QATAR UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

THE RELATIONSHIP BETWEEN GENDER DIVERSITY AND EARNINGS QUALITY GIVEN DIFFERENCES IN CULTURAL DIMENSIONS AND ACCOUNTING VALUES.

BY

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ABSTRACT

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Title: The Relationship between Gender Diversity and Earnings Quality Given Differences in Cultural Dimensions and Accounting Values.

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Given their risk-averse and conservative nature, female directors are expected to influence board effectiveness. However, despite the hefty literature on gender diversity, few studies (with inconclusive results) focused on the effect of female directors on accrual quality. From an institutional perspective, the interactions and decision making of the board are expected to be influenced by the mindset of its members. To that effect, this thesis examines the relationship between board gender diversity and earnings quality whilst considering the moderating effect of different cultural dimensions and accounting values. Hierarchical linear regression analysis is conducted using a sample of 3,092 public firms from 46 different countries for the year 2017. The results show that the effect of female directors on accrual quality is enhanced in small power distance, individualist, and feminine societies. The results also indicate that professionalism, uniformity, secrecy, and conservatism moderate the relationship between gender diversity and accrual quality. The study contributes to the body of accounting knowledge by examining important mitigating factors, which were not previously used in earnings quality literature.

DEDICATION

I dedicate this thesis to the person who taught me to aspire to achieve. To the person who taught me strength and showed me how strong an individual can be. To the one who taught me how to laugh through hardships and fight until the end. To you, Mom, I dedicate this work. I also dedicate this thesis to the man of my life, my role model, my love, and my dearest friend. I dedicate this thesis to you, my Dad.

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CHAPTER 1: INTRODUCTION

1.1. Background of the study:

The topic of corporate governance has been the subject of many inquiries since the 1990s, with the 1992 Cadbury report being the basis of many future corporate governance principles and regulations (Tricker & Tricker, 2015). The issue of corporate governance reform seems to gain further prominence in the aftermath of accounting scandals and corporate failures around the world (Tricker & Tricker, 2015). Examples of corporate collapses include Enron, WorldCom, and Tyco in the United States; Marconi, British Retail, and Tomkins in the United Kingdom; HIH Insurance in Australia; Parmalat in Italy; and Vodaphone Mannesmann in Germany (Tricker & Tricker, 2015). These scandals helped erode investor confidence in the financial markets, thus raising questions concerning financial transparency and the effectiveness of the governance processes (Tricker & Tricker, 2015).

Regulators around the world found it necessary to instate and reform corporate governance regulations to regain investors' trust (Tricker & Tricker, 2015). Corporate governance regulations, such as the Sarbanes-Oxley Act in US (2002), the Nigerian Code of Corporate Governance (2003), the UK Corporate Governance Code (2010), and the Malaysian Code of Corporate Governance (2012) among others, were issued to decrease the information asymmetry between managers and shareholders and to increase financial statements creditability and usefulness for decision-makers (Lin & Hwang, 2010). These reforms targeted various mechanisms, but the most important of which was the structure, composition, and effectiveness of the board of directors.

The board of directors represents the company's shareholders and acts to protect their interests in the company (Naciri, 2008). Corporate boards play a crucial role in mentoring and supervising managers to ensure that they are operating the

company in line with the long-term interest of the stakeholders. Board composition, in particular, is a crucial factor that improves the effectiveness of the decision making of the board (Nielsen & Huse, 2010). Composition guidelines refer to the ratio of executive and independent directors and the diversity of the board directors, in terms of gender, expertise, social backgrounds, and network bases.

One of the prominent diversity issues is gender diversity, which has recently taken center stage in various research projects around the world (e.g., Carter, Simkins, & Simpson, 2003; Kang, Cheng, & Gray, 2007; Adams & Ferreira, 2009; Srinidhi, Gul, and Tsui, 2011; Chapple & Humphrey, 2014; Arun, Almahrog, and Aribi, 2015). Although there have been calls to increase gender diversity on corporate boards for many years, boards of directors remain dominated by male representatives. The Morgan Stanley Capital International (MSCI) report published the percentage of female representation on corporate boards in 2018. The country that had the highest gender diversity was France (41.2%), followed by Norway (39.6%), then Jersey (37.5), and Sweden (36.9%) (Ellis & Eastman, 2018)

The arguments in support of gender diversity can be divided into two categories: ethical and economic. The ethical argument states that women must not be excluded from boards solely as a result of their gender. Since women make up half of the population, they should be represented proportionately on corporate boards. As for the economic argument, it states that gender diversified boards can outperform male-only boards. (Campbell and Mínguez-Vera, 2008). Unlike prior studies that focus on only one of the two arguments, the current study considers them both. The study argues that the economic effect of gender-diversified boards relies on making the ethical choice to include all members of society. More specifically, the study examines the impact of gender diversity on accounting information, such as the

quality of accruals.

1.2. The motivation of the study:

Several factors motivate this study. The first motivator of this study is to propose a plausible reason to support legislation that aims to enhance board gender diversity. Several legislative bodies around the world have issued quotas to ensure female representation on boards. The pioneer in adopting such regulation was Norway by mandating their public companies to have 40% females on boards by 2008 (Terjesen, Aguilera & Lorenz, 2015). Several European Union (EU) countries have passed similar regulations with different compliance dates. These countries include Spain in 2015, France in 2017, and Belgium in 2018 (Carrasco, Francoeur, Labelle, Laffarga, & Ruiz-Barbadillo, 2015). The United Kingdom placed soft regulatory targets for its public companies to reach 33% female representation by 2020, but without enforcing quotas (Financial Reporting Council, 2018). In 2012, the EU issued a directive mandating that all member states have regulations in place that grants 40% female representation on corporate boards by 2020 (European Commission, 2012). In its revised corporate governance code of 2017, Malaysia mandated its large companies to have at least 30% female board representation (Malaysian Code on Corporate Governance, 2017).

The United States (US) and Australia are among the countries that have recently adopted regulations to achieve higher gender diversity. In the US, the state of California issued the first gender quota mandating public companies to have at least one female on their boards by the end of 2019 and a minimum of two to three females by 2021, depending on the size of the board (Trujillo, 2019). In 2018, Australia reached its target that board composition includes 30% women. However, some entities, such as the Australian Council of Superannuation Investors (ACSI), have

called for an increase in the percentage of female representatives on boards (Australian Council of Superannuation Investors, 2019). The chief executive officer of the ACSI recommended companies to put regulations and timelines in place to reach a minimum of 40% female representation by 2025. The CEO of ACSI requested regulatory actions in case such progress was not achieved. These fast-moving changes and regulatory reforms motivated this study to examine the impact of gender-diversified boards on accrual quality.

The second motivator of the current study is the scarcity and inconclusive results of board gender diversity-accrual quality literature. Although there are a number of studies that focused on gender diversity in senior management, very few took on the relationship between female representation on the board and accrual quality (Krishnan and Parsons, 2008; Labelle, Gargouri, and Francoeur, 2010; Barua, Davidson, Rama, and Thiruvadi, 2010; Peni & Vähämaa, 2010). Furthermore, the limited results from papers that link board gender diversity and accrual quality are somewhat conflicting (Arun, Almahrog, and Aribi, 2015; Srinidhi, Gul, and Tsui, 2011; Lara, Osma, Mora, and Scapin, 2017; Gull, Nekhili, Nagati, and Chtioui, 2018; Triki Damak, 2018; Kyaw, Olugbode, and Petracci, 2015; Lakhal, Aguir, Lakhal, and Malek, 2015). As a result, the current study aims to bridge this gap in the literature and contribute to the body of knowledge in these areas.

The third motivating factor of this study is its aim to put the board gender diversity-accrual quality research in the context of an institutional dimension. Different researchers have raised the concern that the gender diversity effect is context-sensitive and that it is governed by various institutional factors (Abdullah, Ismail, and Nachum, 2016; Miller, and del Carmen Triana, 2009; Dwyer, Richard, and Chadwick, 2003). Dwyer, Richard, and Chadwick (2003) helped to resolve the

gender diversity issue by putting diversity into context, concluding that gender diversified boards enhance the performance of companies within a particular organizational culture. Miller and del Carmen Triana (2009) revealed that that the lack of a direct relationship between gender diversity and firm performance does not deny the effect of diversity within the firm. On the contrary, it signals that the environmental structure of the firm is not utilizing the benefits of diversity. Abdullah, Ismail, and Nachum (2016) concluded that in order for studies to understand the effect of female directors on a firm's performance, they must consider the contingent factors that shape this relationship. Similarly, this study aims to contextualize the relationship between board gender diversity and accrual quality. To the researcher's knowledge and up to this date, there is no other study that examines the relationship between board gender diversity and accrual quality within a cultural context.

1.3. Research problem:

The study aims to examine the relationship between accrual quality and board gender diversity in the context of Hofstede's cultural dimensions and Gray's accounting values. The cultural aspects include power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity. As for the accounting values, they consist of professionalism versus statutory control, uniformity versus flexibility, conservatism versus optimism, and secrecy versus transparency.

1.4. Research questions:

Based on the proposed research problem, the study raises the following questions:

1. How does board gender diversity affect accrual quality within the company?
2. To what extent does the relationship in Question 1 differ in the context of large versus small power distance societies?

3. To what extent does the relationship in Question 1 differ in the context of high versus low uncertainty avoidance societies?

4. To what extent does the relationship in Question 1 differ in the context of individualist versus collectivist societies?

5. To what extent does the relationship in Question 1 differ in the context of masculine versus feminine societies?

6. To what extent does the relationship in Question 1 differ in the context of professionalism versus statutory control?

7. To what extent does the relationship in Question 1 differ in the context of uniform versus flexible societies?

8. To what extent does the relationship in Question 1 differ in the context of conservative versus optimist societies?

9. To what extent does the relationship in Question 1 differ in the context of secretive versus transparent societies?

1.5. Objectives of the study:

The objectives of the study are as follows:

1. To provide empirical results concerning the effect of gender diversity on accrual quality within different national cultural contexts.
2. To contribute to the body of accounting knowledge by examining important mitigating factors that have not been included in accrual quality literature.

1.6. Statement of the research hypothesis:

To provide answers to the research questions, the study formulates the following hypotheses:

Hypothesis 1: Gender diversity on the board of directors enhance accrual quality.

Hypothesis 2: The impact of gender diversity on accrual quality is reduced in

societies with a large power distance.

Hypothesis 3: The impact of gender diversity on accrual quality is reduced in collectivist societies relative to individualist societies.

Hypothesis 4: The impact of gender diversity on accrual quality is reduced in masculine societies relative to feminine societies.

Hypothesis 5: The impact of gender diversity on accrual quality is reduced in societies with high uncertainty avoidance.

Hypothesis 6: The impact of gender diversity on accrual quality is increased in high professionalism societies.

Hypothesis 7: The impact of gender diversity on accrual quality is decreased in uniformity societies.

Hypothesis 8: The impact of gender diversity on accrual quality is decreased in secretive societies.

Hypothesis 9: The impact of gender diversity on accrual quality is decreased in conservative societies.

1.7. Methodology:

This study used cross-sectional data from 2017 for 46 countries to examine the effect of gender-diversified boards on accrual quality in different cultural contexts. The data were obtained from the Bloomberg database. The Dechow & Dichev (DD) (2002) accrual estimation error, as well as the decomposed DD model and modified Jones model, were used as proxies for accrual quality. Gender diversity was represented by both the percentage of females on boards and a dummy variable of gender diversity. Hofstede's cultural dimensions and Gray's accounting values, based on those dimensions, were used as moderators in the model. Hofstede's cultural dimensions were retrieved from the Hofstede center (2019), while Gray's accounting

values were calculated following the approach of Braun and Rodriguez (2008). The empirical model controlled for the board, company, and country-specific variables. Hierarchical linear regression was used to conduct the analysis.

1.8. Results of the study:

The results of the study have shown that female directors significantly enhance the quality of the company earnings. However, this relationship varies across different national cultures in which the company operates. The power distance cultural dimension influenced the association between innate accrual quality and gender dummy. While individualism cultural dimensions were found to moderate the relationship between gender dummy and both DD (2002) model and discretionary accruals as well as the relationship between gender percentage and innate accruals. However, masculinity versus femininity and uncertainty avoidance dimensions were silent in all models.

