion in a CEO plays a significant role in their firm's strategic marketing decisions. The research which follows investigates specific outcomes related to the CEO's ability to insightfully lead and collaborate to develop a consistent and efficient marketing message across the firm. Therefore, this study looks into the organizations sensitivity to customer needs as well as their ability to translate these needs into business solutions.

The essay which follows was organized accordingly: First, the theoretical underpinnings on how a simple personality trait of an individual in an organization can have such a large impact on the firm will be discussed. Second, the explanation of the role of a CEO and the definition and facets associated with the personality trait of extraversion will be discoursed. Third, hypotheses related to how CEO extraversion will play a role in the strategic outcomes of the organization. Following hypotheses development, an empirical evaluation of the proposed hypotheses will be analyzed and discussed. Finally, implications for both practical and theoretical additions to the literature will be discussed.

Literature review, Proposed model and Hypotheses

Upper echelon theory (Hambrick and Mason 1984) purports that the values and traits of a firm's top management are likely to ripple down throughout the entire organization and consequently the organization tends to be a reflection of its c-suite. The majority of supporting literature indicates that these characteristics and individual differences impact the competitive actions that an organization will pursue (Smith et al. 2001). This process is said to occur through both direct and indirect methods.

The direct method is typically divided into two main processes: "behavior channeling" and "perceptual screening" (England 1967). Behavior channeling suggests that top managers select alternatives based on personal preferences in order to satisfice their own personal needs and feed their desires (Thompson 1967). For example, an executive who is more extraverted may be more likely to spend on research and development and introduce more new products as a means for allowing them more social interactions with others who are interested in their ideas and new cutting edge merchandise. Alternatively, perceptual screening describes how the personality trait may cause them to change in the relative probability of the occurrence of certain outcomes based on the "lenses" that they use to interpret their situation (Weick and Kiesler 1979). For example, an extravert may be more likely to push a new product to market as the increased level of positive affect or surgency found in extraverts (Elphic, Halverson & Marszal-Wisneiwska 1998) causes them to adjust their relative chances of success as high.

Even when a CEO is not directly involved in a specific strategic marketing decision it is likely that the CEO's traits have an indirect influence on the decisions of other top management team members. This is because top management exhibits control over their subordinates through corporate governance mechanisms like the allocation of resources and rewards or the establishment of policies, systems and procedures (Bower 1970). Furthermore, social homophily – the tendency to associate with people similar to oneself (McPherson et al. 2001) – indicates that similar people tend to associate with others who share similarities. This means that through hiring processes, it is likely that top management team members high on a certain personality trait will be more likely to hire like-minded others.

Therefore, whether direct (through the strategic decisions made by the CEO) or indirect (through strategic decisions made by other executives in the organization), it is expected that a CEO's traits and values will have a significant impact on their firm's strategic behavior. Since the aforementioned trait activation theory suggests that trait extraversion will only be activated when the roles and responsibilities of the individual requires them to be put in situations where the personality trait is relevant, it is necessary to first understand the role of the CEO.

The role of the new CEO: Corporate Collaborator

The academic literature on the role of the CEO to this point defines the CEO as the penultimate decision maker in the firm. Their job has historically been one that includes the selection of top executives, supervision of resources to achieve firm goals and monitoring of performance to ensure continued firm growth (Favaro, Karlsson and Neilson 2014). As we transgress through these differences in viewpoints on corporate structure and into the world of "uncorporation" (McCahery, Vermeulen and Priydershini 2013) the technology industry provides evidence that many organizations should consider moving towards a more organic structure where CEOs may directly be involved with lower level managers and even employees. Therefore, the changing role of a CEO is one in which relationship management and collaboration is extremely important.

In terms of their role in specific strategic marketing decisions, some insight into their responsibilities can be found by investigating literature on a firms marketing capabilities. The marketing capabilities literature suggests that a firm's marketing capabilities include product development, pricing, channel management, marketing communications, selling, marketing information management, marketing planning and marketing implementation (Vorhies and Morgan 2005). Each of these are areas in which a firm makes strategic marketing decisions. As a signal of the growing importance of the brand and marketing to the firm, many firms are employing a head of marketing or chief marketing officer (CMO hereafter) whose role it is to oversee each of these marketing capabilities, while recommending and implementing strategic marketing initiatives. In many of these firms, the CEO may not directly make the marketing decisions, however, research on TMTs that focuses on upper echelon theory suggests that the CEO should have a significant influence in the decisions made by their CMO through corporate governance mechanisms (such as policies and procedures) and collaboration in their interactions.

The understanding of the new role of the CEO as the penultimate player in corporate communication and collaboration leads to the following question: What trait difference could explain the relative success of a CEO in this new environment of communication between corporations and their consumers? To answer this question, the paragraphs which follow will look closely at the personality trait most closely associated with how individuals interact with others: Extraversion. An overview of trait extraversion will first be provided followed by arguments which delineate how a CEOs trait extraversion can help explain differences in strategic marketing outcomes amongst firms who employ more outgoing, open and sociable CEOs.

Extraverts: The Social Problem Solvers

Extraversion, in its modern psychological sense, was introduced in 1910 by Carl Jung (1910) as a bipolar personality dimension indicating an individual's outward or inward directedness. Since then it has been popularized by Eysenck (1947) as an important dimension of personality and was eventually included in the most popular personality construct: the 5-factor OCEAN model developed by Costa and McCrae (1990). Although many view being extraverted or introverted as one or the other, the contemporary theories of personality view these traits as part of one single, continuous dimension, where an individual exists somewhere along the spectrum. This is important because some might suggest that most CEOs would be extremely extraverted individuals as they work through the organization on their way to the top. However, individuals who are extreme extraverts may not have reached the top of their organizations as they may be outgoing to a fault. For this reason, and for the purposes of this study, extraversion is investigated along this continuum.

Trait extraversion is most commonly defined as the extent to which an individual is outgoing and sociable (McCrae and Costa 1996). Research in the field of psychology suggests that those who score high in extraversion tend to involve themselves in more social interaction (McCrae and Costa 2003) and entice more social attention (Ashton, Lee and Paunonen 2002). In other words, if given the choice, extraverts will more than likely include themselves in social activities over those that are independent, even if it involves meeting with strangers (Argyle and Lu 1990). In these social activities, extraverts have a tendency to ask more questions as they desire to find things in common (Thorne 1987). They are characterized as gregarious, assertive, talkative and active (Barrick and Mount 1991), but also tend to attempt to be dominant in their interactions (McCrae and Costa 1987). This is important as more assertive individuals share ideas in a clear, confident and firm manner and are typically decisive, outspoken and direct making them more likely to influence others as they interact socially (Hayes 1991; Deluga 1988).

Extraversion also contains surgency or a tendency to have high levels of positive affect and are more likely to be enthusiastic, energetic, confident, active, impulsive and alert (Elphic, Halverson & Marszal-Wisneiwska 1998). They tend to agree, compliment, talk about pleasant things and joke and laugh more than others (Thorne 1987). Accordingly, extraversion has been found to predict happiness and satisfaction (Costa, MacRae and Norris 1981) as well as higher satisfaction in one’s job (Judge, Heller and Mount 2002). These increased positive emotions are also influential in terms of their views on performance as more extraverted individuals tend to focus on rewards, while their counterparts, introverts, focus on punishments (Gray 1972). Furthermore, positive affectivity enhances an extravert’s problem solving and decision-making abilities by making them flexible, innovative in response, creative, thorough and efficient in their cognitive processes (Isen 2000). These characteristics of positive affectivity have also been found to have a distinct influence on team behavior and conflict resolution (Baron 1990).

It is also important then, to differentiate extraversion from a similar personality trait that has received recent and significant attention in the literature: narcissism (e.g. Morf and

Rhodewalt 2001). Although narcissists, much like extraverts, may involve themselves in social settings, there is a distinct difference in these traits as narcissists tend to try and involve themselves in these social settings as an opportunity to gain attention and praise from others (Campbell et al. 2004). The interest they place in their own personal success over their closeness to others (Campbell et al. 2005) supports this difference as well. Additionally, narcissists belief in their own superiority (Emmons 1987) causes them to tend to place the blame on their colleagues, while extraverts are more likely to try to find things in common with others (Thorne 1987). Taken together, these characteristics help to explain that what differentiates narcissism from extraversion is the underlying reason for their involvement in social gatherings. It seems as if their social involvement is driven by concern for themselves, while the extravert has a genuine concern for the social group. Research supports this general ideal as previous studies have found that narcissists are driven by ‘getting ahead’ rather than ‘getting along’ (Paulhus and John 1998).

In light of the aforementioned research, it is expected that CEO extraversion will have both a direct and indirect impact on a firm’s strategic marketing outcomes as they seek to build relationships with those around them and make their decisions from this perspective. The sections which follow will explain the expected role of trait extraversion in impacting these outcomes through the firm’s organizational orientation.

CEO Extraversion: Influencing the Organization

Considering the changing role of a CEO and recent research investigating the influence of CEO personality on firm strategic decision-making, it is expected that individual personality traits do indeed influence the strategic marketing decision-making of the firm. One area in which personality will influence the organization is through the firm’s organizational orientation. In the case of CEO extraversion, previous research is divided on the expected impact of this trait.

One stream of thought on the effects of CEO extraversion takes the upper echelon theory perspective (Hambrick and Mason 1984), suggesting that the strategic-decisions of extraverted CEOs are guided by the trait, eventually filtering down throughout the organization. From this viewpoint, the idea that extraverted leaders were more likely to be charismatic and more likely to stimulate others intellectually (Bono and Judge 2004) is believed to result in employees and other organizational leaders who are inspired and influenced by the extraverted leader. Accordingly, research in this stream suggests that more extraverted leaders are more engaging of followers and strong network builders (Cable and Judge 2003). From this perspective, it seems apparent that the trait of extraversion should have a net positive influence on the effectiveness of the organization as subordinates "fall in rank" and drive forward with those beliefs. Consequently, the more extraverted CEO should breed an organization with more extraverted individuals, where they too involve themselves in more social interaction (McCrae and Costa 2003) and a strong desire to find things in common (Thorne 1987).

Alternatively, more recent research has begun to question the assumption that an extraverted CEO is more likely to be an effective leader in all situations. This research suggests that the effectiveness of the CEO can be explained using dominance complementarity theory (Carson 1969; Kiesler 1983). Dominance complementarity theory suggests that effective interactions between leaders and their subordinates occur when their parties assume complimentary roles. For example, in order for a dominant assertive leader to be effective, the subordinate needs to match, by having submissive, passive behavior. In this circumstance, the dominant party is sufficed by the validation of status and power while the submissive feels better about the relationship through support and security (Grant, Gino and Hoffman 2011). However, because many organizations tend to be a reflection of their upper management, there exists certain situations in which personality traits can cause conflict within the organization resulting in a firm that is less influenced by their leader. For example, due to the assertive nature of extraverts and their desire to be dominant in their interactions (McCrae and Costa 1987) it is possible that an extraverted subordinate may desire to be assertive in a conversation with their superior, resulting in a less than effective conversation. The extraverted CEO in this example, may not actually listen to said opinion from their subordinate either, not only resulting in tension between the two, but also causing the CEO to miss possible important information from the employee who may harbor important customer information which could be useful in CEO decision-making.

The Link Between CEO Extraversion and Organizational Proactiveness

One organizational orientation in which extraversion is likely to play a role is the firm's organizational proactiveness. Research defines organizational proactiveness as firms who are forward-looking and opportunity seeking (Lumpkin and Dess 1997). They are organizations who typically attempt to be on the cutting edge: Introducing new products or services in anticipation (versus in response) of demand allowing firms to try to create change and shape their environment to their advantage (Lumpkin and Dess 2001). There are firms that have the foresight to seize new opportunities (although it may not always be the first to do so), influence trends and create demand (Lumpkin and Dess 1996). In order to be successful, these firms need to be externally oriented, frequently monitoring the market for information and important changes in order to beat their competitors to market (Blesa and Ripollés 2003). However, simply being able to access greater levels of information, is not as valuable as knowing what information to seek and where or from whom that information is accessible (Atuahene-Gima and Ko 2001). In other words, firms who wish to be more proactive, would require their firms to have the ability to access greater levels of consumer insight as well as the ability to effectively and efficiently disseminate and use these insights. The two competing viewpoints regarding CEO extraversion above may offer different explanations of how this personality trait is expected to influence organizational proactiveness.

From the first perspective discussed above, the argument could be made that the extraverted CEO's desire to be involved socially with others (McCrae and Costa 2003) and their impulsivity and tendency to ask more questions (Elphic, Halverson & Marszal-Wisneiwska 1998) should allow them to build up social capital as they traverse, the building of new and strengthening of existing, corporate and personal relationships. This social capital, if used effectively, could provide greater levels of customer and competitive insight as increased access to information may allow them to anticipate and pursue new market opportunities. This suggests that organizations run by extraverted CEOs may have the ability to more proactively respond to any opportunities, or threats to their organization not only directly via their own strategic decision-making, but also indirectly via the actions expected of their employees who tend to be a reflection of their CEO (Hambrick and Mason 1984). Furthermore, because extraverted individuals tend to be more clear, concise, persistent (Hayes 1991) and innovative in response (Isen 2000) they may have greater influence on the views and values of other C-suite members, ceteris paribus, resulting in changes amongst the different departments of the organization in line with the values and desires of the CEO as the other top managers adapt their policies and influence their departments through corporate governance mechanisms. In other words, from this perspective if the CEO determines that the organization needs to be more proactive, it may be more likely to occur with an extraverted CEO, who has the conviction, confidence, and access to the appropriate market knowledge, consumer insights and influential social skills necessary to sway the other C-suite members to adapt the firm's overall strategy.

The alternative perspective, however, could logically conceive that CEO extraversion is likely to result in a negative effect on organizational proactiveness. This effect could occur from one of two different ways. First, the assertive nature of extraverts (Barrick and Mount 1991) causes them to attempt to dominate interpersonal interactions (McCrae and Costa 1987) through typically decisive, outspoken and direct communication, influencing the others as they interact socially (Hayes 1991; Deluga 1988). In some organizations this would result in a more effective and efficient environment where employees and other subordinates assume their roles as the submissive. However, in firms where employees are more proactive, this may not be the case. Since proactive employees are those who tend to voice ideas and try to take charge of the situation (Grant and Ashford 2008), there may exist conflict in communication styles which, from a dominance complementarity view, causes less effective collaboration. Accordingly, a more extraverted CEO may be less likely to receive information from proactive employees as the employee perceives them to be less receptive to their proactive ideas or actions (Grant, Gino and Hofmann 2011). In this circumstance, despite the employees being a reflection of their upper management, the customer information only flows in a top-down manner, rather than the expected. It is from this perspective, that CEO extraversion can logically result in negative impact on the firms organizational proactiveness, as employees do not feel as if the extraverted CEO is actually receptive to their proactive behaviors.

Secondly, the more extraverted CEO is likely to place a greater importance on building relationships, more inline with the relationship-based marketing and contrary to the traditional marketing efforts that more and more firms are falling away from. From this perspective, it can be argued that the more extraverted a CEO is, the higher importance they place on relationship based marketing. This view point, from the perceptual lens path of influence laid out in upper echelon theory research, suggests that a more extraverted CEO would not be as concerned about being proactive, rather, they would be more likely to take care of their existing relationships and customers and less likely to try to proactively stay ahead of market trends and opportunities.

In light of the arguments above, it is expected that an extraverted CEO, with greater social skills and appetite and aptitude for social interaction, will influence their organization both directly through their individual decision-making, and indirectly through the systems, policies and procedures they put in place. However, the results of this influence could be logically hypothesized from either a positive or negative perspective. Accordingly, the following hypothesis is presented:

H1 – CEO extraversion has a relationship with organizational proactiveness.

Strategic Marketing Outcomes Associated with CEO Extraversion

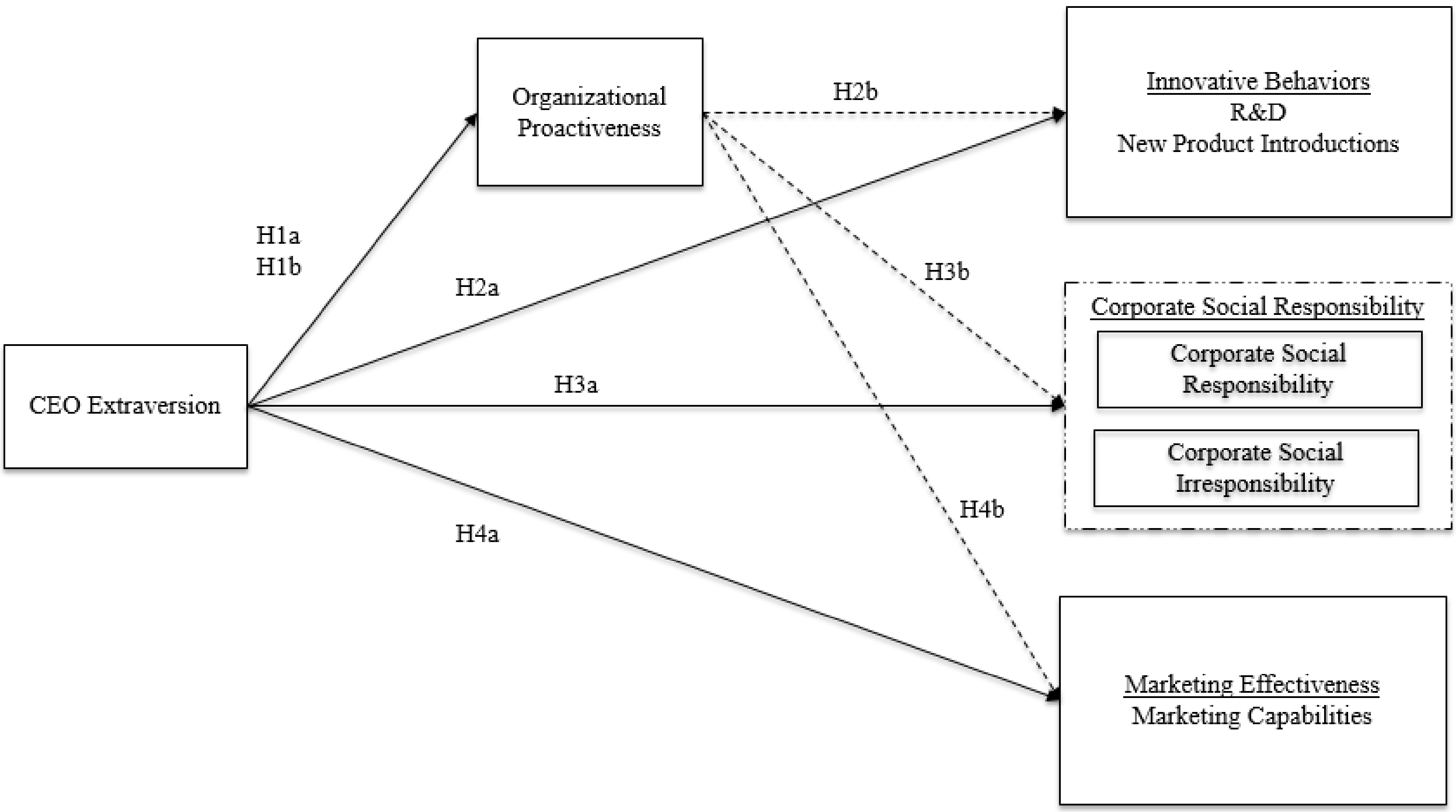
As discussed above, the changing role of the CEO elucidates an increasing concern for implementing customer insight into strategic decisions. Since this is such an important part of the business, corporate boards will be looking for different ways to measure and justify the success of the CEO in this role. However, understanding whether or not collaboration and communication is successful or not may be difficult to objectively measure. Accordingly, the limitations on the success of these endeavors from a strategic viewpoint is limited due to the difficulty in acquiring survey data from top managers paired with the difficulty in pinpointing how these connect to specific performance metrics. For these aforementioned reasons, this research will measure strategic marketing outcomes indicating the organizations ability to meet and exceed their customers' demands. These measures do not necessarily result in organizational success, however, previous research has found each to be strong predictors of that success.