The combined effect of the cultural dimensions represented in the accounting values also yielded significant results. The relationship between gender percentage and each accruals estimation error, discretionary accrual quality, and the modified Jones model were mediated by professionalism, uniformity, secrecy, and conservatism accounting values. Gender dummy and accruals estimation errors, as well as discretionary accrual relationship, were moderated by all accounting values. Therefore, it was found that female directors' effect on accrual quality is higher in small power distance and individualistic societies. This effect was also higher in professional, flexible, transparent, and optimist societies.

1.9. Contribution of the study:

This study contributes to the body of knowledge by examining the gender diversity-accrual quality relationship from a new angle. This study examines how institutional factors, such as the national culture, mitigate the impact of gender diversity on accrual

quality.

1.10. Structure of the thesis:

The rest of the study is structured as follows. Chapter two reviews prior literature related to earnings quality, gender diversity, and national culture. Consequently, the Chapter forms the theoretical framework and presents the hypotheses. The third chapter presents the methodology used in the study, which includes the sample, variables, as well as the statistical method used in the analysis. Chapter four presents the empirical results of the study. Chapter five discusses the results found in Chapter four and links them to the findings of prior literature. Lastly, Chapter six summarizes the study, presents the conclusion, recommendations, limitations, and implications of the study. Chapter six also discusses the contributions of the study and the opportunities for future research.

CHAPTER 2: LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This chapter reviews the prior literature regarding accrual quality, gender diversity, and culture to hypothesize the relationship between gender diversity and accrual quality and assess the moderating effect of culture on that relationship. The chapter further discusses the underpinning theories that define the relationship. Chapter 2 is organized as follows: Section 2.1 defines the concepts of accrual quality, gender diversity, and culture, Section 2.2 reviews prior empirical literature, and Section 2.3 explains the two theories used. Finally, Section 2.4 presents the theoretical framework and the nine hypotheses of the study.

2.1. Conceptual review:

2.1.1. Accrual quality:

Financial statements are the primary tool used by managers in order to communicate their company performance to stakeholders as well as influencing potential investors and creditors. In order to provide this information, managers are allowed to express their judgment in financial reporting. They are given opportunities to use their judgment in choosing how to deal with specific events such as depreciation rates, accruals for bad debt, and assets write-offs (Han, Kang, Salter & Yoo, 2010). This discretion over accounting choices allows managers to reveal financial statements that provide users with additional information related to the company's future earnings and cash flows (Tucker & Zarowin, 2006).

However, those discretionary choices also allow managers to manipulate users through influencing earnings to reach their desired numbers (Han, Kang, Salter & Yoo, 2010). The intensity of monitoring within the board influences the manager's judgment regarding accrual estimations that will indicate future performance (Srinidhi, Gul, & Tsui, 2011). This thesis chooses accrual quality as a proxy to

discretionary accrual-based on its susceptibility to the extent of monitoring within the board. Accruals "are usually considered as temporary adjustments that resolve timing problems in the underlying cash flows at the cost of making assumptions and estimates" (Peni & Vähämaa, 2010, P 633). Total accruals consist of discretionary and non-discretionary accruals. Discretionary accruals are influenced by the judgment and estimates of management, while non-discretionary accruals are related to regular economic activities and business model of the company (Francis, LaFond, Olsson, & Schipper, 2005).

This ambiguous representation of company financials leads to information asymmetry between managers and owners, which consequently leads to inadequate capital markets. This impact on capital markets is explained by the fact that the capital markets are based on stock prices that fluctuate, in part, due to financial information presented by managers. Investors rely on corporate financial information to decide on keeping, selling, or buying a particular stock (Xie, Davidson III, & DaDalt, 2003). However, when managers issue false information, they mislead investors and result in higher agency costs.

2.1.2. Corporate governance and gender diversity of boards:

Corporate governance is a form of monitoring and supervision over management in order to decrease agency costs and ensure that the company serves the best interest of the investors (Lin & Hwang, 2010). Corporate governance assists in ensuring that the company's resources are utilized in the best interest of the owners and that its financial position and performance are presented fairly (Lin & Hwang, 2010). Despite the lack of a generally accepted definition of corporate governance, Messier, Glover & Prawitt (2008, P. 36) defined corporate governance as "a system consisting of all the people, processes, and activities to help ensure stewardship over

an entity's assets" (Lin & Hwang, 2010).

An effective board of directors is an important aspect of corporate governance, which helps to ensure management oversight and monitoring (Lin & Hwang, 2010). Various factors, such as board composition, board structure, board size, and the number of board meetings, determine the effectiveness of the board. Board composition is related to the proportion of independent and executive directors, director with specific expertise and network, as well as gender diversity. Those aspects contribute differently to the effectiveness and monitoring by the board. Furthermore, board structure is related to the formation of different subcommittees, such as audit, nomination, and remuneration committees. Those committees allow the board members to focus on specific areas within the company. Independent directors are more concerned with shareholders' interests and are found to decrease agency problems. Directors with financial expertise can decrease earnings management as they are more knowledgeable about ways earnings could be manipulated (Lin & Hwang, 2010). However, this thesis will focus on gender diversity relationship with accrual quality.

2.1.3. Culture:

2.1.3.1.Hofstede's cultural dimensions.

Culture is the pattern of mind that is developed and nurtured via family, school, and organizations. Hofstede (1984, P. 82) defined culture as "the collective programming of the mind that distinguishes the members of one group or category of people from another." Culture is manifested within values, which refers to our mental software of perceiving different extremes. Those extremes could take one of the forms of various opposites: good and evil, dangerous and safe, clean and dirty, decent and indecent, and moral and immoral. Culture is also represented in the form of symbols,

heroes, and rituals. Different symbols, words, and gestures can be understood in a particular way by the people of the same culture. Heroes are fictitious and non-fictitious people who are idolized in a specific society for possessing qualities that are valued among that society. The last practice that represents a culture is rituals, which are often gratuitous ways of approaching something that is considered to be justifiable in a particular culture.

Mental programs are one's mindset and actions in particular situations. Some mental programs are unique, while others are shared. According to Hofstede (2001), there are three levels of mental programs where unique behaviors reside on the top of the pyramid, while the shared behaviors are at the bottom (*Figure 2.1*). The bottom level of the hierarchy represents the universal behaviors that are lived by and shared among all humankind; those behaviors are mostly part of our genetic information. In addition, a part of our genetic makeup is the individual level of mentality, which can be found on the top level of the hierarchy. Our mental programming represents the unique pattern of each human's mindset. In the middle, collective mentality can be found, and it is where culture belongs. The collective mindset is the shared mental program among people in a particular group that is different from the mental programs of people from another group.

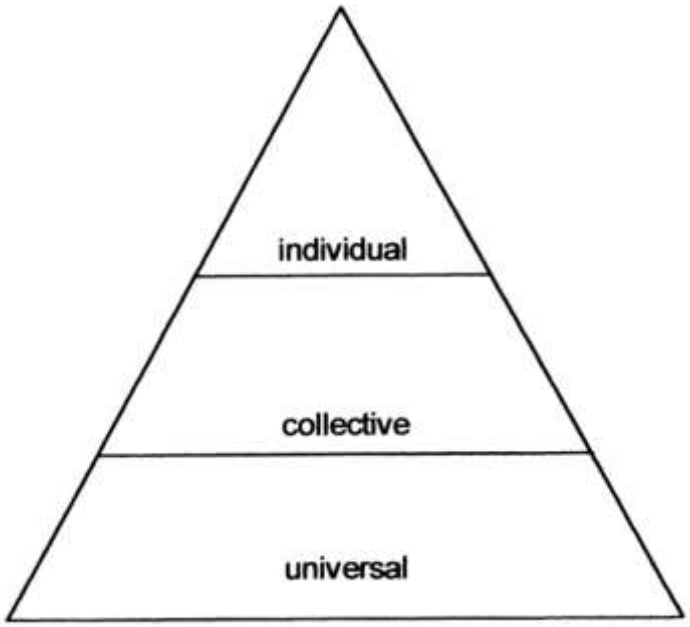

Figure 2.1. Three Levels of Human Mental Programming (Hofstede, 2001, P. 25)

Despite their differences, national cultures are not unique to the extent that they do not overlap. Instead, societies often land on a common ground in which they face the same fundamental problems, but they tend to approach those problems differently. Those cultural issues are represented in six different dimensions of culture (a) power distance, (b) uncertainty avoidance, (c) individualism vs. collectivism, (d) masculinity vs. femininity, (e) long-term vs. short-term orientation, and (f) indulgence vs. restraint.

- *Large versus small power distance:* Refers to the degree in which less powerful people accept the unequal distribution of power (Hofstede & Bond, 1984) and how societies handle power inequality if it exists (Hofstede, 1984). People in large power distance societies accept the fact that power is distributed among people in an unquestioning way and that members of the society are ranked accordingly (Hofstede, 1984). However, in small power distance societies, people are seeking

equalization of power distribution and need justification for any power inequality (Hofstede, 1984).

- *Uncertainty avoidance:* Refers to the level of acceptance of unknown and ambiguous situations among the society and to what extent it tries to create institutions to maintain conformity and to trust promising beliefs to control or better avoid those uncertainties (Hofstede, 1984). Strong uncertainty-avoiding cultures attempt to control the future and are intolerant to deviance activities. Weak uncertainty-avoiding cultures are peacefully living with the fact that uncertainties occur, and they are more flexible towards deviancy (Hofstede, 1984).
- *Individualism versus Collectivism:* This dimension measures the degree in which a particular society promote the individuality of their members. It is represented in situations where people are only supposed to take care of themselves and their nuclear families and where their self-concept is usually "I." On the other hand, collectivism is tightly connected to societies where "we" is the self-concept, and the norm is for people to be part and take care of their extended families in exchange for their unquestioning loyalty (Hofstede, 1984).
- *Masculinity versus Femininity:* Masculinity Refers to the "situation in which the dominant values in society are success, money, and things" (Hofstede & Bond, 1984, p. 419). Those societies are often called "performance societies" (Hofstede, 1984, p. 84). In masculine societies, males and females possess different roles as culture norms grant men the more assertive roles and women the nurturing roles. However, on the other hand, femininity or feminine societies is related to "a situation in which the dominant values in society is caring for others and the quality of life" (Hofstede & Bond, 1984, p. 420). Those societies are often called "welfare societies" (Hofstede, 1984, p. 84).

- *Long-term versus Short-term orientation.* This value relates to what people concerns about the most, the future, or the past (Hofstede, 2001). Chinese researchers first defined this dimension as "Confucian work dynamism" (Hofstede & Bond, 1988). Hofstede (1991) later changed the name to a more general and understandable term "long-term orientation" (Beugelsdijk, Maseland, & Van Hoorn, 2015). Countries scoring high in long-term orientation are more future-oriented and tend to accept late fulfillment of material and social needs. Long-term orientation refers to values such as commitment, thrift, and status-based relations, while the other side of the pole constitutes different values such as personal steadiness, respect for traditions, and reciprocal social obligations (Hofstede, 2011).
- *Indulgence versus Restraint:* This dimension is a complement to the long-term orientation dimension, and they appear to have a weak negative association. This dimension is highly connected to happiness research. Indulgence, for instance, stands for societies where people are allowed to have self-gratitude for just being alive, enjoying life, and having fun. Restraint societies, on the other side, restrict those basic human traits by aggressive social norms (Hofstede, 2011).

These preceding values provide the basis on which countries differ. However, they also apply to organizations and the way they are managed. Employees, business owners, customers, along with managers, are human beings. They have been raised in a particular culture where their mindsets were formed. Having humans own, manage, and work for an organization makes the organization function according to those people's mindset and the way they model it in their minds (Hofstede, 2001). The most significant dimensions for an organization are power distance and uncertainty avoidance, as they are related to the control and planning of an organization (Hofstede, 2001). Planning in an organization attempts to avoid uncertainty while control denotes

power (Hofstede, 2001). However, for the current study, masculinity versus femininity will play an essential role in the relationship between gender diversity on the board and accrual quality.

2.1.3.2.Gray's accounting values.

Gray (1988) used these dimensions and developed four accounting values (a) professionalism vs. statutory control, (b) uniformity vs. flexibility, (c) conservatism vs. optimism and, (d) secrecy vs. transparency.

- *Professionalism* versus *statutory control:* Refers to the "exercise of individual professional judgment and the maintenance of professional self-regulation as opposed to compliance with prescriptive legal requirements and statutory control" (Gray, 1988, P.8) Professionalism is often related to individualism where differences are celebrated, and an individual's decisions are respected. It also related to weak uncertainty avoidance, where there are fewer rules and more professional judgment exercised. Gray (1988) also argued that there is a weaker link between power distance and professionalism as the latter is more likely to exist in small power distance countries where equal rights are granted.
- *Uniformity* versus *flexibility:* Refers to the "enforcement of uniform accounting practices between companies and for consistent use of such practices over time as opposed to flexibility in accordance with the perceived circumstances of individual companies" (Gray, 1988. P.8). Uniformity is related to high uncertainty avoidance, where rigid laws and regulations exist. It is also related to collectivism as shared beliefs and respect exists between groups. Power distance is also less related to uniformity as uniform rules and regulations can be easily enforced with the existence of power.

- *Conservatism* versus *optimism:* Refers to the “cautious approach of measurement as opposed to a more optimistic approach” (Gray, 1988, P.8). The most significant link exists between conservatism and uncertainty avoidance, as conservatism is exercised to reduce future uncertainty. Less significant negative associations exist between individualism and masculinity, while no association is suggested with power distance.
- *Secrecy* versus *Transparency:* Refers to "confidentiality" and the "restricted discloser of information" to only those related and highly involved in the management as opposed to a more public transparent and accountable approach (Gray, 1988). Secrecy is strongly linked to uncertainty avoidance, power distance, and individualism. Secretive societies avoid uncertainties by restricting disclosure in order to avoid conflict and competition. It is also related to power distance as less information is disclosed to maintain inequalities. Secrecy is also linked to collectivism, considering people related to the organization as an “ingroup” and people outside as an “outgroup.” Masculinity is also suggested to have a less significant relation to secrecy. Societies that care more about the human being, environment, and quality of life tend to disclose more information, especially regarding social issues (Gray, 1988).

2.2. Empirical review:

2.2.1. Accrual quality:

Prior studies examined the relationship between corporate governance and accrual quality (Klein, 2002; Xie, Davidson III, & DaDalt, 2003; Peasnell, Pope & Young, 2005; Bradbury, Mak, & Tan, 2006; Lin & Hwang, 2010; Dhaliwal, Naiker, & Navissi, 2010). Klein (2002) investigated the impact of the audit committee and board characteristics on the level of earnings management using a sample from S&P 500 companies for 1992 and 1993. The study revealed that an increase in audit committee and board independence reduced accruals practices.

Xie, Davidson III, & DaDalt (2003) assessed the role of the composition of the board and audit committee in mitigating earnings management. They found that earnings management was negatively associated with having independent outside directors and directors with corporate experience. Moreover, the composition of the audit committee and, to some extent, the executive committee was associated with the level of earnings management. Audit committee members with corporate and investment banking experience had a negative association with current discretionary accruals. The frequency of the board and audit committee meetings also were negatively linked to current discretionary accruals.

Peasnell, Pope & Young (2005) conducted a study to evaluate the relationship between board monitoring in the UK and earnings management. Their results suggested that outside directors, considered as a monitoring mechanism, decrease practices of income increasing abnormal accruals. Similarly, using a sample from Malaysia and Singapore, Bradbury, Mak, & Tan (2006) examined the impact of effective corporate governance on accounting quality. They found that fully independent audit committees mitigated practices of income increasing abnormal

accruals.

Lin & Hwang (2010) conducted a meta-analysis of 48 studies that investigated the effect of corporate governance and audit quality variables on earnings management. They shed light on the fact that the expertise and independence of the board had a negative relationship with earnings management measured using abnormal (discretionary) accruals, restatements, and financial reporting fraud. Similarly, a negative relationship also was found between earnings management and audit committees' independence, size, and expertise. In line with the fact that stock ownership would decrease the independent role of audit committee members, Lin and Hwang (2010) found a positive relationship between audit committee members' stock ownership and earnings management. Consistent with Lin & Hwang (2010), Dhaliwal, Naiker, & Navissi (2010) found that audit committee independent accounting experts had a positive impact on the accrual quality of the company. Additionally, they found that a financial audit committee expert complemented the role of accounting experts in improving accrual quality.

2.2.2. Gender diversity:

2.2.2.1.Female attributes:

The primary role of the board of directors has been to make corporate decisions concerning various stakeholders' interests. Having women directors has enhanced such a role as women have been found to make fair decisions taking into consideration several shareholders' interests (Bart & McQueen, 2013). They have possessed a unique skillset relative to their male counterparts (Kim & Starks, 2016). They also tend to behave differently on corporate boards when compared to male directors (Adams & Ferreira, 2009). With their unique skill sets, women have reinforced the advisory role of the board and have further diversified the expertise within the board

(Kim & Starks, 2016). Female directors were found to be welcomed on corporate boards and can contribute to the benefit of the company (Mathisen, Ogaard, & Marnburg, 2013). A study by Ahmed & Ali (2017) in Australia, revealed that the presence of at least one female on the board strengthened the board and led to more liquid stocks. Additionally, they supported the critical mass theory by concluding that the strength of the association will increase with the female directors. Gul, Srinidhi, & Ng (2011) found that diverse boards enhance stock price effectiveness through encouraging voluntary disclosures in large firms and private data collection in small firms.

Gender diversity has proven its positive impact on board effectiveness (Adams & Ferreira, 2009). Adams & Ferreira (2009) conducted a study on US firms from 1996 to 2003 and arrived at two significant results. Firstly, female directors had higher board attendance records, and secondly, male directors tended to express fewer attendance problems if there were women on the board. Interestingly, they also found that women had the same impact on boards as independent directors, while, Terjesen, Couto, & Francisco (2016) found that the positive effect of independent directors was strongly tied to the presence of a gender-diversified board. Females were also more likely to participate in monitoring or oversight committees. However, extensive monitoring has not been healthy for the firm (Adams & Ferreira, 2009).

Adams & Ferreira (2009) found that the impact of the board's gender diversity depended on the effectiveness of its governance structure. The presence of females on the board for companies that already had well-established corporate governance led to over-monitoring and decreased firm value. While in companies with weak corporate governance structure, female presence on boards worked as a complementary mechanism to the governance structure and led to higher firm value

(Adams & Ferreira, 2009; Gul, Srinidhi & Ng, 2011)

Additionally, when it comes to risk and ethical values of women in a corporate setting, results were inconsistent. Zalata, Ntim, Aboud, & Gyapong (2018) conducted a study using a broad sample of US firms' archival data for the period from 1992 to 2014. They aimed to investigate the impact of the CEO gender on the extent of using classification shifting earnings management techniques. Results indicated that, after the issuance of the Sarbanes-Oxley (SOX) Act, female CEOs decreased their use of classification shifting tremendously. This pattern revealed that female CEOs are not more ethical per se, but they were more tolerant of risk than their male counterparts.

Farag & Mallin (2017) conducted a study on 17 European banks for the period 2004 to 2012. Results showed no evidence that female and male CEOs have different risk behavior. Farag & Mallin (2017) suggested that women's perspective on risk depends on their corporate position and volume. They found that, after a critical mass of 18% representation of women on boards of directors and 21% of representation on the supervisory board, adding one more female decreased the banks' susceptibility of financial risk. However, adding a female director after a critical mass of 24% increases banks' vulnerability to risk. Sila, Gonzalez, & Hagendorff (2016) found no evidence that female representation on boards had any significant impact on firm risk level.

Lanis, Richardson, & Taylor (2017) conducted a study on 418 US firms to examine the effect of female directors on tax aggressiveness. Results showed a significant negative relationship between women on boards and the level of tax aggressiveness, which indicates that female presence in US board deceased tax aggressiveness. Richardson, Taylor, & Lanis (2016) found the same results in 205 Australian companies.

Gul, Hutchinson, & Lai (2013) investigated the relationship between board

gender diversity and analysts forecasts for 2,200 US companies from 2001 to 2007. They found a positive relationship between female representation and analyst forecast. Their results implied that female directors' demand for higher quality disclosures enhanced the accuracy of analysts' earnings forecast. Liu, Wei, & Xie (2016) conducted a study to test the effect of female CFOs on earnings management among Chinese companies from 1999 to 2011. They found that female CFO were more conservative in their financial reporting and engaged less in earnings management. Peni & Vähämaa (2010) examined CFO gender in S&P 500 companies and found that female CFOs act more conservatively than male CFOs as they were highly associated with income decreasing discretionary accruals.

Females' prudence over details provided several benefits for companies. For instance, because women were more prone to details, they took more time negotiating acquisitions, which eventually led to fewer acquisitions overtime. Chen, Crossland, & Huang (2016) found that female directors were negatively associated with the number and size of acquisitions. Despite the lower number of acquisitions, investors reacted positively to decisions and acquisitions conducted by female executives more than male executives (Huang & Kisgen, 2013). Huang & Kisgen (2013) results revealed that male executives were overconfident, invested in acquisitions that bring 2% fewer returns than anticipated, if not destroying the value of the company. However, male CEOs in companies with female directors were probably less overconfident as they do not have full authority over firm growth forecasts (Chen, Leung, Song, & Goergen, 2018).

Furthermore, due to their prudence, females that sat on audit committees had an impact on audit fees. Audit committees with female members demanded extensive work from external auditors (Aldamen, Hollindale, & Ziegelmayer, 2018). The

consequences of these extra services varied between companies according to their size, level of risk, and complexity. Aldamen, Hollindale, & Ziegelmayer (2018) found that the presence of a female on the audit committee of large, high-risk and, low-complexity companies increased audit fees. A plausible reason is that, in larger companies that have high-risk levels, demanding excessive audit work will incur higher audit fees. Moreover, demanding unnecessary extended audit services in a low-complexity firm will result in an excessive audit service fee.

Nonetheless, in small, low-risk companies and high complexity situations, women on audit committees decreased the audit fees incurred. This pattern is mainly because of their contribution to enhance the monitoring role of the audit committee, which would lead to lower requirements for audit services (Aldamen, Hollindale, & Ziegelmayer, 2018). Additionally, having female directors enhanced the strategic board control by decreasing conflicts among the board and boosting board development activities (Nielsen & Huse, 2010).

Females on the boards also contributed to the company appearing on high-ranking lists. Bernardi, Bosco, & Vassill (2006) conducted a study on a sample of Fortune's "100 Best Companies to Work For" and revealed the existence of a positive association between female representation and the company being recognized on the list. Landry, Bernardi & Bosco (2016) also found that females on the boards were positively associated with the firm listed on corporate recognition lists.

2.2.2.2.Gender diversity and earnings management:

Several studies have addressed the impact of female representation on financial reporting and accrual quality. Qi, Lin, Tian, & Lewis (2017) examined the effect of top management team demographic characteristics on real and accrual-based earnings management. They found that the directors' age and gender negatively correlated with

both accrual-based and real earnings management, while financial experience positively correlated with the same variables. However, the executive education level showed a mixed result with the two measures. Highly educated executives were more likely to engage in accrual-based earnings management, but not real earnings management. Krishnan & Parsons (2008) evaluated the influence of gender diversified senior management on earnings quality. Results revealed that females in senior management possessed higher quality earnings after the initial public offering, which would lead to higher stock returns and profitability. Labelle, Gargouri, & Francoeur (2010) also found a negative association between diverse management composition and earnings management.

Using more than 2,000 firm-year observations for US companies from 2004 and 2005, Barua, Davidson, Rama, & Thiruvadi (2010) found a negative relationship between female CFOs and levels of abnormal total and current accruals and accrual estimation errors. These results indicated that companies with female CFOs experienced higher quality accruals. Similarly, Belot & Serve (2018) studied the effect of CEO demographics on earnings quality of 30,476 French small and medium enterprises. They concluded that companies led by female CEOs were less likely to engage in earnings management than companies led by male CEOs.

Ittonen, Vähämaa, & Vähämaa (2013) studied the association between the quality of companies' accruals and the gender of the audit engagement partner in a sample of Finnish and Sweden companies. They assumed that there would be differences in audit practices and judgment between male and female auditors due to the general differences they possessed on perceived risk, the extent of conservatism, and persistence. The results showed that the presence of female engagement partners enhanced the quality of accruals by decreasing abnormal accruals. The results also

revealed that female auditors constrained both practices of income increasing and income decreasing accruals.