To determine an organization's ability to satisfy customer needs the following three constructs were investigated: (1) innovative behaviors, (2) marketing effectiveness and (3) social awareness. Figure 2.1 illustrates the expected model which will be illuminated in the paragraphs which follow. Each of these constructs provide evidence of the marketing strategy of the organization both directly and indirectly (through aforementioned corporate governance mechanisms) related to the role of the CEO as the leader in strategic decision-making. First, an investigation into the firm's innovative behaviors should reflect the firm's willingness to develop new products or adapt existing products that better solve their customers current or future problems, as well as their attempt to shape the market from future customer needs rather than simply responding to customers' existing needs. Second, studying the firm's marketing effectiveness should indicate their ability to leverage their marketing resources in order to more effectively meet consumer demands. Finally, social awareness indicates the firm's ability to be aware of social trends and issues that are important to their customers – an area that is becoming increasingly important to consumers when making purchase decisions (Nielsen 2014). The sections which follow outline how the personality trait of extraversion and the organizations proactive orientation are expected to result in a firm with greater levels of these strategic marketing outcomes.

Linking CEO Extraversion with the Firm's Innovative Behaviors

One of the main facets of extraversion involves the desire for individuals to be social (McCrae and Costa 2003). A more social CEOs may be more likely to spend time conversing

Figure 2.1
Framework for the link between CEO extraversion and strategic marketing outcomes



with customers and employees, building relationships with industry competitors through networking and other social venues. Their desire to ask questions of others (Elphic, Halverson & Marszal-Wisneiwska 1998) along with their exceptional social skills and knowledge of the market should allow them to not only gather the right information but also to gain insight that a less extraverted CEO may not be able to. This should give the extraverted CEO a solid understanding of not only current, but also future needs of their customers and market; above and beyond the less extraverted CEO.

With this knowledge, and their increased levels of positive affect (Elphic, Halverson & Marszal-Wisneiwska 1998) it is expected that the extraverted CEO will be more likely to spend money on research and development of both existing and new products as they believe that the likelihood of success in these endeavors is higher than a less extraverted CEO. Furthermore, they will be more likely to push the products to market because of the extravert's tendency to focus on the positive outcomes or rewards rather than the likelihood of failure (Gray 1972). Both of these arguments are consistent with perceptual filtering (Weick and Kiesler 1979). Additionally, their involvement in a new product launch could be viewed as beneficial to them in terms of their desire to gain additional opportunities for social interaction. For example, as they release new products they might develop relationships with others who are interested in their new developments and products (such as members of the media) and/or partners who they align with in designing or developing these new products. Accordingly, opportunities in the market for new product development and research should be more visible to them as they are more likely to focus on finding strategic objectives which suit their needs and desires. This is consistent with the idea of behavior channeling which suggests that these personal needs and desires can cause them to select certain alternatives in their desire to achieve this goal (Thompson 1967).

Furthermore, upper echelon theory would suggest that CEO extraversion would influence the entire organization through their influence and collaboration with the corporate board resulting in organizational control mechanisms and selection practices geared towards increasing social capital, flexibility and responsiveness. Presumably, a proactive organization, run by a more extraverted CEO, should therefore be more aware of the latest trends and directions where the market is heading. As discussed above, this should enhance the ability of the organization to be proactive which has been found as a predictor of new product success (Narver, Slater and MacLachlan 2004).

The evidence suggested above explicates the belief that a more extraverted CEO is expected to increase the levels of R&D spending and new product introductions through their own strategic decision-making as well as through their influence in the top management team. Accordingly, impact these outcomes through the firm's proactive orientation. Therefore, it is proposed that:

H2(a) – CEO extraversion has a positive relationship with a firm's innovative behavior.

H2(b) – The link between greater CEO extraversion and innovative behavior is mediated by the firm's organizational proactiveness.

Linking CEO Extraversion with the firm's Corporate Social Awareness

The larger social networks that an extraverted individual develops may also cause them to have more social capital than other their less outgoing counterparts. Both in their business and personal lives, extraverted CEOs are more likely to seek out and hold more conversations with greater numbers of people (McCrae and Costa 2003). Through these conversations the extraverted CEO should gain a greater understanding of what is important to the customer, not only in terms of how their products is perceived, but also issues or social trends that are important to their customer base.

As discussed above, these strong social skills also mean that CEO should also be better at collaboration. Many organizations are now working hard to have a consistent and clear message across each of their departments in their firm. For example, because each department has different goals and objectives, the sales and marketing departments in the firm tend to have a plethora of issues such as cultural differences, interfunctional conflict, and a differing perspective about the marketplace (Malshe and Sohi 2009). Research suggests that these issues present in the sales and marketing interface are also present between marketing and other functions of the business such as logistics (Ellinger, Keller and Hansen 2006), manufacturing (Malhotra and Sharma 2002) and finance (Zinkhan and Verbrugge 2000). As such, it is expected that this greater ability of the CEO to communicate customer needs to the other c-suite members, will result in a firm wide awareness and understanding of crucial social issues that only specific departments may have insight into. Additionally, the tenets of upper echelon theory suggest that if the CEO themselves help to influence the integration of the organization, the organization and its employees will too be more aware of the social trends or consumer issues. The organization will then be more likely to get themselves involved in positive corporate social responsibility efforts.

Alternatively, the outward expression and vocal nature of more extraverted CEOs means that they will be more likely to have more conversations and marketing messages leading to a higher likelihood of making a mistake. As this outward expression and social influence flows down to the lower levels of the organization, they too may be involved in a greater number direct customer conversations resulting in incidences of misspoken messages resulting in possible controversial statements. As such, it is expected that driven by the more extraverted CEO, the proactive firm will be more likely to invest both time and resources into advocating for social causes important to their customers. However, they will also be more likely to be involved in a corporate misdeed as the individuals of the firm take proactive efforts to communicate directly with their customers resulting in a higher likelihood of making a mistake.

H3(a) – CEO extraversion has a positive relationship with (i) corporate social responsibility strengths and a positive relationship with (ii) corporate social responsibility concerns.

H3(b) – The link between CEO extraversion and the corporate social responsibility outcomes is mediated by the firm's organizational proactiveness.

Linking CEO Extraversion with the firm's Marketing Effectiveness

Another important measure of the organizations ability to satisfy customers' needs can be seen in the effectiveness of their marketing endeavors. As suggested above, organizations lead by extraverted CEOs are likely to have access to greater levels of market knowledge as their policies and procedures place great importance on building and maintaining relationships resulting in greater levels of social capital. The resource-based view (RBV) of the firm provides an understanding of how organizational capabilities allow them to use their access to social capital resources and more effectively serve the customers whom they target.

RBV states that a firm's competitive advantage lies in their ability to leverage resources to create customer value (Hughes, Le Bon and Malshe 2012). In order for these capabilities to offer them a competitive advantage they must be valuable, rare, inimitable and non-substitutable (Barney 1991; Wernerfelt 1984). These organizational capabilities, defined as "complex bundles of skills and accumulated knowledge…used to enable firms to coordinate activities and make use of their assets" (Day 1994), are embedded in the processes of the organization and allow them to be more effective at deploying their resources (Makadok 2001). Resource Based Theory (RBT) also provides the idea that firm performance is contingent upon the effectiveness of capabilities in comparison to a firm's competition (Cron et. al 2014). More specific to a firm's marketing effectiveness, marketing capabilities are defined as "the integrative processes designed to apply collective knowledge, skills and resources of the firm to market-related needs of the business, enabling the business to add value to its goods and services, adapt to market conditions, take advantage of market opportunities and meet competitive threats" (Vorhies 1998). Firms who have strong marketing capabilities are able to use their marketing resources, knowledge and skills more effectively, resulting in higher levels of marketing and overall performance (Vorhies and Morgan 2005).

Keeping the resource-based view in mind, it can be expected that firms with an extraverted CEO should be effective in their marketing communications and solutions. This is because the socially driven decision-making of an extraverted CEO should make the organization more likely to communicate with both internal and external information sources resulting in greater levels of social capital in the form of customer relationships and preferences as well as stronger and more unique competitor and industry information. The literature on market orientation calls these abilities market intelligence generation and responsiveness to market intelligence (Kohli and Jaworski 1993). The knowledge based process of creating social capital is expected to become embedded in the organization over time resulting in the firm's ability to develop and acquire stronger marketing capabilities difficult for their competitors to imitate (Teece, Pisano and Shuen 1997). Taken together, the interaction between these market orientation measures and the firm's capabilities should result in greater value-creation potential

(Morgan, Vorhies and Mason 2009).

Additionally, the increased positive affect seen by more extraverted individuals suggests that the extraverted CEO will have enhanced problem solving and decision-making abilities (Isen 2000). This means that an extraverted CEO should be more flexible, efficient and thorough in their cognitive processes causing similar results to the systems, policies and processes of the organization. This means that firms run by an extraverted CEO will not only be better prepared to prevent any dissatisfaction from occurring by providing more carefully targeted advertising and solutions, but also will be more effective in their dealings with and responses to any customer issues which still may arise. Consequently, it is expected that firm's run by extraverted CEOs will have greater ability to efficiently leverage marketing resources into sales revenue (Dutta, Narasimhan and Rajiv 1999) resulting in higher levels of marketing effectiveness.

H4(a) – CEO extraversion has a positive relationship with marketing effectiveness.

H4(b) – The link between CEO extraversion and marketing capabilities is mediated by the firm's organizational proactiveness.

Methodology

Sample

To develop an initial list of firms, the WRDS COMPUSTAT and ISS (formerly Execucomp) databases were used. The resulting sample was made up of 325 large, publicly listed U.S. firms from a variety of industries existing in 8 different 1-digit SIC codes. These firms were tracked over a five-year period (2006-2010) so that the findings do not reflect any idiosyncrasies of a certain year and was subject to the following set of criteria: (1) The CEO of the firm was appointed between 2003 and 2005 and (2) did not change during the measured five year time period. This allows the investigation of the CEOs personality traits early in their tenure and helps to eliminate any possible effects which may remain as holdovers from the previous CEO. Below, the measures and sources of data for the various variables used in the study are provided. Table 2.1 (Appendix) delineates the variables used in the following analyses, their operational definitions, sources and measures.

Data and Measures

The data in the sample frame was collected annually over the five year sample from the aforementioned databases. Additionally, annual reports and proxy statements for each of the firms and were gathered in order to obtain samples of (1) each individual CEOs writing style, (2) the firm's aggressive orientation and (3) values used in the calculation of the moderating variables whose measurement are defined below.

CEO Extraversion. Since it is difficult to obtain direct measures of personality from a firm's top managers, often times researchers rely on alternative measures to attempt to evaluate the traits and characteristics of CEOs. For example, research by Cain and McKeon (2014) looks at CEOs with a pilot license as a measure of risk taking, while research by Chatterjee and Hambrick (2007) looks at the size of the CEOs photograph in the shareholder letter as an indicator of their narcissistic tendencies. Similarly, this research looks to evaluate the firm's CEO using a proxy measure of their personality based on the CEO's writing content in their annual letter to shareholders. This measure, although it has its limitations, allows an investigation (which otherwise may be unable to be measured) into an important area of study as delineated by the narrative and hypothesized relationships outlined above. Using the writing from the shareholder letters as a measure of CEO personality is consistent with existing corporate personality research which suggests a CEO narrative that the "CEO is the company" and vice versa.

Although there has not been a previous study which specifically investigates CEO extraversion or other Big 5 personality traits using this method many studies have identified lexical cues which are associated with the personality trait of extraversion (i.e. Pennebaker and King 1999). Using previous research as a guide, CEO extraversion was measured via textual analysis using the very oft -used Linguistics Inquiry and Word Count software. Previous studies of extraversion have provided evidence of six different aspects of an individual's writing which has been found consistent with the Big 5 personality inventory measure of extraversion: (1) the total number of words used (Gill & Oberlander 2002), (2) the number of words used related to people and social processes (Pennebaker and King 1999), (3) the number of positive emotion words (Pennebaker and King 1999), (4) the number of negative emotion words, (5) the number of present tense words (Pennebaker and King 1999) and (6) the number of first person pronouns (Pennebaker and King 1999). Extraverts therefore, should be expected to score higher on all of these measures except for negative emotion words, which one would expect to be lower.

Theoretically, these measures are consistent with the characteristics and traits of extraverts such as their propensity to have a more positive attitude and have strong concerns and desires to engage in social interactions. Word counts for the aforementioned variables were collected using shareholder letters from the years n+1 and n+2 of the sample. Following an exploratory factor analysis to ensure that all six of these measures load on 1 construct, Bartlett scores resulting from a principal component analysis were used as the value for the latent construct of CEO extraversion for each organization in the sample.

Organizational Proactiveness. Organizational proactiveness was measured using the firm's annual 10-k reports. Using Short et al. (2007; 2009) as a guide, the text-analysis software DICTION 7.0 (Hart 2000) was used to analyze each company's 10-K annual reports for the years

2006 and 2007 for words reflecting a company's proactiveness. The frequency of these words normalized per 500 words was used as a measure of proactiveness. The proactiveness-related words used include: Anticipate, envision, expect, exploration, exploratory, explore, forecast, foreglimpse, foreknow, foresee, foretell, forward-looking, inquire, inquiry, investigate, investigation, look-into, opportunity-seeking, proactive, probe, prospect, research, scrutinization, scrutiny, search, study, and survey.

Innovative Behaviors. Two measures of the firm's innovative actions were investigated and are operationalized as follows: (1) the firm's total spending on research and development (R&D) and (2) the number of new products that the firm brings to market in a calendar year. Total spending on R&D was measured as the value of spending on R&D in the year of observation and was gathered using Wharton Research Development Services Compustat database. The number of new product introductions was measured as the total number of new products introduced by the firm in the year of observation. These product introductions were gathered using new product announcements found in the Lexis-Nexis database which provides excerpts from companies' product related press-releases. Since some of these press releases deal with other product related announcements (such as product pre-announcements and non-introduction product related news) the press releases were coded and separated to ensure that only new product introductions are considered in the sample. The final value was recorded as the total number of unique product introduction announcements made by each firm in the year of observation.

Corporate Social Responsibility. Corporate social responsibility was measured with two separate measures: (1) An annual count rating of the total number of social issue strengths and (2) an annual count rating of the total number of social issue concerns. These values were ascertained using the Kinder, Lydenberg and Domini Social Performance Index. Since this data base has limitations, a subsample analysis of the firms who do have an input in this database were used when investigating these measures of social awareness outcomes.

Marketing Effectiveness. This construct was measured using the Dutta, Narasimhan and Rajiv (1999) stochastic frontier approach for marketing capabilities. This method of measurement uses a firm's activities as an "efficient frontier", comparing the marketing resources used by a firm to the optimal fulfillment of its goals. In other words, advertising, SG&A expenditures, and other investments in customer relationships when compared to the sales of an organization should give us an efficiency score for a firm's marketing capability. COMPUSTAT was used as the main data source for the financial information required for this model.

Control Variables. Measurement of industry effects (measured using 2-digit SIC codes), prior performance (measured as the ratio of net income to total assets), financial leverage (measured as the ratio of total debt to total equity) was gathered using Compustat. Additionally, globalization (measured as the ratio of the firm's sales outside the U.S.) and diversification (measured using Palepu (1985)'s entropy measure based on four- and two-digit-level segment sales) will also be controlled for in the model.

Analysis and Results

Means, standard deviations and inter-correlations for the studied variables can be found in Table 2.2. These measures are pooled over the period of observation. Consistent with Kennedy (2003) none of the correlations exceeded .5, model variance inflation factors were smaller than the benchmark of 10 while condition indices associated with the eigenvalues were less than the benchmark of 30. These findings suggest that multicollinearity should not be of concern. Multilevel structural equation modeling was used to test the hypothesized model. Mplus

(Version 7.4, Muthen and Muthen 1998-2015) software was used to perform the SEM analysis.

Development of the Extraversion Construct Measure. In order to determine which of the LIWC measures would best fit the data, an exploratory factor analysis (EFA) was run using the average word count scores for each of the two years collected in the sample (N+1, N+2). The EFA provided evidence that the items loaded on two different constructs. Theoretically speaking, this seems consistent with research as the aforementioned and closely related personality trait of narcissism may indeed be that other construct. Since research on narcissism suggests that narcissists think they are more intelligent or better than others and continuously attempt to reaffirm their inflated self-views through dominance and superiority (Raskin et al. 1991; Morf and Rhodewalt 2001) it can reasonably be expected that they are more likely to use a greater number of words in their writing as they push forth their beliefs. Furthermore, their competitive (Morf, Weir and Davidov 2000) and aggressive nature (Webster et al. 2007) alongside their tendency to blame others (John and Robbins 1994) leads me to believe that the measure of negative emotion words may better reflect this closely related trait rather than extraversion. Both word count and negative emotion words had loadings on factor one of less than 0.5 (Gerbing and Anderson 1984) and loaded highly on the second factor, while the other indicators all loaded higher on the first factor. Using this analysis and the theoretical underpinnings discussed above the total word count and negative emotion words measures were dropped from the analysis. Following their removal, the remaining items all loaded on one single construct and all of the loadings were higher than 0.5.

Following the exploratory factor analysis, the CEO extraversion construct was validated using a principal component analysis (PCA). The PCA results suggested that the use of personal

Table 2.2

Descriptive statistics and correlation coefficients for essay 1

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	CEO Extraversion	0.02	0.95	1													
2	Org. Proactiveness	0.13	0.10	-.12*	1												
3	R&D Spending	-0.01	10.0	-.01	.06*	1											
4	New Product Introductions	4.47	10.86	.04	-.03	.22**	1										
5	CSR	1.93	3.07	-.02	-.06*	.59**	.25**	1									
6	CSiR	2.52	2.41	-.01	-.03	.34**	.03	.46**	1								
7	Marketing Capabilities	52.36	14.08	.01	-.37*	.26**	.13**	.43**	.39*	1							
8	Globalization	0.58	0.37	.13**	-.03	-.05*	.03	-.10**	-.08*	-.03	1						
9	Diversification	0.41	0.50	.03	.02	-.02	-.04	-.11**	-.04	-.05	-.06*	1					
10	Firm Size	1.36	2.01	.26**	-.07*	.05	-.01	.01	.04	.02	.08**	.35**	1				
11	Firm Age	3.58	1.01	.14	-.07*	.03	.08*	.05	-.02	.05	.09**	.20**	.45**	1			
12	Leverage	0.22	0.22	.02	.07*	-.06*	-.01	-.06*	-.04	-.04	.24**	-.05*	.05*	-.03	1		
13	CEO Age	4.00	0.12	-.09**	-.01	-.06*	-.03	-.08*	-.04	.02	.04	.11**	.165**	.17**	.09**	1	
14	CEO equity-pay ratio	0.46	0.21	.01	-.01	.05	.03	-.02	.02	-.05	.04	.09**	.17**	-.01	-.06*	-.06*	1

pronoun use (0.901), positive emotion words (0.567), focus on the present tense (0.549) and social words (0.929) provided the best fitting model. The chi squared was 1221.56 (6 d.f.) and the KMO test produced a result greater than 0.5 (.599) suggesting that the sample is adequate. Both construct reliability (0.84) and the average variance extracted (0.57) were above the levels suggested by Fornell and Larcker (1981). After validating this measure, predicted Bartlett scores for the construct were used as the measure of CEO extraversion measure in the analyses which follow.

Model Analysis. The results of the main analyses are presented in Table 2.3 and suggest that the overall model provided good fit for the data (X^2 = 180.995, df = 55, TLI = .485, RMSEA = .038, SRMR = .001). RMSEA was greater than the .05 level suggested by MacCallum, Brown and Sugawara (1996), while model SRMR was above the .08 benchmark set by Hu and Bentler (1999). Investigation into the direct effects of CEO extraversion found mixed results. For the model reported in Table 2, the control variables listed above (firm size, prior firm performance, leverage, CEO age and CEO equity-pay ratio were included in the model and regressed upon both the dependent variable and the mediator. Their inclusion allows confirmation of the robustness of the results found within the analyses. Separate models were run with and without the control variables but both models lead to the same research conclusions.

Providing evidence to support H1, the path between the dependent variable, CEO extraversion and the mediator, organizational proactiveness was negative and marginally significant ($\beta = -.013$, $p < .10$). The relationship between CEO extraversion and two different indicators of innovative behaviors: R&D spending ($\beta = -.107$, *n.s.*), and new product introductions ($\beta = .475$, *n.s.*) were not significantly related.

Table 2.3

Multilevel SEM analysis results with CEO extraversion as the dependent variable

Paths Modeled:					**Parameter Coefficient**	**z-value**	**p-value**
Direct Effects:							
CEO Extraversion	→	Org. Proactiveness			-.013*	-1.943	.052
CEO Extraversion	→	R&D Spending			-.107	-.373	.709
CEO Extraversion	→	New Product Introductions			.475	.905	.365
CEO Extraversion	→	CSR			-.126	-1.027	.304
CEO Extraversion	→	CSiR			-.026	-.227	.821
CEO Extraversion	→	Marketing Capabilities			-.531	-.756	.449
Org. Proactiveness	→	R&D Spending			9.758*	1.682	.093
Org. Proactiveness	→	New Product Introductions			-2.429	-.577	.564
Org. Proactiveness	→	CSR			-2.212*	-1.863	.062
Org. Proactiveness	→	CSiR			-.704	-.618	.536
Org. Proactiveness	→	Marketing Capabilities			-51.931***	-6.329	.000
Indirect Effects:							
CEO Extraversion	→	Org. Proactiveness	→	R&D Spending	-.123	-1.185	.236
CEO Extraversion	→	Org. Proactiveness	→	NPIs	.031	.572	.567
CEO Extraversion	→	Org. Proactiveness	→	CSR	.028	1.357	.175
CEO Extraversion	→	Org. Proactiveness	→	CSiR	.009	.587	.557
CEO Extraversion	→	Org. Proactiveness	→	Marketing Capabilities	.657*	1.903	.057
Overall Fit:							
RMSEA							.038
TLI							.485
SRMR							.001
χ^2 (d.f.)							180.995(55)

**p<.10, **p<.05, ***P<.01, two-tailed significance levels. Coefficients were estimated using the MPLUS MLR estimator which estimates the model using maximum likelihood estimation and robust standard errors.*

Consistent with these findings, CEO extraversion was also not significantly related to the firms marketing capabilities (β = -.531, *n.s.*), corporate social responsibility strengths (β = -.107, *n.s.*), or concerns (β = -.107, *n.s.*). Accordingly, the results for hypotheses 2a, 3a and 4a were largely unsupported.

Despite the non-significant findings for the direct effects of CEO extraversion on the outcome variables, the paths between our mediator, organizational proactiveness, and the outcome variables provided some evidence to support the overall research question. Marginal significance was found for the relationship between organizational proactiveness and new product introductions (β = 9.758, $p < .10$), CSR (β = -2.212, $p < .10$), while the relationship between organizational proactiveness and marketing capabilities was found significant at the .001 level (β = -51.931, $p < .001$).

Combining the paths for CEO extraversion and the firm's innovative behaviors, provides evidence that H2b is unsupported by the data as the total indirect effect of CEO extraversion on both R&D spending (β = -.123, *n.s.*) and new product introductions (β = .031, *n.s.*) were non-significant. The total indirect effects on CSR (β = .028, *n.s.*) and CSiR (β = .009, *n.s.*) also did not support the hypotheses 3a and 3b. Finally, and contrary to the previous results, marginal significance was found for the total indirect effect of CEO extraversion on marketing capabilities (β = .657, $p<.10$) providing some support for H4b.

Endogeneity. It is possible that certain firms may attract more extraverted CEOs or that certain situations may cause tendencies associated with extraversion to be demonstrated causing endogeneity concerns. To combat this, an approach used by Chatterjee and Hambrick (2007;2011) was used where CEO extraversion was regressed against a set of antecedent and concomitant variables all measured in t-1 (i.e. the year preceding the CEO's appointment). Firm performance (ratio of net income to total assets) and firm age (natural log of the difference between the year of observation and the firm's founding year) were the antecedent variables used in this analysis. These variables were chosen as they highlight key characteristics of the CEOs entry. CEO age (natural logarithm of the CEO's age) and CEO/chair duality (dummy variable 1 indicating that the CEO is also the chairman of the board, 0 if not) were used as the concomitant variables. Finally, a dummy variable for industry using SIC codes were included in the analysis. No significant association of these explanatory variables with CEO extraversion was found providing evidence that CEO extraversion is not an endogenous proxy for other factors.

Discussion, Limitations and Future research directions

Although the results above were largely non-significant, they did provide some interesting talking points and avenues for future research. First, the marginally significant negative relationship between CEO extraversion and organizational proactiveness, in support of hypothesis 1, is consistent with more recent research suggesting that extraverted leaders do not effectively interact or manage other employees who are not subservient. In this way, the extraverted manager is likely to have a negative impact on their firm if the employees of the organization are proactive and do not complement the personality of their leader. Furthermore, these results seem to indicate that those more extraverted CEOs who are more concerned with relationship building rather than the traditional marketing goals of simply making sales, are likely to run less proactive organizations, attempting to improve customer loyalty, rather than simply beat their competitors to market with new products for new customers.

Second, the positive total indirect effect of CEO extraversion on marketing capabilities (through organizational proactiveness), in support of hypothesis 3b, suggests that this personality trait does indeed indirectly influence the marketing capabilities of the firm. Although not explicitly hypothesized in this research, the path between organizational proactiveness and marketing capabilities helps to explain this impact and tells an interesting story. Since proactive organizations try to get ahead of the market and anticipate likely changes, they are likely to negatively impact the effectiveness of the firm's marketing capabilities as they diminish the firm's ability to efficiently use the marketing mix processes and the processes of marketing strategy and development that marketing capabilities are inherently comprised of (Vorhies and Morgan 2005). To further emphasize this issue, research by Day (2011) discusses how the marketing capabilities gap is widening as the difference between the resources required to keep up with market complexity and velocity is exponentially outgrowing the resources available to firms. Accordingly, those firms who are more proactive may not be able to effectively use the marketing capabilities and resources available to them in an efficient manner, reducing the importance of those capabilities for proactive organizations.

As a result, the more extraverted CEOs focus on relationship building, and/or their incompatibility with proactive employees causes a net positive indirect effect of CEO extraversion on marketing capabilities. In other words, because the CEO is either ineffective in managing his proactive organization or more focused on relationship, it reduces the negative impact of organizational proactiveness on the firms marketing capabilities.

Implications. As discussed above, previous research in upper echelon theory, although numerous, has surprisingly limited amounts of work done involving TMT member personality traits. The majority of research in this area has tended to focus on demographic characteristics such as CEO age, functional background, education and tenure (e.g. Jensen and Zajac 2004; Bertrand and Schoar 2003; Barker and Mueller 2002). This work is even more limited when considering the impact of personality traits on marketing outcomes. This research fills this gap in the literature by providing evidence that the personality trait of extraversion in a firm's CEO does indeed have some impact on the firm's organizational orientation. Also, this research provides evidence that a CEO's social prowess and desire potentially causes conflict within a more proactive organization which in turn results in higher levels of marketing effectiveness.

For academicians these results should add to the previously scant amount of research on the antecedents of innovation. Although there is a large amount of research on innovations impact on the market (i.e. Srivistava, Shervani and Fahey 1998; Chaney, Divinney and Winer 1991), there has been minimal research done investigating innovative behaviors as a tangible outcome. This research fills this gap by evidencing that CEO extraversion (through the firm's organizational proactiveness) results in greater levels of marketing effectiveness adding to the broad literature base in this field. A large amount of research in marketing has investigated the relationship between a firm's strategy and its effectiveness (i.e. Vorhies and Morgan 2003) and performance (i.e. Morgan, Vorhies and Mason 2009), however, there has not been (to my knowledge) an investigation into the role of CEO personality on the firm's strategic marketing capabilities. Findings that CEO extraversion will impact the organizational processes (even in a negative light) leading to greater marketing effectiveness should provide future researchers with a basis for investigating other marketing related organizational orientations and outcomes resulting from traits and characteristics associated with CEO personality.

From a methodology standpoint, this research contributes a new measure of CEO personality. Along those lines, the proxy measure of CEO extraversion should also allow further research in this field where it is difficult to get responses from the intended sample. It is my hope that this new measure of CEO extraversion will spur further use of previous LIWC findings as a measure of other TMT member personality traits. With that being said, the limitations of using a proxy measure of personality are understood. Since many of the hypotheses of direct effects were non-significant, perhaps a more nuanced measure of CEO extraversion might provide a clearer picture. Future research should not only look to validate this measure of CEO extraversion with other personality measures such as the Meyers-Briggs test, but also explore other metrics which may get a more nuanced view of this important personality trait.

The findings of this research also have important implications for practitioners. First, these results delineate the resulting impact of hiring more outgoing and social CEOs. Interestingly, these findings also suggest that CEOs who are less extraverted may actually cause their firms to be less proactive. For certain industries, such as the tech industry where change is faster and more complex, it may be an important trait to consider when hiring. Perhaps hiring an individual who is more introverted might increase organizational proactiveness. Although it is not realistic for corporate boards to analyze writing samples for candidates for their open CEO positions, our findings do suggest that a broad-view understanding of their social network or ability to interact with strangers may provide a foreshadow of their success as the firm's leader.

Limitations. This research also has a few limitations. The focus on one key personality trait limits the generalizability of this research to broadly speak about the influence of CEO personality as a whole. Future research should investigate other personality traits that might influence marketing outcomes (i.e. Srivastava and Owens 2010; Kashmiri, Nicol & Arora forthcoming). This research also focused on only one specific organizational orientation (proactiveness). Future research could investigate other marketing related organizational orientations and their impact on marketing outcomes. It is possible that another organizational orientation (such as customer orientation) might provide a broader picture of the impact of this trait on the firm. This research also limits itself to one key member of the firm's top management team despite research which indicates that other individuals on the TMT may have an impact on strategic marketing outcomes (i.e. Nath and Mahajan 2011). An interesting study may investigate the aggregate influence of these individuals and the interaction of certain traits between group members (i.e. CEO and CMO extraversion).

Admittedly, the data and measures used in this research have limitations mainly due to the accessibility of available data sources. For example, the KLD database has a limited number of firms, only allowing the corporate social awareness outcomes to be measured in a sub-sample. Another limitation is the way that new product introductions were measured. Perhaps future research could look at a more in-depth view of new product introductions which account for the difference between incremental new product introductions as opposed to completely new to market products. The idea here would be that it is possible that the incremental additions are muddying the analysis as more extraverted CEOs may influence the incremental new product introductions as they focus on relationship building. Additionally, the measure of extraversion based on textual analysis, may also be a limitation of this research. Future researchers should investigate the developed measure and compare the predictive validity of the measure to the traditional pen and paper based personality tests. Finally, future researchers could look for alternative data sources to remedy these concerns.

III. ESSAY TWO: THE “FACE” OF MARKETING: USING FACIAL WIDTH-TO-HEIGHT RATIO TO PREDICT CMO SUCCESS

Introduction

"What you have to do and the way you have to do it is incredibly simple. Whether you are willing to do it is another matter."
-Peter Drucker

Every year, Forbes releases a list of the world's most valuable brands. For the third straight year Apple Inc. has topped the board as the world's most valuable brand (Forbes 2015). Apple has recently surpassed Coca-Cola (who had held the top position for the previous 13 years) by increasing their brand value 28%, 21% and 17% over the past three years (2013-2015). From a valuation standpoint, Apple Inc.'s brand value has increased from $98 to $145 billion in this short time span. This growth has Apple poised for success as they maintain peak position and their valuation is now almost three times that of Coca-Cola and two times as valuable as the new second and third most valuable brands – Microsoft and Google (Forbes 2015) – quite possibly making them the most successful brand of all time! Given that the corporate brand tends to be the responsibility of the firm's top marketing managers (Jaworski 2011), it is not surprising that Apple Inc.'s Chief Marketing Officer (CMO hereafter) Phillip Schiller tops ExecRank's list of the top CMOs (2014). Following the passing of longtime leader Steve Jobs, Apple Inc. was determined to keep its most senior talent within the organization. Following the appointment of new Apple Inc. CEO Tim Cook, Mr. Schiller was granted 150,000 restricted stock units valued at nearly $60 million (Parekh 2011) indicating not only his value to their corporate brand, but also the importance of marketing to their firm.

Moreover, the continued success seen by SVP Schiller has caused him to be charged with role of Apple Inc. CMO since 1997 well past the average 4 year tenure of top marketing managers in Fortune 100 companies (Spencer Stuart 2015). It seems apparent that there is something exceptional or different about Phil Schiller.

In order to determine what it is that is special about top managers like Mr. Schiller, initial research in this area examined the CMO's impact on the organization through mere presence (Nath and Mahajan 2008) and through their influence in the firm's top management team (TMT hereafter) (Nath and Mahajan 2011). Initial outcomes of this stream of research were not very encouraging, as CMO presence alone had unsupported or mixed findings (Nath and Mahajan 2008). This study indicated that the presence of a CMO in an organizations TMT has neither a positive or negative impact on performance. These findings would prompt follow-up studies as researchers tried to find an explanation for these results which were detrimental to the perceived importance of marketing.

One such follow-up study which looked at the impact of the CMO through their relative power, finds that considering the CMO's level of influence might help to explain the lack of previous findings (Nath and Mahajan 2011). Although they found evidence for marketing's positive influence on sales growth, they still did not find conclusive evidence to suggest that including the CMO's relative power (in terms of relative position and pay) would impact organizational performance. Not satisfied with the methods performed in previous studies, Germann, Ebbes and Grewal (2015) replicated the work done by N&M (2008; 2011) also measuring their results in different samples, using different models, accounting for CMO endogeneity, in additional industries and across a larger time frame. This follow up study and its impressive methodological contribution was given a rather appropriate (but tongue in cheek) title: "The Chief Marketing Officer Matters!" clearly outlining their findings from the research. In other words, the authors indicate through their title and robust results that CMOs do indeed have an impact on performance, finally putting to rest the debate over the importance of including marketing in the C-suite.

Following this conclusion that a CMO *does actually* influence the firm's bottom line, another question arises: What is it that makes certain CMOs, like Phil Schiller, more successful than others? Building on the success of Mr. Schiller and the significant influence of a CMO on organizational performance described above, it is easy to see why the position of CMO is hot topic amongst practitioners and academics alike. If one individual is able to influence an organization or brand in this way (and since there is clearly heterogeneity in the performance and success of these individuals), it is likely that the distinct differences between these individuals can help to indicate to corporate boards, other executives and firm shareholders their likelihood of success in their role as CMO. As a result, the marketing literature has investigated a few differences between the success of CMOs focusing mainly on organizational or environmental differences such as tenure, power and employment backgrounds. For example, Boyd, Chandy and Cunha (2010) investigated the role of managerial discretion, while the aforementioned Nath and Mahajan (2011) piece explored the relative power afforded to the CMO. This laser focus on organizational variables has seemingly caused researchers to overlook the possibility of certain traits, characteristics or values which determine the likely success of future marketing managers.

Admittedly, recent research in management has investigated traits and characteristics of the CEO such as their view of self (Hayward and Hambrick 1997), locus of control (Sidek and Zainol 2011), propensity for risk (Cain and McKeon 2012) and even their personality (Peterson et al. 2003). However, very little of this research (with a few notable exceptions) has investigated the individual differences of the other specific members of a firms TMT, such as the CMO, CIO or CFO. Furthermore, there is currently no existing literature (to my knowledge) which investigates the *personality* of a firms CMO and the corresponding outcomes. This may be because the proxy measures currently available and used in CEO studies tend to evaluate some form of publically available text such as annual reports, corporate proxy statements or transcripts from conference calls or shareholder meetings. Documents like these tend to be written by and/or can be easily attributed to a firm's CEO, however, there does not exist any easily obtainable text document that can be directly and/or reasonably linked to the CMO. Another measure, facial width-to-height ratio (fWHR hereafter) provides this opportunity.

With the aforementioned limitations in mind, biological measures have recently become an interesting avenue for researchers to try to help explain behavior. Since photographs of c-suite members are typically publicly available and easily obtained thanks to the wonders of social media and technology, fWHR provides an interesting avenue to help us begin to unravel important traits associated with CMO success or failure. Accordingly, the research which follows, looks at fWHR of male Fortune 500 CMOs and its impact on firm level marketing-specific variables to help explain the aforementioned performance heterogeneity found in firms who employ a CMO. First, literature behind fWHR and its link to masculine tendencies will be outlined. Second, hypotheses will be developed surrounding marketing-related measures which are believed to be impacted by these CMOs. Third, an empirical investigation to support these hypotheses will be conducted. Finally, a discussion of the theoretical and practical implications of these findings will be explained.

Literature review, Proposed model and Hypotheses

The Role of the CMO

Before an investigation into fWHR can be done, one must have an understanding of the roles and responsibilities that the head of marketing for a firm must understand and undertake.

This is because trait activation theory indicates that an individual's characteristics or traits only influence decision-making in situations where that characteristic or trait is relevant (Tett and Burnett 2003). With this in mind, the existing academic literature describing the role of a CMO exists, however, the amount of work exploring this important TMT member is relatively minute as compared to some of their other TMT counterparts.

A look at the literature on the firm's top marketing managers tells us that the CMO is the "consumers' advocate in the firm's upper echelon" (McGovern and Quelch 2004), the custodian of the corporate brand (Wang and Huff 2007), the person in charge of safeguarding marketing assets (Brown and Beltramini 1989) and the individual charged with the generation and consideration of customer insights before formulating strategic options (Gilliatt and Cuming 1986). These definitions provide the beginnings of an understanding of their role, but lack the specific tasks and responsibilities required of them. Additional insight into their responsibilities can be found by investigating the literature on a firm's marketing capabilities. The marketing capabilities literature suggests that a firm's marketing capabilities include product development, pricing, channel management, marketing communications, selling, marketing information management, marketing planning and marketing implementation (Vorhies and Morgan 2005). From these firm attributes, a better description of the role that the CMO position may entail can be formed.

Accordingly, the most specific role delineation from the literature describes their function as including, but not limited to: Overseeing marketing resources, uniting and strengthening departmental marketing plans, and directing marketing efforts such as branding, product marketing and customer relationship marketing (Nath and Mahajan 2008). This means that the CMO in most companies is directly involved and responsible for the development of new products and services, as well as their communication with consumers, such as advertisements and social media.

As the role of the CMO has been adapting and changing over time, a quick look to popular press may also be warranted to ensure that the role is carefully delineated and understood. A glance through popular press (in the form of CMO related websites and professional blogs) provides a qualitative finding that the CMO is very important. Many new forums, websites and blogs allow CMOs to connect, unite and communicate their best practices with each other and other industry counterparts. These support group type social media websites have begun to crop up en masse on the internet. This is important because it also serves as an indicator of the increased desire for internal and external members of top management teams and academics to learn about the current field of marketing and the individuals who run marketing departments. Moreover, the focus of the articles and blogs written on these sites indicate that marketing is becoming very technology dependent. They explain this because they expect that CMOs will soon out spend their counterparts in the firm's technology department (Brinker and McLellan 2014). This is supported by surveys of CMOs which suggest that two-thirds of marketing departments in their sample were planning on increasing their spending on technology-related activities (Pemberton 2015). Accordingly, the role of the CMO is one that now requires a willingness to collaborate closely with their peers, more specifically those TMT members who are in charge of technology (Brinker and McLellan 2014). As these technological changes take place, the CMO is in a critical position: likely to have irreplaceable access to customer insight and behaviors that other top managers do not. This means that their ability to cooperate, collaborate and communicate this information with other c-suite members, such as the firm's top technology officer, is also of major importance.

Now that we have a firm understanding of some of the important roles and responsibilities that the CMO position entails, a basis for determining the individual traits and characteristics important for their success can be considered. As aforementioned, the majority of current knowledge on the type of person for the job is in public press and appears vague, tends to be situational and opinion-based, and lacks any form of empirical validation. The evaluation of CMO fWHR as a measure of their perspective or lens through which they see the world will hopefully begin to address concerns in the marketing literature regarding the lack of understanding about these "enigmatic creatures" (Boyd, Chandy and Cunha 2010). Accordingly, it is expected that fWHR will provide the first predictive glimpse into the impact that a CMO's traits and personality can have on the firm's strategic marketing decisions and outcomes. The section which follows will outline this measure and the psychological traits and characteristics associated with this interesting and unique biological indicator.