Arun, Almahrog, & Aribi (2015) examined the association between female directors and earnings management practices among UK companies. The results revealed that female directors and female independent directors enhanced conservative financial reporting. Their results revealed that firms with more female and independent female directors engaged more in income decreasing than income increasing earnings management practices. However, after controlling for different types of organizations, they found that female directors' impact on earnings management depended on the level of debt in the organization. They concluded that female and independent female directors tended to promote conservative accounting choices, and thus practiced income decreasing earnings management in low debt firms while having no impact on high debt firms.

Srinidhi, Gul, & Tsui (2011) discovered that higher female representation on corporate boards was linked to higher quality accruals. Similarly, in the UK, Lara, Osma, Mora, & Scapin (2017) found that the presence of female independent directors was associated with higher quality accruals. However, after controlling for discrimination against women on board appointments, they failed to support the fact that independent female directors had any significant effect on financial reporting quality.

Gull, Nekhili, Nagati, & Chtioui (2018) and Nekhili & Gatfaoui (2013) both examined the voluntary appointment of women directors in French companies, taking into consideration female directors' statutory and demographic attributes. Gull, Nekhili, Nagati, & Chtioui (2018) exposed a negative link between female directors and earnings quality. However, this finding did not hold after considering the different

attributes. Their results revealed that what matters the most is not the presence of females on the board, but their unique contribution depending on their set of skills, expertise and network base (Gull, Nekhili, Nagati, & Chtioui, 2018 and Nekhili & Gatfaoui, 2013). Gull, Nekhili, Nagati, & Chtioui (2018) results revealed that female business expertise and membership in audit committees were key to their ability to enhance earnings quality. However, female board chair and experience showed a positive association with earnings management.

Strydom, Au Yong, & Rankin (2017) assessed the link between gender diversified boards and earnings quality using a sample of Australian companies' observation for the period 2005 to 2013. They categorized gender diversity into the following four representation categories: Uniform board (no female), skewed board (20% representation), tilted board (20 to 40% representation), and lastly, balanced board (40 to 60% representation). Results revealed a significant positive relationship between both tilted and balanced boards and earnings quality. Their results supported critical mass theory indicating that when having a sufficient number of female representations, female directors enhance the level earnings quality.

Waweru & Prot (2018) studied the effectiveness of corporate governance requirements in constraining earnings management using 480 firm-year observations from East Africa for the period 2005-2014. They found a positive relationship between female board membership in companies located in Kenya and Tanzania and earnings management. This finding implied that in East Africa, gender diverse boards do not help reduce earnings management. Similarly, In Nigeria, Bala & Kumai (2015) examined the effect of board characteristics on earnings management in the food and beverage sector for the period 2009-2014. They found that the number of board members, frequency of board meetings, and the level of board financial expertise,

decrease earnings management practices. However, they found that board gender diversity increases earnings management practices.

Abdullah & Ismail (2016) and Firoozi, Magnan & Fortin (2016), among others, did not find any significant relationship between gender diversity and earnings quality. Using non-financial companies listed on bursa Malaysia, Abdullah & Ismail (2016) studied the impact of female representation on corporate boards and audit committees on the level of earnings management for the period 2008-2011. They found no relationship between earnings management levels and the presence of female directors on both corporate boards and audit committees. Firoozi, Magnan & Fortin (2016) investigated the impact of geographical and gender diversity on reporting quality on a sample of Canadian firms from 2008 to 2012. They found a negative relationship between geographical diversity and abnormal accruals, suggesting that firms would have higher reporting quality when the independent directors are geographically distant from the firm's headquarter. However, they found no relationship between gender diversity and the firm's reporting quality.

Elghuweel, Ntim, Opong & Avison (2017) used a large sample of Omani companies and an extensive corporate governance index consisting of 72 provisions. The authors aimed to evaluate the impact of corporate governance and Islamic governance mechanisms on earnings management in Oman. Overall, Elghuweel, Ntim, Opong & Avison (2017) found lower earnings management in Omani companies that had weaker governance. However, individually, they found no relationship between the level of earnings management and board gender diversity, size of the board, size of the external auditor, and the existence of corporate governance committee. They also found that the presence of the Islamic governance committee leads to a decrease in earnings management behavior. Table 2.1

summarizes the literature concerning the relationship between gender diversity and earnings quality.

2.2.3. Culture:

2.2.3.1.Culture and gender diversity:

Carrasco, Francoeur, Labelle, Laffarga, & Ruiz-Barbadillo (2015) conducted a study of 32 countries in an attempt to understand the differences in female board representation. Results revealed that women were less represented on boards in societies where uneven power distribution was acceptable, as well as in masculine countries. Schneid, Isidor, Li, & Kabst (2015) conducted a meta-analysis to explore the relationship between gender diversity and team performance. They found that when societies possessed high gender equality, the knowledge, experience, and ideas of both genders within the team were equally valued and would contribute to the performance of the team. Furthermore, since gender was considered as a base of social categorization, team members of the same gender in a collective society tended to form a group of their gender while considering the opposite gender as an outgroup (Schneid, Isidor, Li, & Kabst, 2015).

Parboteeah, Hoegl, & Cullen (2008) found that the traditional gender roles of managers depended on their national cultures of power distance and uncertainty avoidance. Their study of 50 countries revealed that in high power distance societies and societies that highly avoid uncertainties, women were positioned at the bottom of the hierarchy as managers were highly confined to their traditional gender roles. However, they did not find any significant relationship between traditional gender roles and masculinity dimensions. Using a sample of the USA, Germany, China, and Japan, Gunkel, Lusk, Wolff, & Li (2007) concluded that work-related values do not differ between genders, but they do differ between national cultures. Further, women

were found to affect ethical decision making and practices in high male-dominated societies such as China (Cumming, Leung, & Rui, 2015) and Korea (Kim, Jeong, Kang & Lee, 2017). Cumming, Leung, & Rui (2015) conducted a study on 1,484 Chinese firms to assess the effect of female directors on the number and severity of predicted fraud. They found that the presence of female directors on corporate boards decreases the probability of predicted fraud and the level of intensity of the fraud. They also found that this relationship is stronger in male-dominated industries. In their study on a sample of Korean firms from 2002 to 2010, Kim, Jeong, Kang & Lee (2017) found that female executives have a negative impact on abnormal accruals. Additionally, this relationship was found to be stronger within firms with more female dominance than firms with more male dominance.

Humphries & Whelan (2017) conducted a countrywide study examining 55 different countries to test the relationship between corporate governance codes and Hofstede's cultural dimensions. Results showed that countries that had a high-power distance and were collective, masculine, and high uncertainty avoidant were less likely to have corporate governance codes regarding board independence and gender diversity. Results also reported a significant association between Board meeting regulation and CEO duality with some of the cultural dimensions. High power distance, masculinity, and high uncertainty avoidant societies tended to have codes requiring boards to meet frequently. Finally, the study results revealed a significant association between CEO duality, power distance, and uncertainty avoidance, where high power distance and high uncertainty avoidant countries tended to be less likely to require separation between the roles of the CEO and the chairman.

Yeganeh & May (2011) investigated the relationship between Schwartz's (1994) national culture pairs and the gender gap. They found that the gender gap was

positively related to conservatism versus autonomy cultural dimension. Stedham & Yamamura (2004) examined the gender differences among cultural dimensions between Japanese and US graduate-level students. The results indicated that individualism differed between men and women both in Japan and the US. However, power distance only differed between genders in Japan. These results implied that Japanese female students believe more in an equal distribution of power than their male counterparts. Additionally, females in both Japan and the US had lower individualism scores than men, which signified women's need to belong to a group.

Carrasco, Francoeur, Réal, Laffarga, & Ruiz-Barbadillo (2012) conducted a study to link the variation of board gender diversity to national culture. They succeeded in explaining that board gender diversity variations within five European countries can be explained by their cultural dimension levels. Their results indicated that low power distance, low uncertainty avoidant, and feminine societies tended to have a higher level of gender representation within their boards.

Li & Harrison (2008) examined the differences in the corporate governance structure of multinational organizations based on their home countries' cultural dimensions. Results showed strong evidence that corporate governance structures, defined by CEO duality and board size, vary among different cultural dimensions. High power distance, individualism, and masculine societies tended to consolidate the roles of the chair and the CEO. However, high uncertainty avoidant countries tended to separate the two roles. Additionally, results showed that individualistic societies tended to have smaller boards.

Lewellyn & Muller-Kahle (2019) tested the moderation effect of power distance and masculinity cultural dimensions on the relationship between economic empowerment and board gender diversity worldwide. They found that power distance

negatively moderated the positive relationship between economic empowerment and the percentage of female directors.

2.2.3.2.Culture, accounting, and earnings quality:

One of the accounting aspects influenced by national culture is the extent of disclosure and the quality of reporting. García-Sánchez, Rodríguez-Ariza, & Frías-Aceituno (2013) conducted a study on a sample from 20 countries in 2008 and 2009 to examine the reasons behind integrated reporting. They found that collectivist and feminist societies were more concerned with integrated reporting. Interestingly, Jaggi & Low (2000) found mixed results when examining the effect of national culture on financial reporting while considering the legal system. Their results showed that cultural values had no significant effect on financial disclosures in common law countries. Only the individualism dimension was found to affect financial disclosure in code law countries.

Zarzeski (1996) examined the culture-disclosure relation in seven countries: France, UK, Germany, Japan, Norway, the US, and Hong Kong. She found that local companies in secretive societies tended to disclose less information than their branches in foreign and less secretive societies. In effect, secrecy was related to financial disclosure as companies in a high masculine, high individualist and low uncertainty avoidant countries tended to disclose more information. This trend showed that national culture affected accounting and disclosure practices. Tsakumis (2007) assessed the influence of national culture on accountant's perceptions of disclosure and recognition of accounting rules. His study revealed that Greek accountants were found to be more secretive than US accountants and are less likely to disclose information than their US counterparts. However, US accountants were more conservative than their Greek counterparts.

Doupnik & Richter (2004) evaluated the influence of the conservatism accounting value on the interpretation of in-context verbal probability expressions (e.g., probable) between US and German accountants. Results showed that conservatism, as an accounting value influenced by national culture, affected the interpretation of probability terms. German accountants were more conservative in their interpretation of probability terms than US accountants. Chand, Cummings, & Patel (2012) examined the effect of national culture on the interpretation of some uncertain accounting expressions extracted from International Financial Accounting Standards (IFRS) between Australian and Chinese accounting students. Results revealed significant differences in reporting or disclosing accounting elements between Chinese and Australian students. Chinese students were found to be more conservative and secretive than Australian accounting students.

Similarly, using a sample of 527 accounting students from Japan, China, the US, and Mexico, Curtis, Conover, & Chui (2012) tested the mediating effect of justice and power distance on the relationship between country of origin and ethical decision making. Power distance was found to mediate the relationship between country and ethical decision making concerning the agreement of the whistleblowing decision but not with the layoff decision.

Hope, Kang, Thomas, & Yoo (2008) tested the association between national culture and the external auditor choice. They used a sample of 37 countries and found that companies in secretive environments were less likely to hire a Big 4 auditor. Additionally, following Zarzeski (1996), they found that multinational companies were less affected by their home country cultural norms. Chan, Lin & Mo (2003) evaluated the effect of individualism and power distance cultural dimensions on audit-detected accounting errors. They found a positive association between accounting

errors and power distance and individualism levels.

Chen, Dou, Rhee, Truong, & Veeraraghavan (2015) studied the relationship between corporate cash holdings and national culture. Using data from 41 countries, they found that individualism was negatively associated with corporate cash holding, while uncertainty avoidance was positively related to the same variable. In the study of Shao, Kwok, & Zhang (2013) on the effect of individualism cultural dimension on the firms' corporate investment decisions, it was evident that individualism was profoundly influencing risky investment decisions. They found that companies operating in highly individualistic societies tended to make more long-term risky investment decisions while companies in collectivist societies tended to make more short-term, safer investments.

Kanagaretnam, Lim, & Lobo (2011) conducted a study to examine the effect of Hofstede's culture dimensions on the quality of banks' earnings before the financial crisis period (1993 to 2006). Using a sample of banks from 39 countries, they found that banks in individualistic, masculine, and low uncertainty avoidant societies tended to manage earnings to meet or beat a specific target and have smoother earnings. Li, Griffin, Yue, & Zhao (2013) conducted a study on 35 countries examining the influence of culture on corporate risk-taking. Results show that individualism was positively associated with corporate risk-taking, while uncertainty avoidance was negatively associated with risk-taking. They also found that more considerable managerial discretion strengthened this risk-culture association.