Facial Width-to-Height Ratio: An Indicator of Masculine Tendencies

In recent years, literature in sociology has uncovered the aforementioned metric which has been shown to predict a range of behavioral traits: facial width-to-height ratio. Adopted in a wide variety of fields ranging from biology to psychology, research suggests that greater levels of fWHR are positively related to masculine behaviors (e.g. Carré and McCormick 2008; Stirrat and Perrett 2010; Haselhuhn and Wong 2011). As expected, there are studies which indicate that fWHR may be sexually dimorphic and not be predictive of any changes in behavior or psychological outcomes in women (Haselhuhn, Ormiston and Wong 2015). One characteristic across these studies which is consistently linked to fWHR is aggression (Carré and McCormick 2008). Furthermore, higher measures of fWHR have also been linked to egocentrism, risk taking, a desire to maintain social status and cheating behavior (Carré and McCormick 2008;

Haselhuhn and Wong 2011) indicating a willingness to do whatever it takes to win or at least maintain their role. Other research has found that male CEOs with greater fWHR perform better than their counterparts (Wong, Ormiston and Haselhuhn 2011), and that men with greater fWHR contribute more to group efforts when intergroup competition is made salient (Stirrat and Perrett 2012).

Ongoing research is attempting to investigate how these physical traits influence the behavior of the individual. The existing evidence is only speculative, but one recent study seems to suggest that testosterone underlies the association between an individual's fWHR and their aggressive behaviors (Lefevre et al. 2013). The idea here is that testosterone has an impact on the neural circuitry during our early years impacting brain development. Furthermore, testosterone has been related to an individual's face shape as it causes craniofacial growth in young people (Verdonck et al. 1999). An alternative explanation, posed by Haselhuhn, Wong and Ormiston (2013) suggests that this link between fWHR and behavior may also be elicited through social processes. Using the self-fulfilling prophecy (Snyder, Tanke and Berscheid 1977), they suggest that the observer's treatment of the target, based on their perceptions of the trait, has an impact on the targets behavior in response to how he or she has been treated. In other words, when an individual is perceived as being trustworthy, observers actually trusted them more which caused the perceived individual to actually elicit more honest behaviors (e.g. Zebrowitz, Voinescu and Collins 1996).

Regardless of the method in which fWHR influences behavior, it is apparent that the facial-structure of an individual is a seemingly good indicator of masculine tendencies such as aggressive, risky and competitive behaviors. Since the role of a CMO involves a delicate balance of consumer needs and the outwitting competing firms and their offerings, it is expected that fWHR as an indicator of the individual's competitiveness, aggressiveness and willingness to take risks should have an influence on related strategic marketing outcomes and decisions. Accordingly, the following section will delineate and hypothesize about the strategic marketing decisions expected to be impacted by more masculine CMOs.

Linking CMO Masculinity with Strategic Marketing Decisions and Outcomes

A quick look to the economics literature provides a basis for understanding how CMO masculinity is likely to effect the strategic decision-making of these marketing executives. Economic theory suggests that the decision to perform certain actions are based on a cost-benefit analysis (Becker 1968). This is important because perceptual filtering suggests that the link between the masculine tendencies associated with fWHR will affect the cost and benefit perceptions associated with the individual CMO's decision-making. In other words, the perception of the likely costs associated with risky behavior are adjusted downwards by the desire to do whatever it takes to be successful over their competitors.

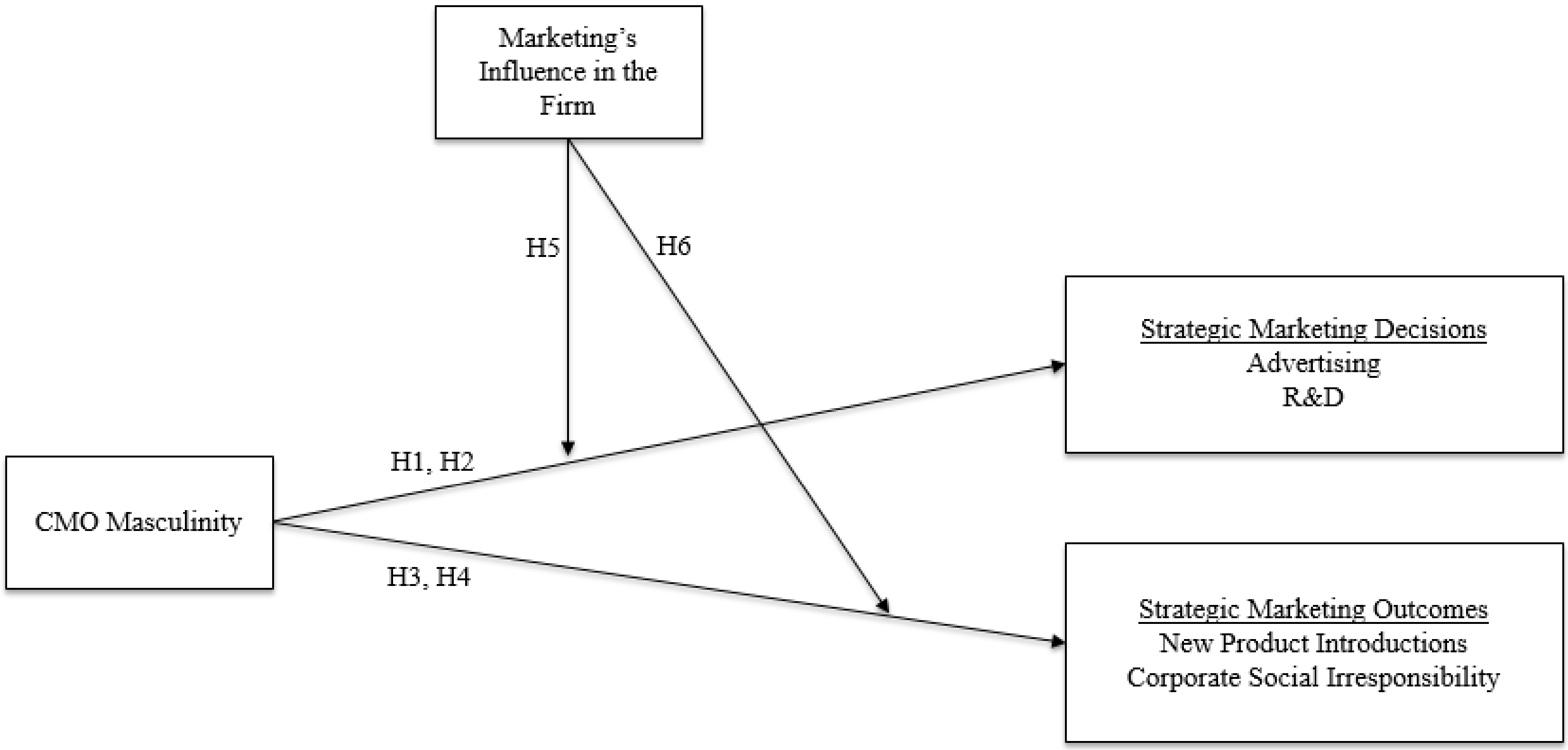
Regardless of the CMO's view of the likelihood of success, there are certain decisions that a firm's TMT view as inherently "riskier" than others. This is due to the fact that (in many organizations) there exists a lack of understanding of the financial value of marketing metrics (Ambler 2003). This suggests that shareholders and other TMT members do not have the marketing knowledge and background to understand the value of metrics such as awareness, loyalty or customer satisfaction and accordingly, tend to view decisions to spend on strategic marketing initiatives such as advertising and innovation to be inherently risky. This is all despite studies which indicate that greater spending in R&D and advertising actually lowers the systematic risk of the organization through intangible-market based assets (Mcalister, Srinivasan and Kim 2007). Since perceived fWHR has been found to be indicative of the desire for an individual to be dominant and willing to do whatever it takes to get their way (Carré and McCormick 2008; Haselhuhn and Wong 2011) it is logical to conclude that a more masculine CMO might be attracted to riskier strategic marketing decisions and outcomes. Even for those decisions which the CMO does not make themselves, the CMO's role, as corporate collaborator and as the TMT member closest to the heartbeat of the customer and other competitive information, should cause them to have some level of influence on each of the decisions made by their peers. It is expected, then, that a more masculine CMO will even have influence on other TMT member decisions.

The sections which follow outline strategic marketing areas which typically fall under the control of the firm's marketing manager. Framework of the model explicated below can be seen in essay in Figure 3.1 below. The decisions and outcomes considered below are those which tend to be considered riskier endeavors. First, hypotheses regarding two investment-spending decisions are investigated as likely outcomes of increased CMO masculinity: (i) advertising and (ii) research and development. Second, two hypotheses are explored investigating likely outcomes associated with a more masculine CMO: (i) the release of new products by the firm and (ii) the likelihood of involvement in marketing controversy.

Linking CMO Masculinity and Strategic Marketing Decisions

A major issue of concern to many marketing managers is the old-fashioned mindset of other TMT members who focus on maximizing shareholder value and ignore marketing performance metrics such as awareness, loyalty and customer satisfaction (McAlister, Srinivasan and Kim 2007). Since many of these individuals are uninterested and/or unable to understand metrics related to these outcomes, the importance of advertising is often overlooked as many top managers view the decision to spend money on advertising as inherently risky. This is all despite

Figure 3.1
Framework on the link between CMO masculinity and strategic marketing outcomes



research on advertising which does in fact indicate that advertising does indeed decrease the systematic risk of the firm (McAlister Srinivasan and Kim 2007). Accordingly, advertising is one area of the firm's expenditures where measurement of the success related to individual efforts is seen as difficult. This means that firms generally view expenditures on advertising as risky at best. In other words, because the link to performance outcomes from investment in television advertisements, billboards and other media is difficult to quantify and measure, the ability to determine its success is also challenging. When top managers cannot speak in terms of financial outcomes of their investment decisions, their decisions are more difficult for them to explain and quantify to the firm's CEO. This means that (in situations where a company is struggling financially) a CMO's decision to invest more heavily in advertising could be viewed as inherently risky, as one bad result could end their tenure, unless they could accurately quantify their results.

Despite the inherent level of risk involved in advertising, those CMOs who are more willing to take these risks may perceive their likelihood of success for these campaigns to be greater. CMOs who are more masculine will tend to be more aggressive in their actions and desire to beat their competitors. Advertising is one way in which the marketing department of the firm can display their own strengths and their competitors' weaknesses making a case to consumers that their brand is better than the others. Consequently, it is expected that organizations whose CMOs are more willing to take risks and aggressive in their decision-making will be more likely to spend greater sums of money on advertisements in hopes that it will help them to maximize their product or service volume.

H1 – Firms who employ a more masculine CMO will spend more on advertising.

Another area in which the CMO's decision-making has a great impact is in the products and services that an organization will develop and release. R&D spending is an area in which a firm may never reap rewards. When money is being spent to develop a new product, there is no guarantee that the resources will be put to good use and/or result in a winning product. Over 75% of new products tend to fail when they reach market (Evanschitzky et al. 2012). Accordingly, expending greater levels of resources on the development of new products is inherently risky.

Despite the risks, it is expected that if the CMO's role involves the decision of how much to invest in innovation related spending, those who are more masculine will make the decision to be more aggressive, spending at a higher level than their counterparts. Conversely, if the decision to invest in R&D falls under the roles and responsibilities of another TMT member (or even the CEO), it is expected that the more masculine CMO will be more likely to aggressively influence them, convincing them to increase the amount of spending on what is likely to be perceived as a risky endeavor. Furthermore, perceptual filtering suggests that the competitive nature of these aggressive CMOs should make them more likely to spot opportunities to invest in R&D in hopes they will find the next best product or groundbreaking adaptation to an existing product line.

H2 – Firms who employ a more masculine CMO will spend more on R&D.

Linking CMO Masculinity and Strategic Marketing Outcomes

In terms of firm outcomes, upper echelon theory (UE hereafter) provides a basis for understanding. UE purports that the values and traits of a firm's top management are likely to impact the entire organization (Hambrick and Mason 1984). This impact is said to occur in one of two ways: Directly through behavioral channeling – the selection of alternatives based on their personal preferences (England 1967) or through perceptual filtering – an influenced perception of the likelihood of success (Weick and Kiesler 1979). Additionally, in this situation, it may occur indirectly – as the CMO aggressively influences other TMT members and their reporting employees as discussed above.

Continuing the narrative from above, the actual release of new products also provides a high likelihood of risk desired by more masculine CMOs. This is consistent with previous research on risk-taking CEOs which suggests that the firms who employ them will be more likely to push their product to market despite the high likelihood of product failure (Evanschitzky et al 2012). Since more masculine CMOs are likely to perceive the expected outcome as more likely to be successful, it is expected that they will be more likely and willing to direct their organization to go ahead and release their new products despite the inherent risks. This desire to beat competitors to market above and beyond the apparent risks involved can expectedly put pressure on the other employees involved in new product development who now may rush through the processes which have been put in place to prevent any issues from occurring. Regardless of their success, it is expected that the number of new product introductions in firms who employ a more masculine CMO should be greater than those who have a less masculine CMO.

H3 – Firms who employ a more masculine CMO will release a greater number of new product introductions.

Finally, given that greater levels of fWHR are associated with more aggressive and competitive individuals who are willing to take chances, one would expect a more masculine CMO to be more prone to error as they rush their organizations forward with different products and advertisements that may not be ready to go to market. Their competitive nature may also push the boundaries of what is socially acceptable resulting in the firm's involvement in marketing related controversy. Logic suggests that if an individual is aggressive and willing to take risks in their decision-making, then they are more likely to accidentally (or on purpose) make the wrong decision once in a while. Research in accounting supports this logic; greater fWHR in CEOs has been found to be significantly and positively related to opportunistic insider trading (Jia, Lent and Zeng 2014). The association of fWHR with a desire to do what ever it takes to win and a willingness to cheat also supports this idea (Carré and McCormick 2008; Haselhuhn and Wong 2011).

For example, advertising or media campaigns that organizations make public can face intense scrutiny from consumer power and advocacy groups if the language and message they present is not carefully constructed. Thus, any time the firm releases new advertising, they may find themselves and their organization involved in a marketing controversy if they are not careful and considerate. Whether intentional or not, even some of the most carefully planned and thought through campaigns can be misread or misunderstood. For example, the Starbucks #RaceTogether campaign did appear to begin from an honest attempt to lead a positive conversation about the racial divide that has been plaguing the country. However, the movement received major negative attention for the Starbucks brand as minority groups and other advocacy groups saw it as an attempt to gain market share and financial returns by using the racial issue as a way to raise brand awareness. Again, using this frame of reference, a firm's involvement in advertising can be seen as a riskier endeavor for the firm.

Accordingly, as a CMO and their firm are more willing to take risks in the production of and spending on new products, advertisements and other competitive efforts then they too should also be expected to be more likely to get involved in marketing related controversy.

H4 – Firms who employ a CMO with a greater fWHR will be involved in greater levels of corporate social irresponsibility.

The Moderating Role of Marketing's Influence in the Firm

Although the aforementioned hypotheses suggest that the fWHR of the CMO will have an impact on the strategic marketing outcomes for the firm, it is also important to understand the surrounding limitations of this phenomenon. Accepting the explanations and arguments above mean that the characteristics and values of an individual influences both their own decision-making, as well as the decision-making of peers (other TMT members) and employees. As one of the penultimate decision-makers in many firms, this means that their personality and characteristics are likely to influence many of the decisions being made in the firm. However, for a firm's CMO, the power afforded to them is often times not based on their own determinations.

Research on departmental power defines the power of a firm's functional departments as their ability to influence the other people and departments in the firm (Pfeffer 1981). This power is often derived from the relative standing of the department amongst the organizational hierarchy rather than by the individual characteristics of its managers or employees (Welbourne and Trevor 2000) suggesting that other decision-makers in the firm determine its importance. Regardless of how the department's power is determined, those departments with higher power are given greater control and influence over the decisions of other individuals and business segments in the firm (Brass and Burkhardt 1993).

Furthermore, the more control these individuals have over the other departments in the firm, the more likely it is that they have an influence on the CEO or other TMT member decisions as the strategic emphasis of marketing for the firm makes the importance of their opinion paramount in any and all decisions being made. Accordingly, it is expected that in organizations where the marketing department has a greater level of influence, the CMOs will have more decision-making power and influence on strategic decisions. An argument could be made that CMOs with more influence will also be burdened with greater levels of responsibility. This may result in the characteristics and tendencies associated with masculinity exerting more influence on their decisions as they fail to have the appropriate time to make objective decisions; strengthening the influence of CMO masculinity on the strategic marketing decisions and outcomes. However, the more likely result is that as their role increases in importance, they may see their position through the lens of risk management, as they have more of the organization to be concerned for. This is because as they are more invested in the organization their role as the entity that bridges the divide between the customer and the corporation will become more salient. As such, the increased responsibility of the CMO may result in them paying closer attention to the details resulting in their role as the custodian of the corporate brand (Wang and Huff 2007) to take precedence in their decision-making. In this circumstance, the greater concern for the brand will result in reduced risk taking. Accordingly, the influence of CMO masculinity on the strategic marketing outcomes will be attenuated. Regardless of the direction of the effect, it is expected that:

H5 – Marketing's influence in the firm will attenuate the relationship between CMO masculinity and the level of spending on (i) advertising and (ii) R&D.

H6 – Marketing's influence in the firm will attenuate the relationship between CMO masculinity and (i) the number of new product introductions a firm releases and (ii) the number of marketing controversies that the firm gets involved.

Methodology

Using Fortune 500 companies (2014) as a starting point, the sample of firms consists of only of those who have employed a top marketing manager in their firm. Due to the limitations of the typically short lifespan of most marketing managers, only those who had worked for the company for at least three calendar years prior to 2015 were included. This allows the ability to gather historical data for the CMO (2 years: 2014-2015) while leaving a year of room (2013) to eliminate any influence left behind from the previous CMO. Measuring two years also helps to eliminate any statistical anomalies which may occurred in a year during the sample. After eliminating those firms for which the marketing manager had not been employed for at least two years and those for whom a picture could not be found, the remaining sample included 134 firms. Further, since the measure of fWHR has been found to be sexually dimorphic (Haselhuhn, Ormiston and Wong 2015) those companies whose CMOs were women were also dropped from the final sample. The final sample consists of 92 firms and 184 firm-year observations.

The paragraphs which follow delineate each of the measures used in this study. A summary of these measures and the data sources from which they have been drawn can be found in Table 3.1 (Appendix) which follows.

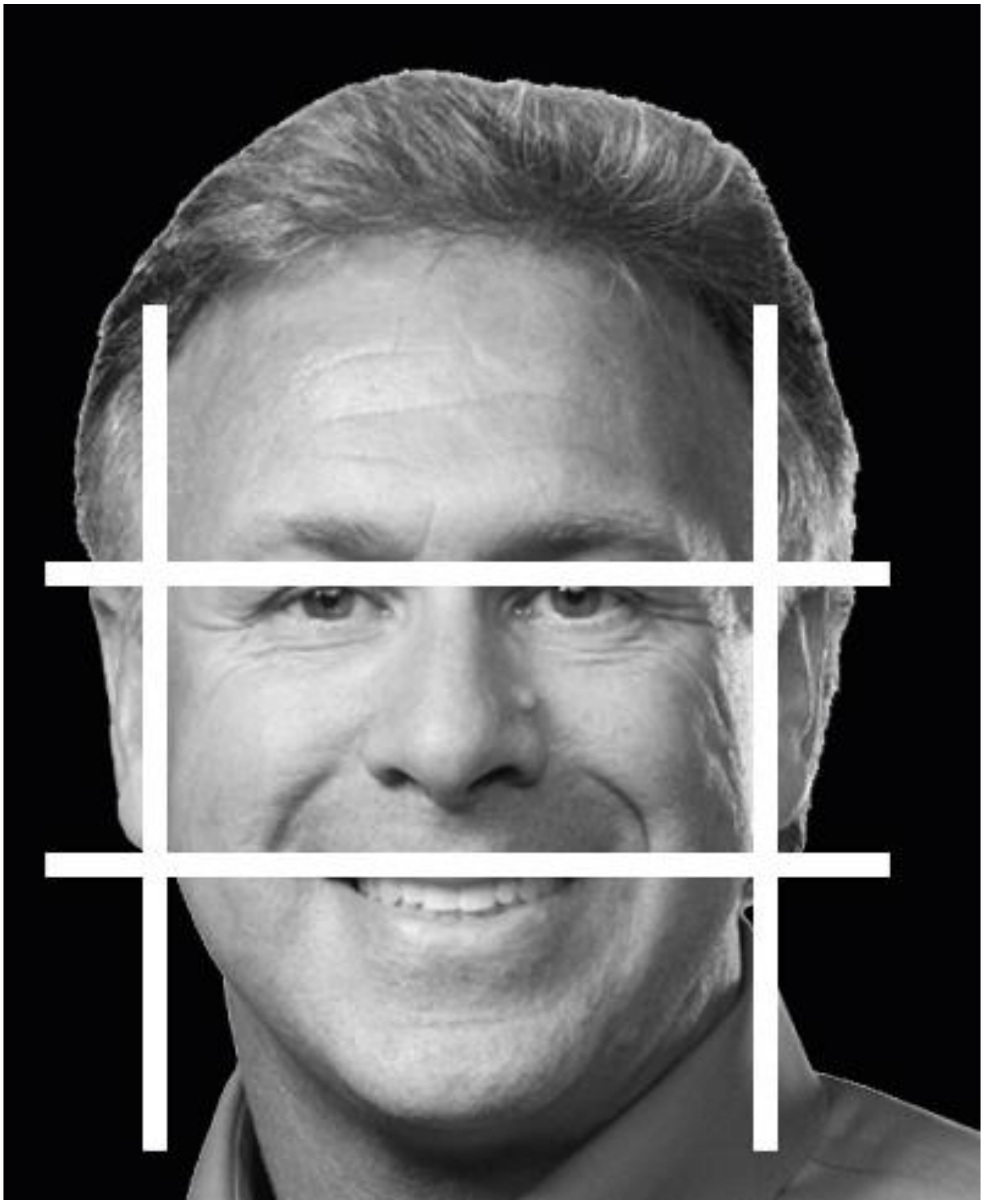
CMO Masculinity. As discussed above CMO masculinity is measured using the facial width-to-height (fWHR) ratio. fWHR was calculated by measuring the distance between the two zygions (bizygomatic width) as indicated by the cheekbones, relative to the distance between the upper lip and the highest point of the eyelid (height of the upper face). Previous research has indicated that the use of photos, rather than the measurement of the skull is a valid indicator of fWHR (Carré and McCormick 2008). Evidence also suggests that this measurement has predictive validity of aggressive behavior both inside and outside of the laboratory (Carré and McCormick 2008). This measure will serve as the focal independent variable for the study.

Measurement of the CMO's fWHR was done using the semblance of the CMO from their company website, Forbes website, company's annual report, or LinkedIn profile (that indicates that they are the CMO for the company). Then, using Google Image Search, the best picture is identified for each CMO. The best picture was determined by resolution, whether or not the CMO is facing forward, and whether or not they have a neutral facial expression consistent with previous research (Jia et al. 2014). Once the pictures were downloaded, each picture was converted into eight-bit images with a standard height of 400 pixels as described in Carré, McCormick and Mondloch (2009). Following collection and formatting, two graduate research assistants independently measured the pictures using the ImageJ software applet (Rasband 2008) a software application provided by the National Institutes of Health. An example of this measurement can be seen in the Figure 3.2. Once measurements were collected they were evaluated to determine if they were consistent enough, indicated by a difference of less than five percent. If the measurements were less than five percent, the picture was deemed good quality and the average value of these two measurements was used as the dependent variable in the study. In a small number of cases, the measures differed by more than five percent.

In these cases, a third research assistant re-measured the pictures to ensure that this was due to issues with the measurement rather than the photograph. In these photos, the third research assistant confirmed this was indeed the case and averages were taken using this third measurement instead. Interrater reliability for the two measurements used in the final sample was 0.948 ($p < .01$, 133 d.f.).

Figure 3.2

Illustration of measuring the dimensions of the CMO face in pictures



Measure of fWHR: the horizontal lines indicate the upper face height (the distance between the upper lip and the highest point of the eyelids). The vertical lines represent the byzogmatic width (the distance between the left and right cheekbones). fWHR is calculated by dividing the byzogmatic width by the upper face height.

Strategic Marketing Decisions. In order to measure a firm's risky strategic decisions, two indicators were considered. The first measure, advertising spending, is measured as the total annual dollars spent by the firm on advertising for each year during the CMO's tenure (excluding the year of their hiring). The second measure, R&D spending, is measured as the total annual dollars spent on R&D during the CMO's tenure (excluding the year of their hiring). This data was collected using the S&P Capital IQ and Compustat databases

Strategic Marketing Outcomes. As discussed above, two marketing related strategic outcomes were investigated. First, in order to determine the number of new product introductions made by the firm, a count variable was used indicating the total number of unique product introduction announcements released by the firm in each year of observation. These were measured using new product announcement press releases from the S&P Capital IQ database. The second strategic marketing outcome that is measured is the likelihood of the firm being involved in a product related corporate crisis. This was operationalized as the number of concerns or controversies listed in the product related controversy section of the Kinder, Lydenburg and Domini Research & Analytics (KLD) database. A dichotomous indicator, where "1" indicates that the firm did get involved in a controversy and "0" indicates that they did not get involved in a controversy (using the KLD product related concerns category) was taken as an indicator of the firm's involvement in controversy during each calendar year.

Marketing's Power in the Firm. The influence of marketing in the firm was measured using a dichotomous indicator of the firm's marketing manager as being one of the top five highest paid individuals in the TMT. Using publicly available DEF14A proxy reports to collect the data, those CMOs who were listed as being one of the top five highest paid executives in the firm were issued a "1" while those who were not listed were issued a "0".

Controls. A number of variables related to the company's aggressive or competitive actions, likelihood of increased advertising, likelihood of engaging in innovation, or likelihood of getting involved in a marketing crisis were controlled for. In the analysis which follows firm size, firm age, prior firm performance, leverage and industry classification (using one-digit SIC codes) were all controlled for. Since it is likely that those CMOs who have performed their role in the organization longer will have had a greater opportunity to implement their ideas and influences on the organization, CMO tenure (using the number of years they have worked in the positon since they were hired) and CMO age will also be controlled for to account for these differences. Finally, an indicator of firm-level orientation: competitive aggressiveness, was controlled for due to the fact that some organizations may be naturally more aggressive than others to account for ingrained corporate culture driven by decisions made by the CEO.

Analysis and Results

To investigate hypotheses 1, 2 and 3 outlined above, negative binomial regression was employed as the dependant variable was continuous and time-invariant and each of the proposed outcomes variables are count variables. In each of the equation models outlined below, *i* represents the firm and *t* represents the year while δ_0..., δ_8 are the regression coefficients. α_i and ε_{it} represent the unobserved randomly distributed error terms. To investigate the first four hypotheses, the following equation models were used:

(1) (AdSpending)it = δ0 + δ1(CMO masculinity)i+ δ2-8(Control variables)it + αi + εit

(2) (R&D Spending)it = δ0 + δ1(CMO masculinity)i+ δ2-8(Control variables)it + αi + εit

(3) (NewProductIntroductions)it = δ0 + δ1(CMO masculinity)i+ δ2-8(Control variables)it + αi + εit.

Additionally, hypothesis 4 was analyzed using random effects logistic regression as the firms in the sample either did (1) or did not (0) get involved in a marketing related controversy over the 2-year period investigated in the sample.

(4) (MarketingControversy)it = $\delta 0 + \delta 1$(CMO masculinity)i+ $\delta 2$-8(Control variables)it + αi + εit.

The moderation hypotheses associated with CMO power, H5(i and ii) and H6(i and ii**),** were tested by analyzing the interaction effect between CMO power and CMO masculinity. Pooled regression coefficients for the interaction effects were measured using the following equation models:

(5) (AdSpending)it = $\delta 0 + \delta 1$(CMO masculinity)i+ $\delta 2$(MarketingInfluence)i + $\delta 3$(CMO masculinity * MarketingInfluence) + $\delta 4$-9(Control variables)it + αi + εit.

(6) (R&D Spending)it = $\delta 0 + \delta 1$(CMO masculinity)i+ $\delta 2$(MarketingInfluence)i + $\delta 3$(CMO masculinity * MarketingInfluence) + $\delta 4$-9(Control variables)it + αi + εit.

(7) (NewProductIntroductions)it = $\delta 0 + \delta 1$(CMO masculinity)i+ $\delta 2$(MarketingInfluence)i + $\delta 3$(CMO masculinity * MarketingInfluence) + $\delta 4$-9(Control variables)it + αi + εit.

(8) (MarketingControversy)it = $\delta 0 + \delta 1$(CMO masculinity)i+ $\delta 2$(MarketingInfluence)i + $\delta 3$(CMO masculinity * MarketingInfluence) + $\delta 4$-9(Control variables)it + αi + εit.

Tests for multicollinearity were run as our predictor variables may be highly correlated. These tests look for correlations between the independent variables greater than .50, variance inflation factors smaller than 10 and condition indices associated with eigenvalues smaller than 30 (Kennedy 2003). Based on these tests, no multicollinearity issues were found. These descriptive statistics can be found in Table 3.2.

Table 3.2

Descriptive Statistics and Correlation Coefficients for essay 2

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	CMO Masculinity	2.05	.012	1													
2	Advertising Spending	726.86	142.08	.08	1												
3	R&D Spending	1607.27	278.26	.04	.52***	1											
4	NPIs	8.12	1.16	.09	.42***	.72***	1										
5	CSiR	.04	.01	.05	-.10	-.06	-.03	1									
6	Marketing Influence	.22	.03	-.26***	-.01	-.08	.02	-.04	1								
7	Comp. Aggressiveness	-.01	.07	-.04	.15	.45***	.20***	.04	.02	1							
8	Firm Size	3.18	.10	-.05	.42***	.50***	.33***	.03	.12*	.01	1						
9	Prior Firm Performance	.07	.01	.12	-.03	-.01	.25***	.20***	.16**	.28***	-.01	1					
10	Firm Age	3.94	.06	.01	.20**	-.15	-.01	.07	-.07	-.25***	.23*	-.04	1				
11	CMO Age	3.95	.01	-.02**	.06	-.08	-.12	-.10	-.02	-.08	-.08***	.04	.18**	1			
12	Industry (SIC code)	48.98	1.32	.18	-.15	.20**	-.01	-.01	-.14*	.14*	-.03	-.02	-.10	-.15**	1		
13	CMO Tenure	1.24	.05	-.01	.20**	.10	.05	.19***	.05	-.05	.05	-.14*	.08	.28***	-.17**	1	
14	Firm Leverage	.30	.02	-.14*	-.10	-.22**	-.10	-.10	-.06	-.05*	-.05	-.01	-.07	.02	-.15**	.04	1

Analysis of the relationship between CMO masculinity and marketing outcomes. The results of the regression models with CMO masculinity as the dependent variable are shown in Table 3.3. As this table shows in Model 1, marginal support was found for H1 signifying that firms who employ a more masculine CMO (as indicated by a greater fWHR) are found to spend more money on advertising (β = +2.031, $p < .10$). Additionally, support was found for H2, indicating that firms with more masculine CMOs spend more on R&D activities (β = +4.198, $p < .05$). Marginal support was also found for H3 (as seen in Model 3) suggesting that firms who employ a more masculine CMO also release more new products to market (β = +1.982, $p < .10$). Analysis of Model 4, suggests that the effect of CMO masculinity on CSiR was non-significant (β = +3.596, $p > .10$), and thus no support was found for H4.

Analysis of the moderating effect of Marketing's Influence on the firm. Hypotheses 5 and 6 investigate the moderating effects of marketing's influence on the firm. To test these hypotheses, negative binomial regression (for H5i, H5ii and H6i) and random effects logit regression (for H6ii) were again used to regress our strategic marketing outcome variables on CMO masculinity and the other control variables. In these models, marketing's influence in the firm and the interaction variables (CMO masculinity x marketing's influence) were included as independent variables.

Inclusion of the moderator in Model 5, during investigation of hypothesis 5i, finds marginal support as the interaction variable (marketing influence x CEO masculinity) was negative and significant (β = -4.197, $p < .10$). In addition, marginal support was found indicating that marketing's influence in the firm was significantly related to the firm's spending on advertising (β = 7.878, $p < .10$). Furthermore, inclusion of the moderator and the interaction term causes CEO masculinity to become significant at the .05 level, providing stronger support for

Table 3.3
Regression Analysis with CMO masculinity as the dependent variable

Dependent variable	Adv Spending (N=110 firm years)	R&D Spending (N=110 firm years)	NPIs (N=184 firm years)	CSiR (N=184 firm years)
	Model 1 Random Effects Negative Binomial Coeff. (Std. Err)	Model 2 Random Effects Negative Binomial Coeff. (Std. Err)	Model 3 Random Effects Negative Binomial Coeff. (Std. Err)	Model 4 Random Effects Logistic Coeff. (Std. Err)
CMO Masculinity	2.029(1.035)**	4.196(1.703)**	1.982(1.081)*	3.596(6.644)
Competitive Aggressiveness	.144(.198)	.790(.422)*	.453(.223)**	-.348(1.467)
Firm Size	.546(.108)***	.524(.120)***	.382(.134)***	.278(1.075)
Prior Firm Performance	1.446(.549)***	-.398(.451)	2.428(1.453)*	53.917(42.320)
Industry (2-digit SIC Code)	-.004(.011)	.019(.020)	-.0125(.010)	.067(.084)
Firm Age	.462(.286)	1.163(.478)**	-.135(.301)	3.902(3.529)
CMO Age	.172(1.28)	.455(.953)	-5.989(2.441)**	-21.588(22.118)
CMO Tenure	-.085(.063)	.107(.049)**	-.106(.154)	-2.572(1.904)
Firm Leverage	.223(.186)	-.186(.146)	-.368(.633)	2.146(4.026)
Constant	-3.209(5.326)	-11.568(4.581)***	23.419(8.964)***	46.382(71.581)

*Note: *p<.10, **p<.05, ***p<.01 (2-tailed). Note: Regression coefficients for Models 1 and 2 (Ad Spending and R&D Spending) were calculated using a subsample (N=110) firm years). Models 3 and 4 were based on the total sample (N=184 firm years). Interpretation of regression coefficients for R&D spending should be taken as results do not hold when using zero-inflated negative binomial regression.*

H1. Hypothesis 5ii suggests that marketing's influence on the firm will moderate the relationship between CMO masculinity and R&D spending. Inclusion of marketing's influence and the interaction term in the model provides further evidence in support of H2 as CMO masculinity becomes significant at the .001 level. Additionally, marketing's influence is found to be a significant predictor of R&D spending. However, the interaction term is non-significant and therefore H5ii is not supported.

Models 7 and 8 investigate the inclusion of the marketing influence and the interaction term with NPIs and CSiR as the independent variables. In both of these models both the interaction term and the direct effects of marketing influence were non-significant. Therefore, hypotheses 6i and 6ii were unsupported. A summary of the aforementioned findings can be seen in Table 3.4.

Exploration of the indirect effect of CMO masculinity. Although not specifically hypothesized, an argument could be made that CMO masculinity influences the outcome variables indirectly via an organizational orientation, rather than directly via decision-making. To account for this possible mediating effect, an analysis was run using pooled OLS regression with firm competitive aggressiveness as the independent variable and CMO masculinity as the predictor. The results of this analysis indicated that there was no direct effect of CMO masculinity on the firm's competitive aggressive orientation suggesting that mediation may not be present based on the Baron and Kenny (1986) approach. Other researchers, however, have used newer approaches to mediation, indicating that the traditional step-by-step Baron and Kenny approach of concluding that each path is significant for mediation to occur in a model, is not the only appropriate method (MacKinnon et al. 2004). Accordingly, models were run using STATA's binary_mediation macro to determine if any mediation was present. Again, all paths in

Table 3.4
Regression Analysis with marketing influence as moderator

Dependent variable	Adv Spending (N=110 firm years)	R&D Spending (N=110 firm years)	NPIs (N=184 firm years)	CSiR (N=184 firm years)
	Model 5 Random Effects Negative Binomial Coeff. (Std. Err)	Model 6 Random Effects Negative Binomial Coeff. (Std. Err)	Model 7 Random Effects Negative Binomial Coeff. (Std. Err)	Model 8 Random Effects Logistic Coeff. (Std. Err)
CMO Masculinity	2.759(1.205)**	7.011(2.198)***	1.534(1.170)	-.202(6.984)
Marketing Influence	7.890(4.570)*	15.197(8.919)*	-4.032(5.591)	-14.175(45.930)
Marketing Influence* CMO Masculinity	-4.204(2.260)*	-6.639(4.463)	1.747(2.806)	5.129(23.202)
Competitive Aggressiveness	.188(.193)	1.052(.395)***	.463(.225)**	-.743(1.769)
Firm Size	.627(.123)***	.565(.076)***	.395(.133)***	.325(1.103)
Prior Firm Performance	1.445(.527)***	-.568(.374)	2.509(1.454)*	63.451(48.641)
Industry (2-digit SIC Code)	-.006(.011)	.027(.019)	-.016(.011)	.044(.077)
Firm Age	.403(.271)	1.226(.435)***	-.188(.309)	4.028(3.664)
CMO Age	.127(1.235)	.341(.865)	-6.241(2.418)***	-28.428(26.791)
CMO Tenure	-.101(.064)	.108(.048)**	-.138(.156)	-2.480(1.850)
Firm Leverage	.251(.183)	-.233(.140)*	-.270(.641)	.244(4.096)
Constant	-4.449(5.281)	-17.868(5.234)***	25.739(9.045)***	81.950(92.382)

*Note: *p<.10, **p<.05, ***p<.01 (2-tailed). Note: Regression coefficients for Models 1 and 2 (Ad Spending and R&D Spending) were calculated using a subsample (N=110 firm years). Models 3 and 4 were based on the total sample (N=184 firm years). Interpretation of regression coefficients for R&D spending should be taken as results do not hold when using zero-inflated negative binomial regression.*

each and every model were found non-significant. Consequently, competitive aggressiveness was not used as a mediator in the larger model.

Addressing endogeneity. It is possible that certain firms may attract more masculine CMOs or that certain situations may cause tendencies associated with masculinity to be demonstrated causing endogeneity concerns. To combat this, an instrumental variable analysis was conducted using variables related to CMO turnover as the focal variable. To combat this, this study will use an approach used by Chatterjee and Hambrick (2007;2011) and adapt it for CMOs. This method regresses a set of antecedent and concomitant variables all measured in t-1 (i.e. the year preceding the CMO's appointment). Firm size (natural log of the number of employees), firm performance (ratio of net income to total assets), firm age (natural log of the difference between the year of observation and the firm's founding year) and a 2-digit SIC code indicator were used as the antecedent variables. CMO age was included as a concomitant variable. These variables were chosen as they highlight key characteristics of the CMOs entry. No significant association of these explanatory variables with CMO masculinity provides evidence that CMO masculinity is not an endogenous proxy for other factors.

Discussion, Limitations and Future research directions

Given the significant findings of the research above, those firms' whose CMOs who are more masculine, as suggested by a higher fWHR, will invest more in advertising, as well as investing more in R&D. Additionally, when accounting for the power of the CMO, these results suggest that firms with a CMO tend to release more new products to market. These findings provide the first glance into how the characteristics and traits of the chief marketing officer play a role in the firm's strategic marketing decisions and the related strategic outcomes. Answering the call from previous researchers to help eliminate the "enigmatic" from the literatures current view of CMOs, it is hoped that this research will spur a renewed interest and desire to find alternative ways to measure CMO personality so that we can understand more about these important individuals.