Kanagaretnam, Lim, & Lobo (2013) also had examined the association between conservatism, risk-taking, and two dimensions of national culture, individualism, and uncertainty avoidance, on banks from 70 countries from the period of 2000 to 2006. They found that individualism was negatively associated with conservatism and

positively associated with risk-taking. However, they found uncertainty avoidance to be positively related to conservatism and negatively related to risk-taking. Using a sample of 61 countries, Kimbro (2002) investigated the effect of national culture on corruption levels. The results of the study demonstrated that collective, as well as small power distance countries, were highly associated with lower corruption levels.

Gray, Kang, Lin, & Tang (2015) conducted a study to test if the adoption of IFRS mitigated the cultural effects on people's perception of earnings management. They conducted a study on 14 members of the European Union from 2000 to 2010 and found that cultural factors influenced earnings management levels even after the adoption of the International Financial Reporting Standards (IFRS).

Braun & Rodriguez (2008) tested the impact of Gray's accounting values on earnings management on a sample of 31 countries. Results revealed a positive association between earnings management and the accounting values of statutory control, uniformity, conservatism, and secrecy. Han, Kang, Salter, & Yoo (2010) evaluated the relationship between national culture and institutional features on managers' perceptions of earnings management. They found that earnings discretion was highly related to low avoidance and individualism. They also found that this relationship was highly dependent on the extent of investor protection within the country. The negative association between uncertainty avoidance and earnings discretion turned to a positive association in high investor protection situations.

Geiger & Van Der Laan Smith (2010) conducted a study on a sample of 1,260 university accounting students from 13 counties to examine the association of stakeholder vs. shareholder orientation and the secretive societal dimension on applicant's perception of earnings management. Results showed that individuals from more secretive societies tended to accept earnings management practices.

Doupnik (2008) examined the relationship between a country's national culture and earnings management, in general, and income smoothing and earnings discretion, in particular. They found that national culture had a stronger relationship with earnings. High uncertainty avoidance was positively associated with earnings smoothing, as it is a means of controlling the volatility of future earnings. Furthermore, collectivism was found to be positively associated with earnings smoothing as it related to the attempt to protect a member of the management group. Nabar & Boonlert-U-Thai (2007), also examined the same association between national culture and earnings management for 30 countries. The results revealed that higher earnings management was linked to high uncertainty avoidance scores. However, after separating earning discretion and earnings smoothing measures, they found that the cultural dimensions were associated with earnings discretion, not earnings smoothing.

Table 2.1. Papers Examined Board Gender Diversity and Accrual Quality

N	Author/s	Title	Date	Journal	Class	Country	Dependent Variable	Independent Variable	Relationship with AQ
1	Srinidhi, Gul, & Tsui (2011)	Female Directors and Earnings Quality	2001-2007	Contemporary Accounting Research	A*	US	Accrual estimation error (AEE) (DD (2002) model)	Female director, female nonexecutive director, and female audit committee member dummy	Positive
2	Gulzar & Wang (2011)	Corporate Governance Characteristics and Earnings Management: Empirical Evidence from Chinese Listed Firms	2002-2006	International Journal of Accounting and Financial Reporting	C	China	Modified Jones model (Dechow, (1996))	Percentage of female directors	Positive
3	Mohamad, Abdullah, Zulkifli, Mokhtar, & Kamil (2011, December)	The Effects of Board Independence, Board Diversity, and Corporate Social Responsibility on Earnings Management	2005-2007	In Finance and Corporate Governance Conference	-	Malaysia	Earnings management model suggested by Leuz, et al., (2003) and Bhattacharya, et al., (2003)	Percentage of female directors	No relationship
4	Abdullah & Ku Ismail (2012)	Do women directors constrain accrual management? Malaysian evidence	2008	Conference paper	-	Malaysia	Current accruals	Dummy variable of female directors and female directors in audit committee	No effect
5	Buniamin, Johari, Rahman, & Rauf (2012)	Board diversity and discretionary accruals of the Top 100 Malaysia corporate governance (MCG) index company.	2008	African Journal of Business Management	-	Malaysia	Discretionary accruals (Modified Jones model) (Dechow et al., 2000)	Number of female directors	Negative
6	Hili & Affess (2012)	Corporate boards, gender diversity and earnings persistence: The case of French listed firms.	2007-2010	Global Journal of Management and Business Research	-	France	Earnings persistence (Dechow et al., 2010)	Female directors dummy	No effect
7	Omoye & Eriki (2014)	Corporate Governance Determinants of Earnings Management: Evidence from Nigerian Quoted Companies	2005-2010	Mediterranean Journal of Social Sciences	-	Nigeria	Absolute discretionary accruals (Modified Jones model (1995)	Female directors	A positive and significant influence on high earnings management

Table 2.1. Papers Examined Board Gender Diversity and Accrual Quality

N	Author/s	Title	Date	Journal	Class	Country	Dependent Variable	Independent Variable	Relationship with AQ
8	Ran, Fang, Luo, & Chan (2015)	Supervisory board characteristics and accounting information quality: Evidence from China	1999-2012	International Review of Economics & Finance	A	China	Discretionary accruals (Kothari et al., (2005) model, the Jones model (1991) and the Modified Jones model (Dechow (1996))	Percentage of female on supervisory board	Positive
9	Kyaw, Olugbode, & Petracci (2015)	Does gender-diverse board mean less earnings management?	2002-2013	Finance Research Letters	B	Austria, Belgium, Czech Republic, Denmark, Finland/ France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, and United Kingdom	Aggregate accruals (Dechow (1994)) and Operating accruals (Leuz et al., (2003))	Board gender diversity (BGD)	Positive in countries with high gender equality
10	Arun, Almahrog, & Aribi (2015)	Female Directors and Earnings Management: Evidence from UK companies	2005-2011	International Review of Financial Analysis	A	UK	Current discretionary accruals (Modified Jones model) (Dechow et al., 1995)	Number of female directors, number of independent female directors, executive directors dummy and female CFO dummy	Female directors and independent directors tend to practice income decreasing earnings management
11	Panzer & Müller (2015)	"Earnings quality and gender diversity on German supervisory boards: an empirical analysis"	2006-2011	Problems and Perspectives in Management	C	Germany	Absolute discretionary accruals (Modified Jones model (Kothari et al., 2005) and DD (2002) model	Percentage of female in supervisory board and dummy variable of head or deputy head of the supervisory board is a female	Positive
12	Lakhal, Aguir, Lakhal, & Malek (2015)	Do women on boards and in top management reduce earnings management? Evidence in France.	2008-2011	Journal of Applied Business Research	-	France	Discretionary accruals (Modified Jones model) (Dechow (1995) and (Kothari et al., 2005) and (Raman et shahrur 2008)	Percentage of female directors/ female directors critical mass dummy/ female CEO and female CFO and female chair dummies.	Positive for Female directors and chair

Table 2.1. Papers Examined Board Gender Diversity and Accrual Quality

N	Author/s	Title	Date	Journal	Class	Country	Dependent Variable	Independent Variable	Relationship with AQ
13	Bala & Kumai (2015)	Board characteristics and earnings management of listed food and beverage firms in Nigeria.	2009-2014	European Journal of Accounting, Auditing and Finance Research	-	Nigeria	Discretionary accruals (Modified Jones model) (Dechow (1996)	Number female directors	Negative
14	Kukah, Amidu, & Abor (2016)	Corporate governance mechanisms and accounting information quality of listed firms in Ghana.	2003-2013	African Journal of Accounting, Auditing, and Finance	C	Ghana	Discretionary accruals (Pea (2005) Model)	Percentage of female directors	No effect
15	Xiong, (2016).	Chairman Characteristics and Earnings Management: Evidence from Chinese Listed Firms	2005-2014	Open Journal of Accounting	-	China	DD (2002) model	Female chairman dummy	Positive relationship
16	Abdullah & Ismail (2016)	Women directors, family ownership, and earnings management in Malaysia.	2008-2011	Asian Review of Accounting	B	Malaysia	Absolute value of discretionary accruals (Modified Jones model) (Kothari et al., 2005)	Female directors and female audit committee member dummy	No effect
17	Firoozi, Magnan, & Fortin (2016)	Board diversity and financial reporting quality.	2008-2012	-	-	Canada	DD (2002) model	Percentage and dummy variable of female director in board and audit committee and independent directors	No effect
18	Enofe, Iyafekhe, & Eniola (2017)	Board ethnicity, gender diversity, and earnings management: evidence from quoted firms in Nigeria.	2014	International Journal of Economics, Commerce, and Management	-	Nigeria	discretionary accruals (Modified Jones model) (Dechow (1996)	Percentage of female directors	negative but not significant
19	Elghuweel, Ntim, Opong, & Avison (2017)	Corporate governance, Islamic governance, and earnings management in Oman: A new empirical insights from a behavioral theoretical framework.	2001-2011	Journal of Accounting in Emerging Economies	C	Oman	Modified Jones model (Dechow (1995) and (Kothari et al., 2005)	Gender diversity dummy	No relationship
20	Lara, Osma, Mora, & Scapin (2017)	The monitoring role of female directors over accounting quality	2003-2012	Journal of Corporate Finance	A*	UK	Absolute value of discretionary accruals (Modified Jones model) (Dechow et al., (1995))	Percentage of female director/ independent directors/ executive directors	Female independent directors have a positive effect. The effect disappears in non-gender discrimination companies

Table 2.1. Papers Examined Board Gender Diversity and Accrual Quality

N	Author/s	Title	Date	Journal	Class	Country	Dependent Variable	Independent Variable	Relationship with AQ
21	Strydom, Au Yong, & Rankin (2017)	A few good (wo) men? Gender diversity on Australian boards.	2005-2013	Australian Journal of Management	A	Australia	absolute discretionary accruals (Modified Jones model (Kothari et al., 2005) and (Larcker and Richardson, 2004)	Board gender diversity categories (uniform 0%, skewed 20%, tilted 20%-40% and balanced 40%-60%)	Negative when there is 20% or less. Positive when there are enough women (critical mass) (40% to 60%)
22	Hoang, Abeysekera, & Ma (2017)	The effect of board diversity on earnings quality: An empirical study of listed firms in Vietnam	2006-2010	Australian Accounting Review	B	Vietnam	Aggregate earnings quality score (it includes DD (2002) model)	Diversity in boards (includes female directors)	Positive
23	Gull, Nekhili, Nagati, & Chtioui (2018)	Beyond gender diversity: How specific attributes of female directors affect earnings management.	2001-2010	British Accounting Review	A	France	Current discretionary accruals (Modified Jones model)	Number and percentage of female directors/ women on board and chair dummy/ percentage of independent directors and audit committee directors	depends on female directors' statutory and demographic attributes
24	Waweru & Prot (2018)	Corporate governance compliance and accrual earnings management in eastern Africa: Evidence from Kenya and Tanzania	2005-2014	Managerial Auditing Journal	B	Kenya and Tanzania (East Africa)	Modified Jones model (Dechow (1996) and (Kothari et al., 2005)	Percentage of female directors	Negative
25	Triki Damak (2018)	Gender diverse board and earnings management: evidence from French listed companies.	2010-2014	Sustainability Accounting, Management and Policy Journal	B	France	Discretionary and absolute discretionary accruals (Modified Jones model) (Raman and Shahrur (2008))	Percentage of female directors	Positive
26	Saona, Muro, San Martín, & Baier-Fuentes (2019).	Board of Director Gender Diversity and Its Impact on Earnings Management: An Empirical Analysis for Select European Firms	2006-2016	Technological and Economic Development of Economy	-	Denmark, Finland, France, Germany, Italy, Norway, Portugal, Spain, Sweden, and the UK	Operating accruals (Leuz et al., (2003) and discretionary accruals (Dechow (1995) and Jones Model (1991)	Percentage of female directors. Blau (1977) and Shannon (1948) index	Positive
27	Gonçalves, Gaio, & Santos (2019)	Women on Board: Do They Manage Earnings? Empirical Evidence from European Listed Firms.	2007-2013	Review of Business Management	-	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom	Modified Jones model (Dechow (1996) and the magnitude of accruals (Leuz et al., (2003))	Female directors and female CEOs and CFOs	Only female CFO has an impact. CFO has a positive effect

2.3. Theoretical review:

2.3.1. Agency theory:

Agency theory is based on the principle-agent relationship that arises when an individual (the principal) hires another individual (the agent) to perform work on their behalf. The problem occurs when a conflict arises between the agents' interests and the interests of the principle. Agency problems started to emerge with the advent of corporations and the separation between ownership and management (Lin & Hwang, 2010). In an organizational context, agency problem occurs between shareholders, who are the owners of the firm, and managers, who run the company on behalf of shareholders (Hillman & Dalziel, 2003).