In addition to this first glimpse into the characteristics and traits which presumably influence CMO decision-making, these findings have additional implications for academicians and practitioners alike. The introduction of this new measure into the marketing literature provides avenues for investigation into other related strategic marketing-decisions. While the aforementioned research focused on the impact of the biological marker as a way to predict the behaviors of the CMO, this facial measure has also been found to affect the way that *others* view the individual (e.g. Gomulya et al. 2015). Accordingly, future research should investigate the impact that this has on other strategic-marketing outcomes such as brand alliances where the CMOs facial-structure may influence the strategic-decision making of other individuals with whom they are working with.

Secondly, this research provides physiological evidence that can be used by corporate boards and investors alike in helping them predict the success of the individual charged with protecting the corporate brand. Knowledge of this indicator might suggest to the firm’s CEO, chairman or other board members that there needs to be stronger processes and systems in place to keep a closer eye on the CMO as they determine spending levels, speed at which decisions are made and how quickly products are pushed to market.

Thirdly, future employees looking for certain aspects in their job may be able to determine the type of environment that they might expect to work in, simply by comparing photos of the senior leadership. Individuals who prefer to work in the marketing department of a firm that is more fast-moving and constantly changing (i.e. millenials who are seeking constant challenges and change) may use this evidence to find the work environment that they desire, as this research suggests that marketing departments run with more masculine CMOs should offer greater daily challenges and a more fluid work environment. Conversely, employees who prefer the more routine may prefer to work for a firm where the CMO is less masculine and as a result less aggressive and/or competitive.

This research does also have limitations. Unfortunately, (and to no real surprise) this observable measure of aggressive, risk-taking behaviors, has seen minimal support as an indicator of said behavior in females. Accordingly, models run with female CMOs in the sample found non-significant results. Perhaps future research could attempt to investigate other biological observable traits linking social processes and behavior in female CMOs to provide a more generalizable picture. Although one would assume that this greatly limits the generalizability of the study, its limitation is actually minimal since a fairly recent study has found that only approximately 11% of CMOs worldwide are female (Grant Thornton 2016). Furthermore, the aforementioned findings do not suggest that female CMOs cannot be inherently aggressive, competitive or risk-taking. They simply indicate that these biological markers do not predict these behaviors in the opposite sex. A quick glance at research on female CEOs tells us that more masculine, less attractive women are often seen as better leaders (Eagly and Karau 2002), suggesting that the *perception* of masculinity may result in more competitive female leadership. Therefore, the findings above still provide some guidance as to the importance of masculine tendencies for *all CMOs*.

A second limitation of this study can be found in the ability to collect a larger sample of data. As suggested above: Due to the nature of the CMO role, their short-lived tenure and turnover and the fact that the as compared to their TMT peer (such as CIO, CFO and COO), firms who employ a CMO are limited (Nath and Mahajan 2008; Hyde, Landry and Tipping 2004) it is difficult to find a sample of CMOs to measure an extended frame of measurable outcomes. Hopefully, as the importance and understanding of marketing metrics is improved we will see an increase in the tenures of these individuals which will allow future researchers to look at a longer time frame of results from which to measure. This will allow academicians and practitioners alike a better understanding of the long-term effects of masculinity on marketing related decisions and outcomes. Finally, the limitations of the KLD database also only allow the ability to measure a subsample of our CMOs for the marketing controversy measure, perhaps resulting in the non-significance of Model 4 as there may have not been enough variance to produce an accurate result.

Finally, the attention to one biological indicator of CMO personality does not mean that other indicators don't provide better results or that there are no other characteristics or personality traits that may influence their decision-making. The upper-echelon literature also suggests that there may be some indirect influence on our outcome measures exhibited by the marketing departments run by these CMOs. Accordingly, future research should look to include the findings of this study and expand upon them by looking at the interaction between this and other characteristics or traits, as well as other forms or measures of organizational orientation.

IV. ESSAY THREE: AN INVESTIGATION OF MARKETING AND TOP MANAGEMENT TEAMS DURING A DIVERSITY CRISIS

Introduction

On December 9th, 2014 Microsoft CEO Satya Nadella stood in front of a crowd of women at the Grace Hopper Celebration of Women in Computing conference. As he completed his presentation, he opened the floor for questions. In response to a question about how a female should ask for a raise in the technology industry, Nadella made comments that shook the conference. His statement was as follows: “It’s not really about asking for a raise, but knowing and having faith that the system will give you the right raises as you go along,”. These comments were immediately contrasted by his interviewer Maria Klawe, who responded that she disagreed. Following major applause, she continued to advise the women in attendance to “do their homework on salary information and then practice how to ask with people they trust” (The Guardian 2014). As news of his verbage leaked out, the topic went viral on social media and was discussed the following day on every online media outlet from small independent blogs to major news sites like CNN and the New York Times.

This “Freudian slip” by the CEO of one of the largest technology companies in the world immediately brought negative attention to the technology industry’s shortcoming in not only the equal pay of women, but also the apparently inept ability of these companies to focus on hiring female employees altogether. This major incident continued the more recent attention to a serious diversity crisis not only in the technology industry, but in corporate America. In a recently published article from the DiversityInc foundation, it was disclosed that 450 (90%) of Fortune 500 companies are currently headed by white, male CEOs (Diversity Inc. 2016).

More specifically, the gender pay gap has received national attention as many celebrities and organizations with access to followers such as Beyoncé, Facebook and the U.S. women's national soccer team have begun a major social movement and returned the diversity issue to the national spotlight. With all the attention over the years, we have seen some improvement. A recent news article from CNN announced some terrific news: Female CEOs are at record levels with a 22% increase in 2016! The caveat? This is only 5% of the S&P 500 firms' CEO population.

A younger generation of Americans appears to be increasingly aware and accepting of individual differences and willing to use the power afforded to them by recent technological advances to further the diversity movement. For example, over the last decade there has been a major increase in the number of Americans supporting same-sex marriage (de Vogue and Diamond 2015) and the first ever African American President of the United States has been elected. These recent events suggest changing views and a strong push by a growing portion of the population for diversity, inclusion and equality. This growing pressure from clients, customers and the general public has forced corporations to look at and develop diversity-friendly policies and work environments (Cook and Glass 2010). It is increasingly apparent that as these social trends emerge and grow, corporations must not only be aware but must also find ways to adapt and respond to these changing societal values in their organizational policies and in their marketing and brand management.

Starbucks chairman and CEO Howard Schultz found this out the hard way when he started a campaign called "Race Together" where employees of the coffee chain would write the words "Race Together" on Starbucks cups; a marketing movement intended to engage customers in conversation about this sensitive issue. Although seemingly done in a genuine manner critics took to Twitter with a barrage of criticism labeling this move by Starbucks a superficial gesture (Carr 2015). Some critics even suggested that Starbucks should look at its own less-diverse executive team first (Somaiya 2015). The company shut down the initiative less than a week later. Events such as these make it quite clear that corporations, such as Microsoft and Starbucks, who want to weigh-in on major social movements such as gender equality, the black lives matter campaign, and the immigration debate, need to carefully weigh the pros and cons of their involvement so that they do not mistakenly end up on the wrong side of a public relations crisis.

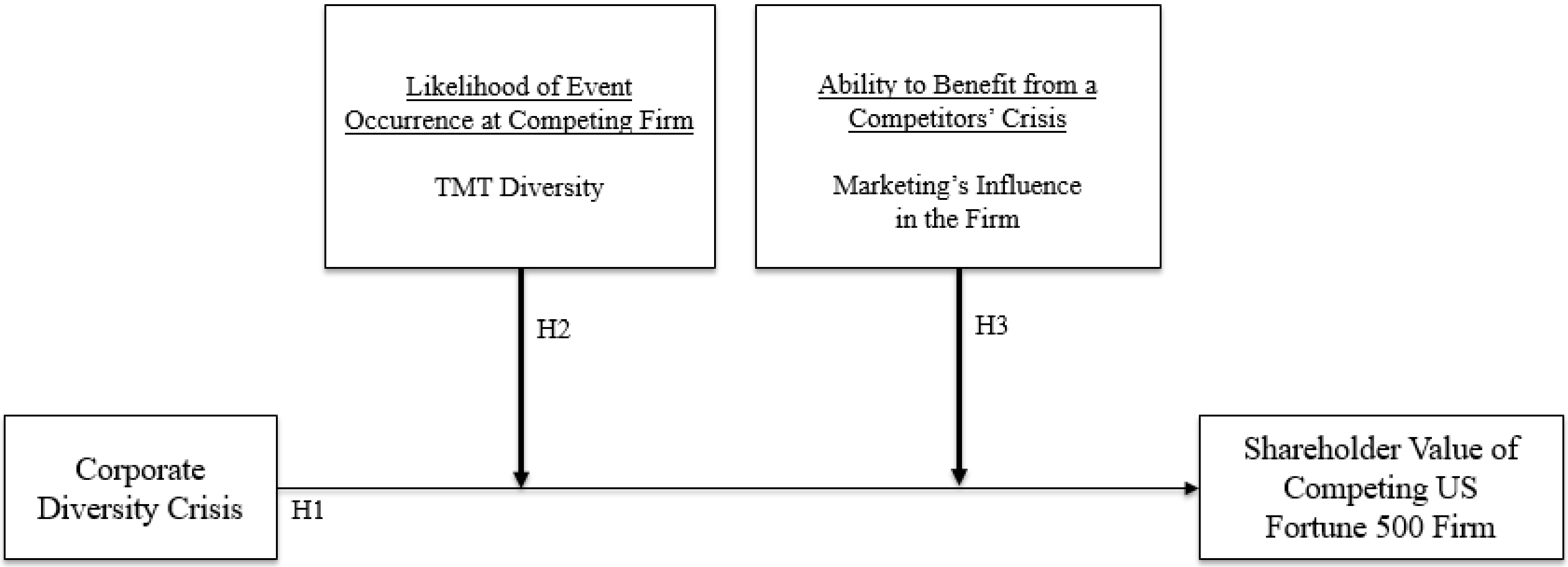
Today this issue is even more important as the number of firms who are active on social media is increasing (Barnes, Lescault, & Wright 2013). With the continued acceptance of this new marketing platform, the likelihood of a firm making a mistake is also increasing as any wrong post can explode into a negative firestorm. For example, Clorox bleach found itself in the middle of a major controversy as a tweet from their corporate account went viral. Following a release of new diverse emojis by Apple, which included alternative emojis for individuals who wanted their emojis to match their ethnicity, Clorox announced: “New emojis are alright but where’s the bleach?” from their corporate Twitter feed. Although the company was simply asking why Apple did not release an emoji with their product on it, many others saw the tweet as insensitive, suggesting it was insinuating that the black and brown faces featured in the new emojis, needed to be bleached. Despite the strategic value of a good corporate reputation (Roberts and Dowling 2002), many Fortune 500 firms, like Clorox, have found themselves on the wrong side of the fence due to unknowingly (or even sometimes knowingly) involving themselves in social issues by failing to see their product release, social media post or other marketing communication from the same angle as their consumer. Accordingly, the ability for a company to carefully assess and analyze their strategic marketing decisions from different viewpoints is now more important than ever.

Research on organizational diversity has found that more diverse firms have increased creativity and problem solving capabilities (Cox 1994; Cox and Blake 1991). As such, the importance of diversity to the firm has been consistently promoted throughout literature (see Robinson and Dechant 1997, for an overview of the case for diversity). Despite the stated importance of diversity, there is minimal research which parses out the specific valuation effect for firms involved in a diversity or inclusion related event. Admittedly, a limited amount of work has been done investigating the valuation of a firm’s shareholder value when they have announced their inclusion in diversity awards (Wright et al. 1995; Pandey, Shanahan and Hansen 2005; Cook and Glass 2011), but the results of these studies seem to have contrasting views. The former two studies suggest that the announcement of a firm receiving an award for diversity had a positive effect on shareholder value while the latter suggested that the announcement had negative effects on shareholder value. One of these studies, by Wright et al. (1995) also investigated the announcement of discrimination lawsuit settlements, finding that firms do indeed see a negative impact on their stock valuation when news of a settlement is announced by the government. However, this study looked at the financial implications cumulatively for the entire group of events and had the assumption that news of the lawsuit had not reached investors prior to the date of the settlement announcement. This is likely due to the event taking place in the early 1990’s, however, access to technology has greatly increased the likelihood of a negative event leaking prior to the court settlement.

Surprisingly, this field of research is rampant with limitations. First, these studies only look at diversity in terms of their internal organizational diversity and practices. None of the aforementioned studies investigated corporate mistakes involving diversity, nor did they investigate organizational diversity in terms of its informational value to investors during such a crisis. Additionally, each of these studies focus on the offending firm, and fail to explore the broader market implications for the firm's competitors. Finally, the aforementioned research did not investigate any additional boundary conditions such as the role of the firms marketing capability or top management team diversity. Given these limitations of the existing literature, this study looks to address the following questions: (1) Does a firm's involvement in a diversity crisis impact the shareholder value of competing firms? (2) Are all firms impacted equally during their involvement in a diversity crisis? (3) Does firm organizational diversity offer informative value to investors?, (4) If so, what certain firm-specific marketing factors attenuate or strengthen these effects?

In response to these questions, the use of event study methodology will investigate the financial impact of a single, diversity related incidence in which the focal firm has been seen as insensitive. A framework for this study can be seen in Figure 4.1. Using the recent comments made by Microsoft CEO Satya Nadella at Grace Hopper Celebration of Women in Computing Conference as the empirical context, the following research provides evidence of the importance of diversity in the technology industry. This essay argues that in these times of need certain organizational variables (i.e. an indicator of the importance of diversity to the firm and the ability of marketing to take advantage of the situation) act as boundary conditions that may help to strengthen the impact on the competing firm's shareholder value. The sections below will (1) provide a discussion of diversity, efficient markets and signaling theory as the theoretical underpinnings of this research, (2) develop hypotheses regarding the expected impact of this event, (3) investigate boundary conditions which strengthen or weaken the effects of the negative diversity event, (4) provide an empirical analysis using event study methodology and finally, (5)

Figure 4.1
Framework on the link between corporate diversity crisis, investor signals and shareholder value



provide a discussion of these results and the implications of the findings for practitioners and academics alike.

Literature review, Proposed model and Hypotheses

Before delving into any discussion on diversity it is important to first outline what exactly is meant by the term. Diversity in the popular press almost always equates the word diversity to gender or ethnicity (Knight et al. 1999). However, research on organizational diversity has also investigated diversity in alternative forms. The attributes described as ‘diversity’ in the literature fall into two main categories: (1) relations-oriented and (2) task-oriented (Jackson, Joshi and Erhardt 2003). Relations-oriented attributes are those that may have an impact on interpersonal relationships but do not directly impact performance while task-related attributes relate to the skills needed to perform their role in the workplace. Examples of relations-oriented diversity could include age, race, ethnicity and gender. Conversely, task-oriented might involve attributes such as tenure, functional background or education. More importantly, research in the field of top management teams suggests that both relations and task-oriented characteristics play a role in influencing executives strategic decision-making (Hambrick and Mason 1984).

Effects of Negative Events on Firm Financial Value

According to financial theory, the stock price of a company represents the expectations of the market of the discounted value of future cash flows expected to accrue to the firm (Lane and Jacobson 1995). The efficient market hypothesis explains that the prices of securities rapidly reflect all available information relevant to the pricing decision (Poitras 1994). This means that any novel information should be reflected in a rise or fall of the shareholder value of the firm immediately upon its release as investors update their expectations about the value of future cash flows (Geyskens, Gielens and Dekimpe 2002). If involvement in a racially charged social media mistake changes those expectations, then the explosion of this information over social networks to national media should move those expectations of future profits downward. Moreover, the firms who are involved in a crisis will have more information about the severity of the damage or the processes that may have caused the issue to occur. This means that when determining the propensity of this information to be damaging to the firm, investors will not have access to all of the relevant information to make their decision. Signaling theory suggests that in order to reduce the missing information, investors use relevant firm characteristics as signals (Spence 1973). This information tends to come from external sources such as news releases or third party databases and reports (Chen, Ganesan and Liu 2009).

Previous studies on other corporate crisis suggest that negative news about a firm lead to adverse consequences for the focal firm in terms of their market value (Tetlock 2007). For example, negative news has been found to have detrimental impact on shareholder value in numerous different kinds of corporate crisis such as a product harm event (Geyskens, Gielens and Dekimpe 2002), a celebrity endorsement scandal (Knitell and Stango 2013), an internet security breach (Cavusoglu, Mishra and Raghunathan 2004) and an industrial accident (Blacconiere and Patten 1994). With the precedent of the previously mentioned studies and the aforementioned understanding of how investors view and use relevant information, it is expected that both online content (e.g. websites and social media) and print announcements (e.g. magazines, newspapers, press releases) which involve negative portrayal of a minority groups should too be relevant to and impact shareholders' investment decisions. Evidence of news reports and print media influencing shareholder investments is prevalent, however, it is only more recently that evidence of social media's influence on stock performance has been found to play a role in shareholder valuation (Tirunillai and Tellis 2011). Accordingly, it can be expected that news of a controversial diversity-related issue is likely to cause investors to perceive increased risk in the focal firm, negatively impacting the firm's valuation.

The Market Effects of a Diversity-Related Crisis

While the aforementioned impact on the focal firm is to be expected, the more interesting story is what happens to other competing firms during a crisis. Prior research suggests that involvement in a crisis has market value implications for firms who are perceived as similar to the focal firm (Zuckerman 2012). This means that a crisis is likely to impact other firms who are in the same industry or product market in which the offending firm operates. Literature refers to this impact, which occurs as a result of another firm's actions, by two distinct terms, competition effects or contagion effects.

Competition effects result when a negative event is perceived to be unique and representative of only the focal firm (Roehm and Tybout 2006). For example, a social media blunder would signal to investors novel information about the shortcomings of the focal firm's social media strategy, while an incident surrounding product packaging or labeling may indicate an issue with processes for ensuring that checks and balances in the firm are taking place. These events are idiosyncratic and likely to be interpreted by investors as problems with the focal company, rather than problems that are industry wide. Accordingly, if an investor perceives the offending firm's future value to be impacted negatively due to the event, it is likely to also signal that competitors of the offending firm will benefit by an increase in demand for their products as the offending firm's customers switch and purchase the products from other competing firms.

Alternatively, contagion effects result when a negative event is perceived to be a systemic issue present in many of the firms in an industry, such as the effects of stolen customer information during the Target privacy breach (Kashmiri, Nicol, Hsu 2017). In this situation if an investor perceives the firm's future value to be impacted negatively due to the event, it is likely to also signal that other industry competitors will also be impacted by the event as investors perceive that they too are likely to get involved in a similar incident.

The media effects literature suggests that media plays a strong role in shaping consumers perceptions of the TMT members and their firms (Rindova, Pollock and Hayward 2004) and as a result shapes an image that tends to credit the TMT members with the firm's strategic outcomes (Hayward, Rindova and Pollock 2004). Accordingly, it is expected that signals of TMT diversity will more than likely be important in an investors decision to invest in a certain product or service provider. This is especially important in the current market environment where the rate of corporate scandals is increasing (Marin, Ruiz and Rubio 2009) and consumers place greater importance on "being socially responsible" as they determine their product or brand loyalties (Hillard 1999).

This means that firms whose CEO or TMT include non-white and/or non-male leaders will be more likely to receive the consumers' business in the wake of their competitor's diversity crisis. It also means that these firms may have higher levels of crisis management capability as leadership has the skills and experience necessary to take advantage of their competitor's crisis by providing their customers solutions or advertising which points out, in a tasteful manner, how they are better suited or more caring of issues that many arise due to individual differences. Finally, it suggests that firms who have prior history of being involved in socially responsible giving or support, might be seen as more sensitive in the eyes of the customer. This is due to the fact that they will be more likely to purchase from socially responsible competing firms in belief they too are now supporting the social issue.

Based on this reasoning, it can be expected that these signals should work similarly with investors as they reason and determine where to invest their money. It is likely then that certain firms' observable characteristics make them more likely to receive either benefit from a competition effect or shielding from contagion effects caused by their competitor's mistake. Since the technology industry is generally perceived as having shortcomings in terms of their diversity and diversity policies, it is expected that the overall effects of a negative diversity event will result in a contagion effect where the majority of firms will experience negative abnormal returns.