The root of the agency problem within corporations is information asymmetry between managers and owners. Financial statements made by managers are the main source of information for shareholders. Having control over the information, managers can manipulate financial statements to serve their interests, which no longer align with the interests of shareholders. A well-established governance structure, represented by an effective corporate board, can reduce agency costs and reconcile the interests of both managers and shareholders (Hillman & Dalziel, 2003).

The board of directors is a crucial governance mechanism that monitors management and reduces the conflict between agents and principles. According to Fama & Jensen (1983), the board of directors is the most important mechanism in a company's internal control as it monitors management and limits their opportunistic and self-serving behaviors. Under agency theory, independent directors are crucial for an effective board, as independent outside directors are less likely to collude with managers in deceiving shareholders. As independent directors aim to maintain their reputation as monitoring agents (Carter, Simkins, & Simpson, 2003).

2.3.2. Institutional theory:

The institutional theory assumes that an organizational structure is built around the social order, beliefs, and expectations of the society (Meyer & Rowan, 1977). According to institutional theory, organizations seek resources, legitimacy, as well as survival through responding to their constituents (Meyer & Rowan, 1977; DiMaggio & Powell, 1983; and Scott 1987). This legitimacy can be achieved in two management approaches. The first approach is substantive management, where the company's structure is changed to align with the belief of its environment. The second approach is symbolic management, where the company seeks legitimacy by symbolically implementing practices to covey specific values.

Culture is also an important component within an institutional theory setting. "Coercive isomorphism" refers to the organization's conformity to the cultural expectations of the society (DiMaggio & Powell, 1983). Culture creates social norms and beliefs that influence how people think, perceive others, and run organizations (Hofstede, 2001). One of the cultural norms that define peoples' life is traditional gender roles. Traditional gender roles are stereotypical expectations about the roles of men and women regarding family and work (Harris & Firestone, 1998. p239). According to Hofstede (2001), the traditional role of men is to be concerned with achievement, in general, and economic achievement, in particular, while women's traditional role is to take care of people, specifically her children. Further, in the corporate context, traditional gender roles create biases and define how others perceive an individual in the organization. These biases will eventually affect the selection of executives (Oakely, 2000) and corporate directors.

2.4. Theoretical framework:

Previous research was inconclusive regarding the impact of gender diversified boards on accrual quality, as shown earlier in Table 2.1. Studies found that companies with female directors increase earnings quality in the United States (Srinidhi, Gul, & Tsui, 2011), Germany (Panzer & Müller, 2015), Europe (Kyaw, Olugbode, & Petracci, 2015; Saona, Muro, San Martín, & Baier-Fuentes, 2019), China (Ran, Fang, Luo, & Chan, 2015), and Vietnam (Hoang, Abeysekera, & Ma, 2017). Conversely, female directors were found to negatively affect earnings quality in east Africa (Waweru & Prot, 2018). Mixed results were found in Australia (Strydom, Au Yong, & Rankin, 2017), France (Triki Damak, 2018), Malaysia (Buniamin, Johari, Rahman, & Rauf, 2012; Abdullah & Ismail, 2016), Nigeria (Omoye & Eriki, 2014; Bala & Kumai, 2015), and the United Kingdom (Lara, Osma, Mora, & Scapin, 2017; Arun, Almahrog, & Aribi, 2015). No relationship was found between female directors and accrual quality in Canada (Firoozi, Magnan, & Fortin, 2016), Ghana (Kukah, Amidu, & Abor, 2016), and Oman (Elghuweel, Ntim, Opong, & Avison, 2017).

As per agency theory, information asymmetry exists between managers and shareholders, which leads to agency costs. One way to reduce such costs is to have an effective board of directors, which has been shown by prior studies to reduce such costs (Carter, Simkins, & Simpson, 2003). Independent directors have proven their effectiveness in decreasing agency costs through increasing voluntary disclosures that eventually reduce information asymmetry (Patelli & Prencipe, 2007). Similarly, Xie, Davidson III, & DaDalt (2003) found that independent directors decrease the extent of earnings management. Adams & Ferreira (2009) found that female directors on boards have the same impact as independent directors. Accordingly, this study expects that having female directors on corporate boards will reduce the level of discretionary

accruals in the company. This expectation stated in the first hypothesis as follow:

Hypothesis 1: Gender diversity on the board of directors reduces earnings management.

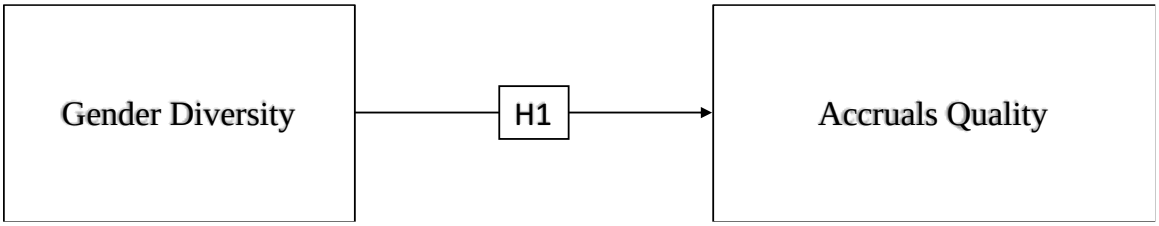

Figure 2.2. Hypothesized model of the relations between, gender diversity and accrual quality (H1)

Due to the differences in the impact of board gender diversity between countries, researchers started introducing national culture into gender diversity research. They found that traditional gender roles were positively associated with power distance and uncertainty avoidance (Parboteeah, Hoegl, & Cullen, 2008). Additionally, they found that women were less represented in masculine societies and where power was unevenly distributed (Carrasco, Francoeur, Labelle, Laffarga, & Ruiz-Barbadillo, 2015) and in collectivistic cultures (Schneid, Isidor, Li, & Kabst, 2015). Moreover, Doupnik (2008) found that the differences in national culture explain international differences in the extent of earnings management between countries.

The impact of culture on the dynamics between board gender and accrual quality is grounded in institutional theory. The current study assumes that culture is an institutional force that helps shape the structure of organizations as well as interpersonal relations within those organizations. Accordingly, this thesis introduces eight hypotheses to argue that national culture and accounting values, based on those

cultural dimensions, affect the role of female directors in enhancing accrual quality. Figure 2.3 and 2.4 illustrates how cultural dimensions and accounting values influence the relationship between gender diversity and accrual quality.

Large vs. small power distance:

Power distance is related to the unequal distribution of power (Hofstede, 1984). Small power distance is associated with low corruption levels (Kimbro, 2002). Females in large power distance societies are expected to perform their traditional gender roles, which does not include participation in decision-making (Parboteeah, Hoegl, & Cullen, 2008). Carrasco, Francoeur, Labelle, Laffarga, & Ruiz-Barbadillo (2015) found that, in large power distance countries, women are less represented in corporate boards. Countries with large power distance discriminate against women, leading to less representation and undervaluation of female opinions. In effect, the female knowledge, expertise, and opinion will not be taken into consideration, which restricts her ability to contribute to improving the quality of the company's accruals by constraining discretionary practices. This study presents the following hypothesis to state the impact of power distance on the relationship between gender diversity and accrual quality:

Hypothesis 2: The impact of gender diversity on accrual quality is reduced in societies with a large power distance.

Individualism vs. Collectivism:

People in individualistic societies tend to make decisions that benefit them personally. However, in collectivistic societies, individuals make decisions favoring the good of the group. In such societies, board members from the same gender (in most cases, men) will form a group treating members from the opposite gender (women) as outgroups (Schneid, Isidor, Li, & Kabst, 2015). This gender-based grouping was found to negatively impact group task performance (Schneid, Isidor, Li

& Kabst, 2015). As individuals from the opposite gender are undervalued, their opinions are discarded, and they are unmotivated to contribute to the good of the group. Earnings smoothing is found to be higher in collectivistic societies (Doupnik, 2008). Individualism is positively related to earnings discretion (Han, Kang, Salter, & Yoo, 2010). Based on the above, the current study presents the following hypothesis:

Hypothesis 3: The impact of gender diversity on accrual quality is reduced in collectivistic societies relative to individualistic societies.

Masculinity vs. femininity:

Masculine societies clearly distinguish between the values and roles assigned to men compared to those assigned to women. Masculinity is related to getting the job done, whereas femininity is related to the welfare of others (Türetgen, Unsal, & Erdem, 2008). When individuals represent themselves as having more masculine traits, they are more likely to aspire for top management levels (Geiger and Van Der Laan Smith, 2010; Powell & Butterfield, 2013). In masculine societies, women are less represented on corporate boards (Carrasco, Francoeur, Labelle, Laffarga, & Ruiz-Barbadillo, 2015). Gender diversity is found to negatively affect team performance in male-dominated boards, while, in a more diverse board, diversity contributes to enhancing the performance of the board (Joshi & Roh, 2009). Masculinity has a positive correlation with earnings management to meet or beat a specific target (Kanagaretnam, Lim, & Lobo, 2011). When females are underrepresented on a masculine board of directors, their opinion is undervalued, and their contribution is ineffective. Hence, their role in constraining earnings management practices will disappear. The current study assumes that a masculine society, relative to a feminine society, influences the relationship between gender diversity and accrual quality, as stated in the following hypothesis:

Hypothesis 4: The impact of gender diversity on accrual quality is reduced in masculine societies relative to feminine societies.

Uncertainty avoidance:

Uncertainty avoidance refers to the level of acceptance of unknown results (Hofstede, 1984). Board of directors, which are uncertainty avoidant, are often intolerant towards diversity and diverging opinions (Carrasco, Francoeur, Labelle, Laffarga, & Ruiz-Barbadillo, 2015). Females could have different values and expertise, which results in them having varying views vis-à-vis males. In a high uncertainty avoidance context, females are expected to perform their traditional gender roles (Parboteeah, Hoegl, & Cullen, 2008). Earnings management is used as a means to control the earning results in societies that tend to avoid uncertainties. Prior studies found that earnings discretion is negatively associated with uncertainty avoidance (Han, Kang, Salter & Yoo, 2010), positively associated with conservatism (Kanagaretnam, Lim, & Lobo, 2013), and negatively associated with earnings smoothing (Kanagaretnam, Lim, & Lobo, 2011). The current study assumes that the relationship between gender diversity on accrual quality is impacted by uncertainty avoidance, as stated in the following hypothesis:

Hypothesis 5: The impact of gender diversity on accrual quality is reduced in societies with high uncertainty avoidance.

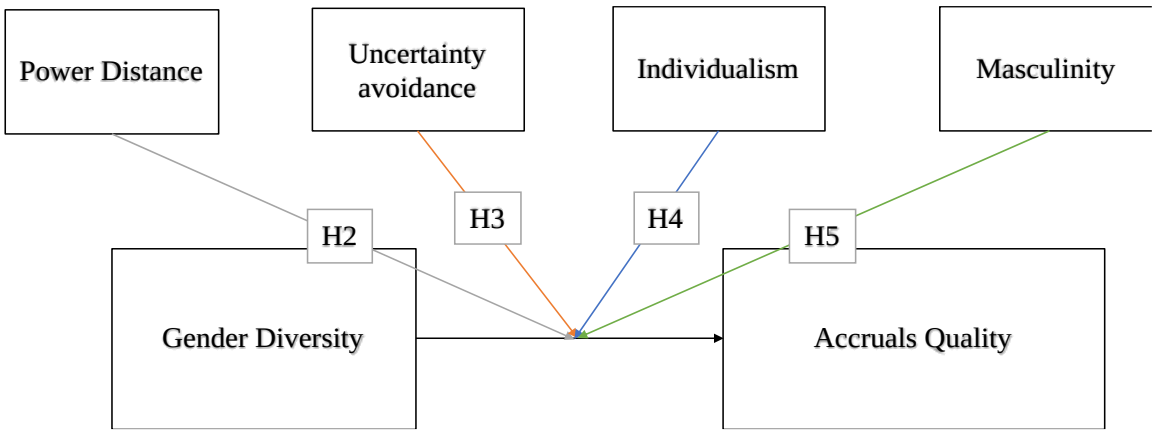

Figure 2.3. Hypothesized model of the relations between cultural dimensions, gender diversity and earnings management (2-5)

Professionalism vs. statutory control:

Professionalism in accounting values the application of personal, professional judgment, and maintaining self-values as opposed to adhering to legal control (Gray, 1988). For people to be able to express their own opinion and apply their judgment, they must be valued as independent individuals in a society that grants them equal rights and equal opportunities. Hence, countries that score high in professionalism usually have high scores in individualism and low scores in uncertainty avoidance and power distance. Low power distance and uncertainty avoidance are associated with lower levels of earnings management. According to Braun & Rodriguez Jr (2008), statutory control is positively associated with earnings management. The current study assumes that professionalism influences the relationship between gender diversity and accrual quality, as stated in the following hypothesis:

Hypothesis 6: The impact of gender diversity on accrual quality is reduced in statutorily controlled societies.

Uniformity vs. flexibility:

Uniformity value refers to the extent the country is enforcing a set of accounting practices and regulations to be followed by all the companies (Gray, 1988). When countries do this, they are exercising power to restrict personal judgment and limit discretion in reporting practices. Uniform countries tend to avoid uncertainties more and have higher levels of unequal distribution of power, yet they have lower individualism scores (Braun & Rodriguez Jr, 2008). The current study assumes that being part of a uniformity society impacts the relationship between gender diversity and accrual quality, as stated in the following hypothesis:

Hypothesis 7: The impact of gender diversity on accrual quality is reduced in uniformity societies.

Secrecy vs. transparency:

Secrecy refers to more limited disclosure of information to external parties as opposed to a more transparent and public disclosure (Gray, 1988). Countries that have higher secrecy values demonstrate high scores of uncertainty avoidance and power distance but lower scores in individualism and masculinity. Braun & Rodriguez Jr (2008) reported a positive correlation between earnings management and secrecy. Companies in more secretive societies were less likely to hire Big 4 auditors (Hope, Kang, Thomas & Yoo, 2008) and to disclose financial information (Zarzeski, 1996). The current study assumes that being part of a secretive society impacts the relationship between gender diversity and accrual quality, as stated in the following hypotheses:

Hypothesis 8: The impact of gender diversity on earnings management is reduced in secretive societies.

Conservatism vs. optimism:

Conservatism refers to cautions measurements and reporting that avoids future

uncertainties, while optimism refers to more flexible and opportunistic reporting (Gray, 1988). Conservatism, as opposed to optimism, relates to uncertainties and risk avoidance in financial reporting. Conservative societies have high uncertainty avoidance scores, but low individualism and low masculinity scores (Braun & Rodriguez Jr, 2008). There is a positive relationship between earnings management and conservatism (Braun & Rodriguez Jr, 2008). However, companies in high individualist, high masculine, and low uncertainty avoidance countries (optimist societies) are likely to manage earnings to meet or beat targeted earnings (Kanagaretnam, Lim & Lobo, 2011). This study assumes that conservative accounting values have an impact on the relationship between gender diversity and accrual quality, as stated in the following hypothesis:

Hypothesis 9: The impact of gender diversity on accrual quality is reduced in conservative societies.

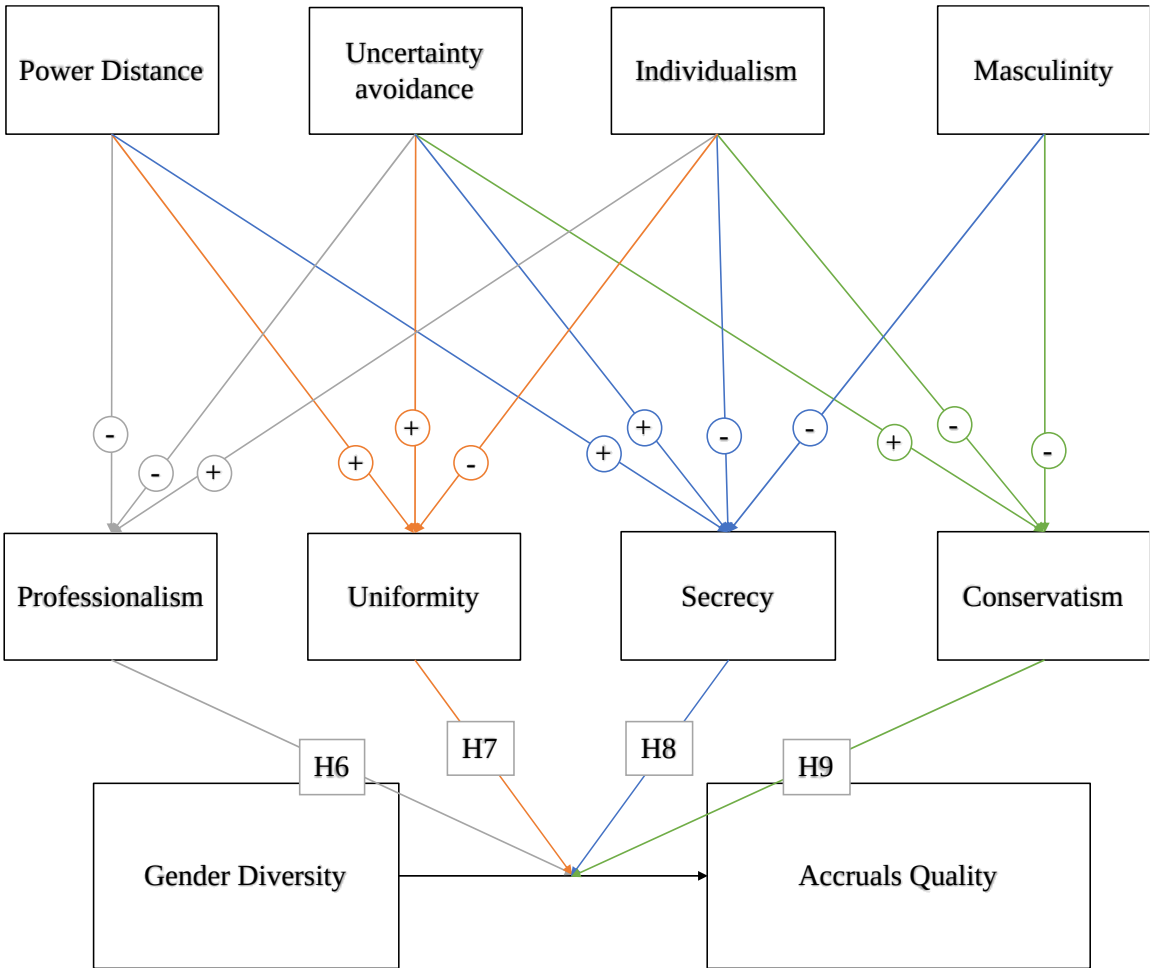

Figure 2.4: Hypothesized model of the relations between cultural dimensions, accounting values, gender diversity and accounting quality (H6-9)

CHAPTER 3: METHODOLOGY

This chapter provides the research design used in this study. It includes the sample, variables, and the estimation of regression models used to test the hypotheses that were established in the second chapter. Chapter three is divided into four sections. The first section shows the sample and data collection. Section two introduces the dependent, independent, moderator, and control variables used in the study. Finally, section three discusses the inferential analysis and presents the empirical model.

3.1. Sample:

The sample used in this study started with 78,399 listed companies worldwide for the year 2017 in order to investigate whether cultural dimensions and accounting values impact the relationship between board gender diversity and earnings quality. It consisted of companies from countries that have records for the four cultural dimensions based on Hofstede center (2019) and Hofstede insights (2019). The majority of the data was obtained from the Bloomberg database, the World Bank (2019), Hofstede center (2019), and Hofstede Insights (2019) websites.

Furthermore, financial firms were excluded from the sample as the composition for their discretionary accruals, the study's main dependent variable, is different relative to other firms. Additionally, firms and countries with missing data and outliers were removed from the sample. The study also excluded companies from unspecified industries and industries with less than eight companies. Further, companies from Australia and New Zealand were eliminated because they have different end of year dates than the rest of the countries in the sample. The final sample consists of 3,092 companies from 46 countries. Table 3.1 provides details about the final sample used in this study.

The reason for selecting 2017 as the year from which the companies are selected

is because it is the most recent year for which Dechow & Dichev (2002) accrual estimation error model can be calculated. This particular model requires data from the subsequent year (2018), which is the most recent fiscal year available. It is important to note that the year 2018 witnessed significant changes with respect to gender diversity within corporate boards. According to the Russell 3000 index, board seats held by female directors increased from 16% in 2017 to 17.7% in 2018 (2020 women on boards, 2019). Additionally, the ratio for Russell 1000 companies that have 20% or more female members increased ten percentage points from 52% to 62% (2020 women on boards, 2019).

A cross-sectional design is used rather than a longitudinal design due to the nature of cultural dimensions across the years. Prior studies suggest that cultural dimension levels do not change drastically from year to year (Beugelsdijk, Maseland, & Van Hoorn, 2015).

Table 3.1. Summary of Sample Make-Up

Sample Data	**N**
Companies from countries with cultural dimensions scores	78,399
Financial companies	(9,649)
Companies with less than one board member	(60,111)
Companies with missing data	(4,924)
Insurance, diversified financials and not specified industry names	(8)
Australian and New Zealand companies	(148)
Outliers	(467)
Final sample	**3,092**

3.2. Operationalization of measures:

3.2.1. Dependent variable:

Due to the focus of the thesis on accrual quality, several alternative measures

are used to represent the dependent variable. This study uses Dechow & Dichev (2002) accrual estimation error model, as well as the decomposed version of Dechow & Dichev (2002), as suggested by Francis, LaFond, Olsson, & Schipper (2005). This study also applies the Jones model, which was modified by Dechow, Sloan, & Sweeney (1995) for additional analysis.

- *Dechow & Dichev (2002) model:*

The main analysis uses Dechow & Dichev (2002) (hereafter, DD) model of accrual estimations error as a proxy for accrual quality. The DD model derives an empirical measure of accrual quality based on past, current, and future year cash flows. McNicols (2002) modified the DD model by adding the change in revenue and property plant and equipment as controls in calculating residuals. Similar to prior studies (Francis, LaFond, Olsson, & Schipper, 2005; Srinidhi, Gul, & Tsui, 2011), the current study measures discretionary accrual (AQ_DD) as the standard deviation of the residuals ($\varepsilon_{i,t}$) from equation 1 for years $t-5$ through t as follows:

$$TAC_{i,t} = \beta_0 + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t+1} + \beta_4 \Delta REV_{i,t} + \beta_5 PPE_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where i is for the firm and t is for the year. $TAC_{i,t}$ are the total accruals, measured as income less operating cash flow for year t. $CFO_{i,t}$ is the operating cash flow in year t, $\Delta REV_{i,t}$ is the change in revenue from year t to $t-1$, while $PPE_{i,t}$ is property plant and equipment for year t. All the variables are scaled by the average total assets of year t. Equation 1 is conducted for the years 2013 - 2017 and for each industry group with at least eight firms (Klein, 2002). AQ_DD, or the standard deviation of the residuals, indicates how accruals map to operating cash flows. The larger the value of AQ_DD, the lower the quality of accruals. It is important to note that the original value of AQ_DD represents the residual and has an inverse relationship with quality, such as a higher number indicates lower quality. Therefore, in order to get a straight

forward relationship and to have an easier interpretation, the value of AQ_DD was multiplied by -1. This treatment reflects a more understandable representation so that the higher the value of the variable, the higher accrual quality.