H1 – During a diversity-related crisis firms that are closely related to the firm experiencing the crisis will experience negative abnormal returns or a "contagion effect".

The Firm's Upper Echelon as a Signal

As discussed above, in the event of a crisis there is an asymmetry of information between investors and the firms with which they invest. Consequently, it is expected that investors will look to certain firm characteristics to help eliminate any uncertainty that they may have (Spence 1973). Upper echelon theory (Hambrick and Mason 1984) suggests that top management team (TMT) characteristics and attributes significantly influence a firm's strategic decision-making. Consequently, observable and publicly available information regarding the firm's TMT members should act as a signal to investors when they are looking to diminish their uncertainty. The sections that follow investigate the ability of two measures of ethnic diversity and marketing's influence in the firm, as signals that minimize investment risk and maximizing investment reward in the eyes of investors. In a diversity-related crisis, it is expected that investors, when determining where to reinvest their money, will look for characteristics of competing firms that indicate (1) the likelihood of a diversity-related crisis occurring at the firm, (2) the firm's ability to take advantage of the situation.

Relations-Oriented Diversity: Signaling the Likelihood of Occurrence at Competing Firm

One fundamental principle of upper echelon theory is that observable experiences (such as demographics), are related to the psychological and cognitive elements of executive orientation (Knight et al. 1999). This means that the observable relations-oriented diversity of a TMT should provide evidence or proxy of perceptual filters which influence the TMT's strategic decision-making. Accordingly, as explained by signaling theory above, investors are likely to pay attention to demographic characteristics of the firm's TMT to help alleviate any uncertainty they may have (e.g. Kirmani and Rao 2000).

For a corporate crisis involving diversity, this research suggests that that the relations-oriented diversity of the TMT should result in a lower likelihood of such an event occurring to the firm, consequently minimizing perceived risk of investment. As the gender, racial and cultural composition of the board of directors is an increasingly important issue in popular press (Carter, Simkins and Simpson 2003), so too is the pressure on corporations to follow suit. A major reason for this movement is that board members with a different gender or ethnicity might ask questions that would not come from directors with more traditional backgrounds (Carter, Simkins and Simpson 2003) allowing the firm to be better positioned to understand the needs of their consumers (Robinson and Dechant 1997). This is supported by research that indicates increased team diversity should result in a wider variety of ideas, alternatives and solutions than a comparable team of homogenous makeup (Bantel and Jackson 1989; Deshpande and Webster 1989; Jackson 1996; Kuczynski 1999). Accordingly, diversity should play a significant role when determining strategic-marketing decisions such as the wording communicated in advertisement or the systems and processes which oversee social media account operators. Had

Clorox had a greater understanding of the importance of including a wider variety of skin colored emoticons, they may have avoided their incident altogether.

For investors, firms who employ a minority CEO or whose corporate board includes a larger more gender or ethnically diverse group, should signal that the firm is more likely aware of issues that may arise when dealing with people from different walks of life. Since TMT diversity will help firms to effectively align their strategic decision-making with current and future market trends (McQuiston, Wooldridge and Pierce 2004), investors should see racial and gender diversity as evidence that the firm will be less likely to get themselves involved in a diversity-related crisis.

Additional support for the signaling nature of TMT or CEO diversity can be seen by investigating the concept of "framing" from social psychological research. Frames are "schemata of interpretation" that enable individuals "to locate, perceive, identify, and label" events that occur in society (Goffman 1974). In these frames, facts take on meaning, rendering them relevant or irrelevant to the situation. Furthermore, the frames which individuals carry around can be manipulated by mass media (Ryan and Gamson 2006). In the event of a diversity crisis, a frame of injustice, involves a collection of ideas and symbols to illustrate how significant the problem is (Snow et al. 1986). Using this injustice frame, individuals create an illusion of justice for the situation by using assumptions, arguments or stereotypes about the blameworthiness of the individual (Hanson and Hanson 2006).

Investors, as human-beings, are prone to these cognitive biases and errors as well. In the wake of a diversity crisis, social networking and media may be inundated with messages suggesting that the injustice performed by the offending firm was somehow related to a group of relative majority intentionally minimizing the importance of a minority group. Accordingly, as investors look for signals to reduce their ambiguity of information, they may frame those organizations who are run by top management teams low in diversity as being bigots or performing the act of kindness towards a minority group for the wrong reasons. Alternatively, those organizations whose top management team consists of a group of highly diverse individuals may signal to investors that the incident was less likely to happen and if it did actually occur it may be more likely to be some sort of mistake rather than an intentional decision. The Starbucks "race together" campaign provides evidence of this reasoning. Perhaps if the CEO of Starbucks was not a "traditional CEO" (Caucasian, male and over the age of 55), the situation may have been seen in the appropriate light, and consequently the problem would not have been seen as significantly negative.

Therefore, whether through top management team diversity as a signal of the careful consideration of ethnic minorities or simply by affecting the investors frame of injustice, it is expected that competing firms will be perceived as less likely to themselves get involved in a diversity-related crisis.

H2 – The presence of minority members in a firm's TMT will attenuate the decrease in the firm's shareholder value during a competitor's diversity crisis.

The Influence of Marketing: Competing Firms' Ability to Benefit from a Competitor's Crisis

As aforementioned, when a negative event impacts a firm, the competition effect suggests that competing firms will benefit from their rival's downfall. Conversely, in the case of a contagion effect, the firm associated with the event may also be negatively influenced. Regardless of the impact, it is logical to assume that some firms will be more affected by these events than others, as investors determine where to reinvest their money. As discussed above, the marketing capabilities of a firm are hard for the shareholders to assess due to their inability to access all of the information about the processes and policies that the firm may have in place (Xiong and Bharadwaj 2011). Accordingly, investors will look for other indicators, such as publicly available information, which may reduce uncertainty in their investment decisions by providing relevant signals of the firm's ability to not only highlight their own market offerings, but also to take advantage of their competitors during these times.

While TMT relations-oriented diversity is expected to signal the firm's ability to prevent a diversity-related crisis, specific attributes of the firm's top managers may also signal their relative ability to differentiate them from their competitors while highlighting their firm's strengths during the crisis. In a similar vein, a firm's strategic decisions tend to be a reflection of the attributes of their top management teams (Hambrick and Mason 1984). One indicator of the influence had by different departmental backgrounds is referred to as power. The power of a functional department of a firm can be defined as the ability to influence other departments in the firm (Hickson et al. 1971; Pfeffer 1981). Organizational theory provides an understanding of this influence suggesting that it operates through three mechanisms: (1) attraction, (2) interfunctional coordination, and (3) strategic decision influence. In terms of attraction, firms with more powerful departments are more likely to receive higher pay and higher quality resources which in turn allows them to attract more talented employees than other departments or their rivals (Welbourne and Trevor 2000). Greater interfunctional coordination means that more powerful departments assist with conflict resolution mechanisms whereby those departments are more efficient and effective in their collaboration with other departments (Perrow 1970; Salancik and Pfeffer 1974). Finally, more powerful departments should also be better at garnishing the TMT's attention to the interests of the department resulting in the firm being more oriented towards that functional domain.

In terms of the marketing department, greater power indicates that the firm should have more talented marketing employees with greater marketing skills and abilities as well as stronger collaboration between their marketing department and the other functions of the firm, assisting their ability to gather the required inputs and cooperation for strategic marketing initiatives (Feng, Morgan and Rego 2015). It also means that within those firms, top managers pay more attention to strategic marketing decisions and as a result the overall firm strategic decision-making will be more influence by marketing ideals (Feng, Morgan and Rego 2015). In other words, greater power of marketing in the TMT should be more market oriented, generating and taking into consideration a greater number of consumer insights while formulating their strategic options (Gilliatt and Cuming 1986; Kerin 2005).

This means that firms whose marketing department has more power, as indicated by the employment of a greater number of highly compensated executives with marketing experience, should act as a signal to investors that the firm will be more likely and able to carefully analyze their external environment, competitors and the crisis. Moreover, it should signal that the TMT of the competing firm will determine the best method to respond and take advantage of this situation, highlighting differences and strengths of their firm. Furthermore, a firm whose TMT provides evidence of greater marketing power should also suggest to investors that the company will have greater levels of the systems and process in place that are necessary to effectively and efficiently communicate the resulting marketing plan.

Marketing power is important because individuals with marketing experience tend to place greater importance on the individual who truly matters: the consumer. This means that firms who do employ a CMO are more likely to be adaptive than other more homogenous teams, particularly in uncertain situations (Cannella et al. 2008; Carpenter and Fredrickson 2001). For example, a firm who may have TMT members with marketing backgrounds based in social media, communications and psychology may be more likely to come to the appropriate solution for satisficing concerned consumer groups.

In light of the evidence above it is expected that the power of marketing in a firm's TMT should signal to investors that the firm will have the skills, knowledge and experience to effectively highlight their strengths and differences during a competitor's involvement in a diversity crisis.

H3 – The greater influence of marketing in a firm, the smaller is the decrease in the firm's shareholder value surrounding the competitor's diversity crisis.

Methodology

To develop the sample, Standard and Poor's Compustat database was used to identify publicly listed technology firms. Using the GIC standardized classification system developed by Morgan Stanley and S&P's database to identify firms in the same primary industry group as Microsoft GIC group 4510. These included firms in the Internet Software and Services GIC industry (451010), IT Services industry (451020) and Software industry (451030). Event study methodology also suggests that firms in the sample have no other major announcements during the ten-day window surrounding the event (e.g. Srinivasan and Bharadwaj 2004) and therefore firms who did have such announcement were dropped from the sample. The final sample was determined using those firms who were also available in the Execucomp database which was used to determine the individual TMT members for each firm. The resulting sample comprised of 127 publicly listed U.S. technology firms. Microsoft was not included in the final sample since the main hypotheses were interested in the contagion effects resulting from this event.

Event Study Methodology

To measure the impact of this diversity crisis, event study methodology was used. This methodology measures the impact of an unanticipated event on the expected profitability and associated risk of for a firm associated with the event. In other words, when publicity provides new information to investors, they adjust their point of view in terms of the firm's future potential and buy and sell their stock according to these adjustments (Geyskens, Gielens and Dekimpe 2002). The standard event study approach (e.g. Gielens et al., 2008, Farrel et al., 2000, Agrawal and Kamakura, 1995) calculates the dependent variable: the abnormal returns (AR) and regresses these ARs on the independent and control variables. Results are based on an estimation sample, using a window 301 to 46 trading days before the data breach crisis announcement. The Market Model (Wiles, 2007) was used to calculate abnormal returns using the following equations:

$$(1)\ R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t}$$
$$(2)\ AR = \varepsilon_{i,t} = R_{i,t} - E(R_{i,t}).$$

In equation (1), $R_{i,t}$ is the rate of return on the stock price of firm i on day t. $R_{m,t}$ indicates the average rate of return on a benchmark portfolio of market assets over an estimation period previous to the event date. α_i is the intercept and $\varepsilon_{i,t}$ is the residual of the estimation. In equation (2) AR is the abnormal return, defined as the difference between the observed rate of return $R_{i,t}$ and the expected rate of return $E(R_{i,t})$ which is obtained from equation (1). Negative returns indicate that the market performs better than the individual stock, while positive abnormal returns indicate that the firm outperforms the market. The Market Adjusted Model (Srinivasan and Bharadwaj, 2004) was also used as a robustness check to calculate abnormal returns. In this model, α and β are set equal to zero and one.

In addition to calculating abnormal returns (ARs), cumulative abnormal returns (CARs) were calculated to account for information leakage or delayed market response using the formula:

$$(3)\ CAR_i[-t_1, t_2] = \sum_{t=-t1}^{t2} \varepsilon_{i,t}$$

In this formula, t = 0 representing the day of the event. CARs will also be averaged into a cumulative average abnormal return (CAAR) for the entire sample, using the following formula, because the sample will include different types of firms:

$$(4)\ CAAR_i[-t_1, t_2] = \sum_{i=1}^{N} CAR_i\,[-t_1,t_2]/N$$

In the CAAR formula, N is equal to the number of firms in the sample. The Patell's (1976) Z test and the Generalized Sign Z test (Cowan, 1992) was used to see if the CAAR from the sample was different from zero.

Regression Model and Control Variables

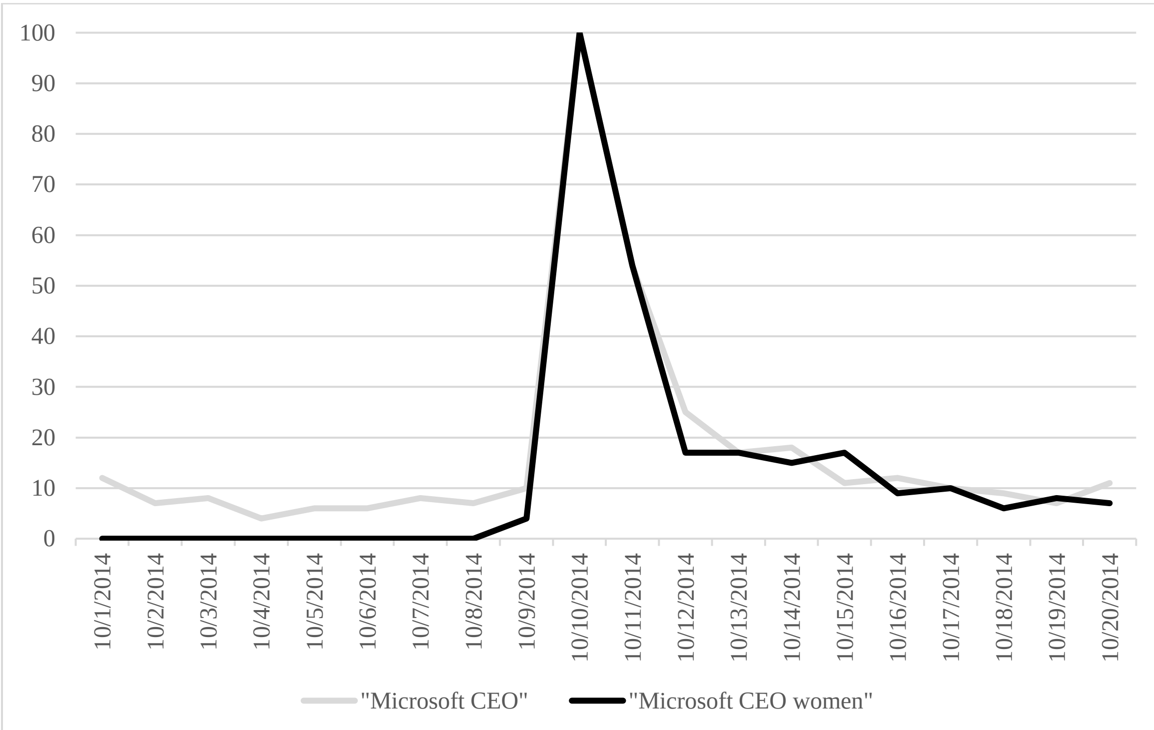
Following the event study discussed above, a cross-sectional multivariate analysis was performed using each competing firm's abnormal returns on the event day as the dependent variable. This typical approach taken in event studies was used to examine the influence of the explanatory variables. Firm prior performance and financial leverage were used as controls since those with greater levels of resources may be more likely to invest in other intangibles or processes which change the perception of firm in the eyes of the investor. Globalization was also included as a control variable as firms who are more globally recognized may face stronger negative consequences when involved in a controversy. Additionally, diversification was included to account for the likely possibility that firms with more diversified offerings may not be as strongly impacted since highly diversified companies could be perceived as less susceptible to negative perceptions as investors discern that they are less likely to be impacted by a negative event. Finally firm age and firm size were included as controls to account for the fact that customers might be less likely to punish or more likely to back those firms who are have more human capital to help them deal with a controversy and those who have a greater history of overcoming the constant change present in the technology industry. Accordingly, the following empirical model was used to test the hypotheses outlined above:

(1) $(AR) = \delta 0 + \delta 1(TMTMinority)i + \delta 2(MarketingPower)i + \delta 3\text{-}8(ControlVariables)i + \varepsilon$

Selection of the Event. To choose an event, the KLD social indicators database was used. The KLD database tracks firms' social performance across seven categories. For each of these categories they provide an annual count rating of "concerns" indicating that the firm has violated the law or not met stakeholder expectations in the specific category. The category of "Diversity" in the KLD database investigates three indicators of diversity related concerns: (1) Controversies (Defined as: "The company has paid fines or civil penalties as a result of affirmative action controversies, or has otherwise been involved in major controversies related to affirmative action issues"), (2) Non-Representation (Defined as: "The company has no women on its board of directors or among its senior line managers"), and (3) Other Concerns (Defined as: "The company is involved in diversity controversies not covered by other KLD ratings"). Each of these indicators is marked 1 for the calendar year if the company has been found to be involved in these issues during said year. Using these firm-year comparisons to narrow down the search, an internet search was performed to find diversity-related events, such as lawsuits, product releases or consumer backlash published by major news outlets between 2010 and 2015. Additionally, a thorough search of LexisNexis was completed to search for any confounding events from 5 days before each event to 1 day after the event.

After narrowing down the list of possible incidences provided by the KLD database, and removing events that were difficult to find in popular press and other media outlets, the incident surrounding Microsoft's Satya Nadella was selected as the focal event. The initial date of the event (October 9th, 2014) was determined using popular press. However, due to the nature of some events, consumer backlash or "viral" events reaction to the event may be delayed as investors wait to see what the response might be. In these circumstances the product release, social media post or advertisement may not spark outrage immediately, and therefore, the official event date was determined using Google Trends. Search terms related to the offensive post, product or picture was used to determine a date where the post had significantly increased in the level of search intensity signifying that the event "went viral". As displayed in Figure 4.2, For the Microsoft event, the actual event date (October 10th, 2014) was determined by the spike in search activity (the date in which there is an increase of greater than 50 on the search intensity score). This method will help to eliminate using dates where the event may not have been considered significant enough news for investors to be concerned or where investors may not realize the inherent risk behind the event.

Figure 4.2
Google search intensity related to CEO minority comments



Note: Search intensity is from http://www.google.com/insights/search/. Search intensity is normalized within each term, with peak volume at 100 and lower numbers representing percentage of peak volume. “Microsoft CEO” and “Microsoft CEO women” are the top-ranked searches listed by Google Insights following an initial search for “Microsoft CEO”

The Likelihood of Occurrence at Competing Firm. Since the focus of this research is the investors' perceptions of the firm, the definition of diversity was strictly limited to observable characteristics. For the purposes of this study, measurement of diversity investigates differences in diversity in terms of race and or sex using a dichotomous variable where 1 indicates that the firm's TMT includes either a female or minority TMT member and 0 indicates a TMT that is perceived as the traditional board (white male of European descent). Since racial diversity of an individual is difficult to validate, racial diversity in this research was measured by obtaining images of each of the top management team members from corporate websites and/or google images. Each individual TMT member was then scored a 1 if they were from a non-white ethnic background and/or if they were female. Two graduate students coded the data and for those images for which there was disagreement a third graduate student's measurement was solicited. Only three firms had mixed opinions determined by the third graduate student.

Ability to Benefit from a Competitor's Crisis. The investigation of the firm's ability to take advantage of their competitor's negative press was measured using an objective measure of marketing department power developed by Feng, Morgan and Rego (2015). This measure is made up of five different measures of marketing's power in the firm: (1) the ratio of TMT members with marketing experience as compared to the total TMT members, (2) the ratio of the marketing TMT executives compensation as compared to the total TMT compensation, (3) the hierarchical level of the highest-level marketing TMT executive's job title, (4) the cumulative hierarchical level of all of the marketing executives in the TMT, and (5) the number of responsibilities reflected in the marketing TMT executives' job titles. Once collected, the items were scaled using industry averages and then combined using a principal component analysis. The resulting Bartlett factor scores for each firm was then rescaled between 1 and 100 to indicate the marketing department power for each firm.

Competitors. In order to evaluate competition effects, a dummy indicator of the firm's industry was included. This will allow the analysis to account for those firms who are more closely competing with the firm involved in the crisis. For each event, firms listed in the Fortune 500, who fell under the same GIC code as the focal firm, were included as competitors. The cumulative abnormal returns for each group of competing firms was measured for the main hypothesis regarding a contagion effect. Additionally, the abnormal returns for each competitor were measured and used in the proposed moderation model.

Controls. Prior performance was measured using a ratio of net income to total assets in the year of the event, while financial leverage was measured using the ratio of total debt to equity. Globalization was measured ratio of firm's sales outside the U.S. and diversification was measured using Palepu's entropy measure of four- and two- digit level segment sales. Finally, firm size was measured using the natural log of the number of employees of the firm, while firm age was measured using the natural log of the year of the event (2014) less the number of years the firm has existed since their founding. Each of these measures was collected using the Compustat database. A summary of the data source and each of the aforementioned measures used in this essay can be found in Table 4.1 (Appendix).

Analyses and Results

As shown in Table 4.2, on the day of the event, the average abnormal stock return for the sample of 127 tech firms was negative and significant (AAR Market Model = -0.20, AAR Market Adjusted Model = - 0.71%) according to the Patell Z-test ($p < .01$) in both models and the Generalized Z-test ($p < .05$) in the market adjusted model. Additionally, a subsample analysis, as seen in Table 4.3, indicates that the AAR for those firms in the same GIC industry as Microsoft were impacted the greatest (AAR Market Model = -0.66, AAR Market Adjusted Model = -1.30%). Taken together these findings support Hypothesis 1 which suggests that those firms who are perceived as most similar to Microsoft are likely to experience negative abnormal returns or a "contagion effect". Furthermore, Figure 4.2 (above) displays Google trends data suggesting that the search intensity for news related to Microsoft's CEO was almost zero prior to October 10th, 2014. This is important because search intensity has been seen as an accurate proxy for the attention of investors regarding an event (Knittel and Stango 2014). This figure, along with Table 4.3 helps to illuminate that the negative impact was limited to the day of the event, indicating that further investigation should involve only the day of the event rather than using alternative event windows. Accordingly, the decision to use the AR from the day of the event in further analysis was empirically justified.

Despite the main focus of this research i being fixated on other technology firms, the impact of the negative minority comments spoken by Microsoft's CEO on his firm were explored as well. As expected, and explained in the footnote on Table 4.2, the abnormal return (AR) for Microsoft on the day of the event was more negative than the abnormal return of the other technology companies in the sample. The abnormal return for Microsoft on October 10th, 2014 were -2.57% according to the Market Adjusted Model and -3.00% according to the Market Model. The abnormal returns of Microsoft on this date were significant at the .05 level.

Table 4.2
Tech industry daily and cumulative average abnormal returns

Average daily abnormal return										
Market model						Market adjusted model				
Day	Average abnormal return (%)	Patell Z	Generalized Z	% Positive		Day	Average abnormal return (%)	Patell Z	Generalized Z	% Positive
-5	0.59	4.411***	3.612***	62		-5	0.72	5.052***	4.068***	65
-4	0.25	2.107*	4.145***	65		-4	0.03	0.984	3.001**	61
-3	0.24	0.801	1.303$	53		-3	-0.26	-1.748*	-1.264	42
-2	0.59	5.012***	5.211***	71		-2	0.88	6.458***	6.378***	75
-1	0.66	3.678***	4.323***	67		-1	-0.11	-0.170	0.158	48
0	-0.20	-1.745*	-0.296	46		0	-0.71	-4.318***	-2.686**	35
1	1.02	5.808***	3.790***	65		1	0.71	4.228***	3.001**	61
2	0.48	2.579**	3.079**	61		2	0.56	2.936**	3.712	64
3	0.28	0.132	.592	50		3	0.38	0.636	0.869	51
4	-1.90	-12.910***	-7.402***	15		4	-1.48	-10.793***	-5.885***	21
5	-0.16	0.859	-0.829	44		5	-0.09	1.190	-0.198	47
Cumulative average abnormal return (CAAR)										
Market model						Market adjusted model				
Window	CAAR(%)	Patell Z	Generalized Z	% Positive		Window	CAAR(%)	Patell Z	Generalized Z	% Positive
(0)	-0.20	-1.745*	-0.296	46		(0)	-0.71	-4.318***	-2.686**	35
(0,+1)	0.81	2.873**	1.658*	55		(0,+1)	-0.01	-0.063	-0.158	48
(0,+2)	1.30	3.835***	2.724*	60		(0,+2)	0.55	1.644$	1.402$	57
(0,+3)	1.58	3.387***	3.257**	62		(0,+3)	0.93	1.741*	2.113*	46
(0,+4)	-0.32	-2.744**	0.059	48		(0,+4)	-0.54	-3.269***	-0.198	37
(0,+5)	-0.48	-2.154*	-1.540$	40		(0,+5)	-0.63	-2.499**	-1.975*	37

Notes: % Positive represents the percentage of the 127 abnormal returns that were positive for each day or the percentage of the 127 cumulative abnormal returns that were positive for each window. The symbols $, *, **, and *** denote statistical significance at the .10, .05, .01, and .001 levels, respectively, using a one-tailed test. Microsoft was not included in the sample of 127 tech industry firms. In a separate analysis, Microsoft's abnormal return on the day of the event was found to be -3.00% according to the market model and -2.57% according to the market adjusted model. Microsoft's CAR in the window (0, +5) was found to be -5.11% according to the market model, and -5.58% according to the market adjusted model. These abnormal returns of Microsoft were significant ($p < .05$).

Table 4.3

Cumulative abnormal returns on the event date for closely related firms

GIC Industries	451010, 451020, 451030	451030	451020	451010	451030 & 451010
N	127	48	50	29	77
Market model					
AAR % (day 0)	-0.20	-0.66	0.34	-0.41	- 0.57
Patell Z-test	-1.745*	-3.681***	1.514$	-0.966	-3.499***
Generalized Z-test	-0.296	-2.015*	1.998*	-0.658	-1.995*
Market adjusted model					
AAR % (day 0)	-0.71	-1.30	0.13	-1.29	-1.29
Patell Z-test	-4.318***	-5.761***	0.868	-3.004**	-6.393***
Generalized Z-test	-2.686***	-3.441***	0.684	-2.084*	-3.996***

The Effects of Marketing's Influence and Minority TMT members on Abnormal Returns

Since evidence suggests that the overall impact of the event resulted in cumulative negative returns for the technology industry as a whole, the following analysis investigates the differences between the firms which explain the heterogenous outcomes associated with each firm. Accordingly, hypotheses 2 and 3 were tested using a multivariate analysis. In this model, each of the firm's abnormal returns on the day of the event were used as the dependent variable. Descriptive statistics and correlations for all the measures used in this model can be found in Table 4.4. Since none of the correlations between explanatory variables were found to be greater than 0.5 and variance inflation factors were all much less than 10, multicollinearity is not likely to have been a problem (Kennedy 2003).

Table 4.5 summarizes the results of the cross-sectional regression analysis. In investigation of hypothesis 2, which states that firms who have a minority in their top management team are should be impacted less, the coefficient for this independent variable is positive and marginally significant ($\beta = .734$, $p < .10$). These results provide support for H2 and suggests that those firms who employ a minority member within their firm's upper management are likely shielded from the negative effects of contagion and therefore, result in less negative abnormal returns during a negative minority event. Alternatively, the coefficient for marketing department power ($\beta = -.005$) was non-significant. This surprising result may be due to inadequacies in the marketing influence measure and/or associated with limitations of the Execucomp database. Additionally, it may be that marketing department power does not play a significant role simply in this context. Perhaps the fast-changing environment of the technology industry reduces the effectiveness of marketing effectiveness in these firms. For robustness of these results, additional analysis were run with the non-significant control variables removed from the model. Without the controls present, significance levels and coefficients remained the same, providing additional support for the results of the multivariate analysis.

Discussion, Limitations and Future research directions

Based on the above analysis and in accordance with the hypotheses, the signal sent by competing firms indicating their likelihood of being involved in a diversity related even themselves should ensure investors participate as stakeholders in these firms at a higher rate than their competitors. Accordingly, those firms who have minority members in their TMT will receive greater levels of the abnormal shareholder returns resulting from shielding of the contagion effect proposed above.

Accordingly, this research should provide a glimpse into the importance of having a more diverse TMT during a marketing related crisis. This means that firms should promote diversity in their corporate and marketing communications, advertisements and social media channels. These significant findings indicates to practitioners the importance of putting their firm's corporate diversity out in the public eye as a marketing tool to boost value when competing firms find themselves in trouble. Moreover, promoting this diversity to consumers as an indicator of diverse thoughts and reduced likelihood of being involved in a crisis themselves during times of competitor crisis could be advantageous, making them more attractive than other competitors in the same industry. Additionally, the findings that marketing department power was non-significant brings into question the possible boundary conditions that surround when marketing will help to shield an organization, and when it is not perceived by investors to be helpful. This is of special interest since previous research has indicated that both CSR (Battacharya, Sen and Korschun 2007) and marketing capabilities (Kashmiri, Nicol and Hsu 2017) can act as a shield during times of crises.

Table 4.4

Descriptive Statistics and Correlation Coefficients for essay 3

		Mean	SD	1	2	3	4	5	6	7	8	9
1	Abnormal Return - Day 0 (%)	-0.71	2.27	1								
2	Marketing’s Influence in the Firm	21.81	26.10	0.025	1							
3	Minority in the TMT	0.59	0.49	0.160	0.165	1						
4	Diversification	1.09	0.56	-0.051	-0.056	0.080	1					
5	Globalization	0.30	0.24	-0.067	-0.093	0.078	.216*	1				
6	Firm Size	1.40	1.61	0.098	-0.088	.180*	.364**	.223*	1			
7	Firm Age	3.25	0.51	0.113	-0.081	-0.042	.272**	0.167	.247**	1		
8	Leverage	1.34	1.52	0.056	0.053	-0.016	-.192*	0.101	-.362**	-0.123	1	
9	Industry	2.15	0.76	-0.044	-0.029	-0.039	0.121	.254**	0.055	.223*	0.011	1

*Note: *p<.10, **p<.05, ***p<.01 (2-tailed). Note: Table shows pairwise correlations*

Table 4.5

Regression analysis with abnormal return on day 0 as the dependent variable

Variables	**Coefficients (t-values)** **Model 1**
Independent variables:	
Minority in TMT	.734(1.737)*
Marketing Department Power	-.005(.025)
Controls:	
Diversification	-.398(-.998)
Globalization	-1.099(-1.201)
Firm size (ln of employees in ’000)	.196(1.316)
Firm Age (ln of firm age)	.696(1.632)
Financial leverage (debt-to-equity)	.182(1.248)
Industry Indicator	-.111(-.402)
Intercept	-2.910(-2.063)
R^2	.078(2.25)
N (Number of firms)	127
Overall F-test	F(8,118)=1.246

*Note: Abnormal returns are calculated using the Market Adjusted Model. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively, using a 2-tail test*

For academicians this research should not only fill some existing gaps in the current literature, but also spur future research in the area of TMT diversity. Previous research has typically taken an *internal* focus regarding TMT ethnic or racial diversity as important in terms of its ability to bring different viewpoints to the table. The presumed findings suggest that its role is understated. Significant results here suggest that TMT ethnic diversity is an important *external* indicator to consumers *and* investors that the firm is going to take into careful consideration the differences in culture when making marketing related decisions. Furthermore, the expectation that relations-oriented diversity of the firm strengthens the abnormal returns surrounding a competitor's crisis suggests that not only does race or ethnic related diversity in your TMT help during your *own* diversity crisis, but also helps shareholder value when a *competing* firm finds themselves in trouble

This study also has limitations that may provide other opportunities for future research. First, this study looks at one single event in one specific industry with evidence that the focal firm was impacted by abnormal returns. Future research should investigate other negative diversity events in other industries. Secondly, this study investigated two specific diversity related differences that organizations should look to promote. Investigation of this signal of diversity does not suggest that this is the only factor which may assist competing firms during their competitor's diversity related crisis. Future researchers should look to other strategic and/or cultural factors that may help a firm benefit while their competition struggles through these events. Furthermore, since this research only investigates the ability of these competing firms to use their diversity as a signal, future research could also investigate the interaction effects which could possibly occur as the offending firm themselves have differentiated TMT members. Perhaps if the offending firm has a TMT that includes minority members, competing firms who benefit from having minority members themselves may not find as significant of rewards. Another limitation of this research is in the measurement of the minority top management team members. The measurement done in this research relied upon perceptions of the top management team's ethnic background. It is possibly, however, that a more nuanced understanding of the ethnic history or ethnic background of the individual may provide a fuller picture. Future research should attempt to get primary data from each of the TMT members to more closely understand if ethnic backgrounds of the TMT play a role in investors decision-making. Finally, since the firms in the proposed sample are all major U.S. based firms, future research could investigate this effect in other foreign markets where cultural influences may yield differential effects.

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APPENDICES

Table 2.1

Measures and data sources for essay 1

Variable	Definition and Sources
CEO Extraversion	Latent variable composed of the following measures: 1. # of words used related to people and social processes 2. # of positive emotion words 3. # of present tense words 4. # of first person pronouns (LIWC textual analysis) Bartlett scores from a principal component analysis were used as the final measure for each firm.
Organizational Proactiveness	Normalized frequency measure of # of times synonyms related to proactiveness are found in firm 10k annual reports (Diction textual analysis) *Synonyms used: Anticipate, envision, expect, exploration, exploratory, explore, forecast, foreglimpse, foreknow, foresee, foretell, forward-looking, inquire, inquiry, investigate, investigation, look-into, opportunity-seeking, proactive, probe, prospect, research, scrutinization, scrutiny, search, study, and survey.*
Innovative Behaviors: 1. R&D 2. New Product Introductions	 1. Total spending (US$) on research and development 2. Number of new product announcements (S&P Capital IQ database)
Marketing Effectiveness: 1. Marketing Capabilities	 1. Stochastic frontier approach comparing marketing resources to goal achievement: sales (Dutta et al. 1999)
Corporate Social Awareness: 1. CSR 2. CSiR	 1. Annual count rating of the number of marketing “strengths” (KLD database) 2. Annual count rating of the number of marketing “concerns” (KLD database)

Table 3.1
Measures and data sources for essay 2

Variable	Definition and Sources
CMO Masculinity	Facial width-to-height ratio: Measured as the distance between the two zygions (bizygomatic width) as indicated by the cheekbones, relative to the distance between the upper lip and the highest point of the eyelid (height of the upper face) (ImageJ software applet)
Marketing Investment Decisions: 1. Advertising Spending 2. R&D Spending	 1. Total spending (annual - US$) on advertising (Compustat database) 2. Total spending (annual - US$) on research and development (Compustat database)
Strategic Marketing Outcomes: 1. New Product Introductions 2. CSiR	 1. Number of new product announcements (S&P Capital IQ database) 2. Annual count rating of the number of marketing “concerns” (KLD database)
Marketing’s Influence in the Firm	1. Dichotomous indicator of the firm’s marketing manager presence as one of the top five highest paid individuals in the TMT. CMOs listed as being one of the top five highest paid executives in the firm were issued a “1” while those who were not listed were issued a “0”. (DEF14A proxy reports)

Table 4.1
Measures and data sources for essay 3

Variable	Definition and Sources
Competition Effect on Shareholder Value	Abnormal Returns on day 0 (the day of the event) Market adjusted model (EVENTUS)
Likelihood of the Event Occurring to the Competing Firm (Relations Oriented Diversity): 1. TMT Diversity 2. Minority CEO	1. Dichotomous variable where 1 indicates a TMT with a minority member while 0 indicates a TMT without a minority member 2. Dichotomous variable where 1 indicates that the CEO is not an American of Caucasian descent
Ability of the Competing Firm to Benefit from the Event (Task-Oriented Diversity): 1. Marketing Power	1. Ratio of TMT members with marketing experience as compared to the total TMT members 2. Ratio of the marketing TMT executives' compensation as compared to the total TMT compensation 3. Hierarchical level of the highest-level marketing TMT executive's job title 4. Cumulative hierarchical level of all of the marketing executives in the TMT 5. # of responsibilities reflected in the marketing TMT executives' job titles Bartlett scores from a principal component analysis were used as the final measure for each firm.

VITA

EDUCATION

2011	M.A.E.D.	Union University, Jackson, TN, Education
2010	M.B.A.	Union University, Jackson, TN, Business Administration
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PUBLISHED RESEARCH

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ACCEPTED MANUSCRIPT

Kashmiri, S., **Nicol, C.**, and Arora, S. "Me, Myself And I: Influence of CEO Narcissism On Firms' Innovation Proclivity And Marketing Controversies".(*Journal of the Academy of Marketing Science, Forthcoming)*

SELECTED RESEARCH IN PROGRESS

Gala, P., Kashmiri, S., and **Nicol C.** "Seeking Pleasure or Avoiding Pain: Influence of CEOs' Regulatory Foci on Firms' Strategic Emphasis and Corporate Social Responsibility"

Nicol C. "Too Smart For Your Own Good? Implications of Displaying Intelligence Through Technical Language in Dyadic Sales Interactions"

Nicol C. "Too Good to be True: The Sales-Service Experience and the Moderating Role of Salesperson (In)Credibility on Post-Purchase Outcomes"

Nicol C. "It's All About Perception: The Role of Service Literacy and Consumer Situational Fluency In the Sales-Service Agent-Consumer Dyad"

Nicol C. and White, D. "Strengthening the Sales Relationship: Adaptive Selling Through Sports Identification"

SELECTED CONFERENCE PRESENTATIONS

Gala, P., Kashmiri, S., and **Nicol C.** "Seeking Pleasure or Avoiding Pain: Influence of CEOs' Regulatory Foci on Firms' Strategic Emphasis and Corporate Social Responsibility" (Forthcoming, AMS Summer 2017, Coronado, CA)

Gala, P., Kashmiri, S., and **Nicol C.** "Seeking Pleasure or Avoiding Pain: Influence of CEOs' Regulatory Foci on Firms' Strategic Emphasis and Corporate Social Responsibility" (AMA Summer 2016, Orlando, FL)

Kashmiri, S., **Nicol, C.** and Arora S. "Me, Myself And I: Influence of CEO Narcissism On Firms' Innovation Proclivity And Marketing Controversies" (AMS Spring 2016 Conference, Orlando, FL)

Kashmiri, S., **Nicol, C.** and Arora S. "Me, Myself And I: Influence of CEO Narcissism On Firms' Innovation Proclivity And Marketing Controversies" (AMA Winter 2016 Conference, Las Vegas, NV)

Kashmiri, S., **Nicol, C.**, and Hsu, L. "Protecting Retailers Against Contagion: Exploring the Shielding Role of Marketing in the Negative Spillover of the Target Customer Data Breach" (Presentation, AMA Summer Conference 2015, Chicago, IL)

Kashmiri, S., **Nicol, C.**, and Hsu, L. "Protecting Retailers Against Contagion: Exploring the Shielding Role of Marketing in the Negative Spillover of the Target Customer Data Breach" (Presentation, AMS Annual Conference 2015, Denver, CO)

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2016-2017 **Instructor**, Union University
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2010-2013 **Career Tech Instructor**, Southwind High School, Memphis, TN

- *Instructing students in their acquisition of practical business and marketing skills ranging from the design of a marketing plan to the development of advertising copy.*
- *Assisting students in earning university course credit through dual-enrollment business courses associated with the University of Memphis and Southwest Community College.*
- *Implementation and upkeep of school website including marketing and advertising of school events, athletics and awards (including graphic design).*

2007-2010 **Verizon Wireless**, Retail Sales and Customer Service Representative/Technician

- *Initializing consultative sales techniques to match consumer needs to products best suited to their lifestyle requirements.*
- *Instructing customer device workshops minimizing churn and increasing engagement.*
- *Training representatives in sales and service techniques as well as CRM, inventory and sales-force systems.*
- *Repair and replacement of warranty and insured devices*

2005-2007 **Younger Associates**, Marketing Intern/Market Researcher

- *Analyzing copy for marketing projects*
- *Developing and writing copy for print media*
- *Conducting and collecting market research*