Additionally, this thesis follows Kent, Routledge, & Stewart (2010) and Aldamen & Duncan (2013) in decomposing the DD model into innate and discretionary accruals components as introduced by Francis, LaFond, Olsson, & Schipper (2005). Discretionary accruals are estimated as the regressed errors in the DD accrual quality on innate firm characteristics (Francis, LaFond, Olsson, & Schipper, 2005). Innate accruals (AQ_Innate) are represented as the predicted value of equation 2, while the residual value represents discretionary accruals (AQ_Dis).

$$AQ_{DD\,i,t} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 \sigma(CFO)_{i,t} + \beta_3 \sigma(Sales)_{i,t} + \beta_4 \mathrm{OpCycle}_{i,t} + \beta_5 NegEarn_{i,t} + \upsilon_{i,t} \quad (2)$$

$AQ\_DD_{i,t}$ is the accrual quality measure from the DD model multiplied by -1. The value of AQ_DD is multiplied by -1 to reflect the inverse relationship between AQ_DD and AQ_DD with quality and to get values that present a direct relationship with accruals quality. $SIZE_{i,t}$ is firm size measured as the natural logarithm of total assets, $\sigma(CFO)_{i,t}$ is the standard deviation of cash flows from years $t-5$ to t while $\sigma(Sales)_{i,t}$ is the standard deviation of operating revenue from year $t-5$ to t. $\mathrm{OpCycle}_{i,t}$ is the length of the operating cycle measured as the sum of days of inventory and accounts receivables days. Finally, $NegEarn_{i,t}$ is the incidence of reporting negative earnings. It is measured as the number of years the company reported negative earnings over the last five years.

Modified Jones model:

For the additional analysis, this research measures discretionary accruals using a modified Jones Model as an alternative proxy for accrual quality. Following Barua,

Davidson, Rama, and Thiruvadi (2010), the current study uses the Jones Model, which was modified by Dechow, Sloan, & Sweeney (1995). Abnormal accrual value (AQ_MJones) is measured as the residual ($\varepsilon_{i,t}$) from the following regression as a proxy for accrual quality:

$$\frac{TACC_{i,t}}{TA_{i,t-1}} = \beta_0 \left[\frac{1}{TA_{i,t-1}}\right] + \beta_1 \left[\frac{\Delta REV_{i,t} - \Delta AR_{i,t}}{TA_{i,t-1}}\right] + \beta_2 \left[\frac{PPE_{i,t}}{TA_{i,t-1}}\right] + \varepsilon_{i,t} \quad (3)$$

Where $TACC_{j,t}$ is the total accruals, measured as income less operating cash flow for year t; $\Delta REV_{i,t}$ is the change in total sales from year $t-1$ to t ; $\Delta AR_{i,t}$ is the change in accounts receivables and $PPE_{i,t}$ is the gross property plant and equipment. All variables in the model were scaled by the lagged total assets ($TA_{i,t-1}$) to mitigate any firm size bias. The model is estimated for firm i in year t using the available data, with the restriction of having at least eight firms in each industry group (Klein, 2002).

3.2.2. Independent variable:

The independent variable used in this study is gender diversity on the board, which is represented by two alternative measures. The first measure is the gender percentage, while the second measure is a gender dummy.

Gender Percentage:

The variable gender percentage, *GENDER_PCT*, is measured as the percentage of female directors on the board of directors (Gull, Nekhili, Nagati, and Chtioui, 2018).

Gender Dummy:

The other independent variable used in the additional analysis is a dummy variable of gender diversity (*GENDER_DUMY*). This value of this variable equals one if there is at least one female director on the board, and zero otherwise (Lara, Osma, Mora, & Scapin, 2017).

3.2.3. Moderating variables:

Several moderating variables are used in this thesis to investigate the relationship between gender diversity and accrual quality. These moderators are cultural dimensions and accounting values. The following is a detailed description of those moderators.

Cultural dimensions

This thesis will consider the four main cultural dimensions that were initially established by Hofstede as a result of the International Business Machine (IBM) corporation survey that covered 72 countries (Hofstede, 2001). Those dimensions are power distance (PD), uncertainty avoidance (UA), individualism (IND), and masculinity (MAS). Hofstede processed the survey data and scored the countries accordingly. He scored the countries on a scale from zero to 100, with 50 being the cutoff point. Scores less than 50 are considered low, while scores more than 50 are considered high. For power distance and uncertainty avoidance, a score above 50 represents high uncertainty avoidance and unequal distribution of power, while scores lower than 50 represent more equality and less uncertainty avoidance.

For the paired dimensions such as individualism versus collectivism, a score of 50 and above refers to an individualist society, while a score of less than 50 represents a collective society. The same applies to masculinity versus femininity, where a score above 50 means more traditional role-oriented cultures, and scores less than 50 refer to more equal opportunities within the society. Cultural dimension scores were initially retrieved from the Hofstede center (2019). Missing data are then collected from Hofstede insights (2019)[1]. Countries with missing data were excluded.

[1] The data in Hofstede center (2019) and Hofstede insights (2019) are retrieved from Geert Hofstede's book 2015th edition. However, it is stated in the website that cultural dimensions rarely change and that they are adequate to be used.

Accounting values

The other set of moderators used in this thesis are the accounting values introduced by Gray (1988). By aggregating the cultural dimensions established by Hofstede (1983), Gray (1988) hypothesized that different combinations of the four cultural dimensions would form specific accounting values within the country. Gray hypothesized that professionalism versus statutory control is positively associated with individualism and negatively associated with power distance and uncertainty avoidance. Adversely, uniformity versus flexibility has a positive relationship with both power distance and uncertainty avoidance while having a negative relationship with individualism.

Similarly, secrecy versus transparency value has the same associations in addition to a negative association with masculinity. Lastly, conservatism versus optimism has a positive association with uncertainty avoidance and a negative association with both individualism and masculinity. These relations are depicted in Figure 2.4.

Following the approach of Braun and Rodriguez (2008), this thesis measures accounting values by averaging Hofstede dimension scores that comprise each of the values into a single score. The relations proposed by Gray (1988), and discussed earlier, can be either positive or negative. Thus, the negative cultural dimensions must be calculated first before calculating the accounting values. Negative cultural dimensions are calculated in a way similar to the additive inverse, but instead of yielding to zero, it must yield to the mean score of the cultural dimension. In finding the additive inverse, the number calculated must sum up to zero when added to the original number. However, in this calculation, instead of adding up to zero, the value must add up to the mean value of the dimension.

Hence the equation for the inverse of the cultural dimension of any particular country can be written in the form of:

$$CULDIM^{-}_{Country} = -(CULDIM_{Country} - CULDIM_{Mean}) + CULDIM_{Mean} \quad (4)$$

Where $CULDIM^{-}_{Country}$ is the inverse cultural dimension score; $CULDIM_{Country}$ is the cultural dimension of the country and $CULDIM_{Mean}$ is the mean score of the cultural dimension for all countries examined. $CULDIM$ can be any of the four cultural dimensions; $PD, UA, IND, and\ MAS$

After calculating the inverse cultural dimensions, accounting values can be calculated using the following formulas:

$$PROF = (IND + PD^{-} + UA^{-})/3 \quad (5)$$

$$UNIF = (PD + UA + IND^{-})/3 \quad (6)$$

$$SEC = (PD + UA + IND^{-} + MAS^{-})/4 \quad (7)$$

$$CONS = (UA + IND^{-} + MAS^{-})/3 \quad (8)$$

Where $PROF$ refers to professionalism versus statutory control value, $UNIF$ refers to uniformity versus flexibility, SEC represents secrecy versus transparency, and $CONS$ refers to conservatism versus optimism value.

Table 3.2 shows the countries and their relative cultural dimensions and accounting values scores.

Table 3.2. Country Scores of Cultural Dimensions and Accounting Values

Country	Cultural dimensions				Accounting values			
	PD	IND	MAS	UA	PROF	UNIF	SEC	CONS
Bangladesh	80	20	55	60	44	70	63	58
Belgium	65	75	54	94	56	58	55	51
Brazil	69	38	49	76	48	66	62	59
Canada	39	80	52	48	81	33	36	35
Chile	63	23	28	86	42	72	72	75
China	80	20	66	30	54	60	53	44
Colombia	67	13	64	80	39	75	65	64
Denmark	18	74	16	23	95	19	35	41
Finland	33	63	26	59	74	40	48	53
France	68	71	43	86	56	58	57	54
Germany	35	67	66	65	73	41	39	40
Greece	60	35	57	100	42	72	64	66
Hong Kong	68	25	57	29	60	54	51	45
India	77	48	56	40	61	53	50	42
Ireland	28	70	68	35	86	28	28	29
Italy	50	76	70	75	67	47	42	39
Japan	54	46	95	92	50	64	48	47
Jordan	70	30	45	65	49	65	62	60
Kenya	70	25	60	50	52	62	56	51
Kuwait	90	25	40	80	35	79	73	68
Lithuania	42	60	19	65	68	46	54	58
Luxembourg	40	60	50	70	67	47	47	50
Malaysia	100	26	50	36	47	67	62	50
Mexico	81	30	69	82	39	75	63	57
Netherlands	38	80	14	53	80	34	46	49
Nigeria	80	30	60	55	49	65	58	51
Norway	31	69	8	50	80	34	48	54
Pakistan	55	14	50	70	47	67	62	65
Philippines	94	32	64	44	48	66	58	46
Poland	68	60	64	93	50	64	56	53
Portugal	63	27	31	99	39	75	73	77
Qatar	93	25	55	80	34	80	70	63
Russia	93	39	36	95	34	80	75	70
Singapore	74	20	48	8	63	51	51	43
South Africa	49	65	63	49	73	41	40	37
South Korea	60	18	39	85	41	73	69	72
Spain	57	51	42	86	53	61	60	61
Sri Lanka	80	35	10	45	54	60	67	63
Sweden	31	71	5	29	87	27	43	47
Switzerland	34	68	70	58	76	38	36	36
Thailand	64	20	34	64	48	66	66	66
Turkey	66	37	45	85	46	68	64	64
Ukraine	92	25	27	95	30	84	81	77
United Arab Emirates	90	25	50	80	35	79	71	65
United Kingdom	35	89	66	35	90	24	26	23
USA	40	91	62	46	30	84	81	77

3.2.4. Control variables:

Board specific variables:

This study uses specific board control variables that influence accrual quality and gender diversity. In previous literature, the board size, board and audit committee effectiveness, and CEO power are some of the most important board-specific characteristics (Xie, Davidson III & DaDalt 2003; Gull, Nekhili, Nagati, & Chtioui, 2018; Klein, 2002; Lin & Hwang, 2010). The following are the measurement details of the board-specific variables.

Board size:

Nekhili & Gatfaoui (2013) found that the size of the board determines the level of board gender diversity as female directors are more likely to be appointed within larger boards. Xie, Davidson III & DaDalt (2003) found a negative association between the size of the board and discretionary current accruals. Similar to Gull, Nekhili, Nagati, & Chtioui (2018), the current study measures board size, BOD_SIZE, as the natural logarithm of the total number of board members.

Board independence:

There is sufficient evidence in the literature to suggest that the number of independent directors is negatively associated with earnings management (Klein, 2002; Gull, Nekhili, Nagati, & Chtioui, 2018). The current study uses the variable BOD_IND to proxy for board independence. BOD_IND is measured as the percentage of independent directors on the board.

Board meetings:

Board meetings represent the level of activity and, hence, the effectiveness of the board. Xie, Davidson III & DaDalt (2003) argued that active boards are more effective in decreasing discretionary accruals. Similarly, Gull, Nekhili, Nagati, &

Chtioui (2018) found a negative relationship between the frequency of board meetings and the magnitude of earnings management. Following Gull, Nekhili, Nagati, & Chtioui (2018), the current study uses the variable BOD_MEET to proxy for board meetings. BOD_MEET is measured as the natural logarithm of the number of board meetings per year.

CEO Duality:

CEO duality means that the CEO is also the board chair. It is often associated with higher earnings management (Gull, Nekhili, Nagati, & Chtioui, 2018). A plausible reason is the concentrated power manifested in the hands of a single individual. $DUALITY$ equals one if the CEO is also the Chair of the board and zero if the two roles are separated.

Audit committee independence:

Audit committee independence refers to the percentage of independent directors sitting on the audit committee. Xie, Davidson III & DaDalt (2003) found a non-significant association between audit committee independence and current abnormal accruals. On the contrary, Klein (2002) found a significant negative association between audit committee independence and abnormal accruals. However, in their meta-analysis conducted using 48 studies, Lin & Hwang (2010) found a significant negative association between the audit committee and earnings management. Following Klein (2002), AUD_IND is measured as the percentage of independent directors in the audit committee.

Audit committee meetings:

The thesis controls for audit committee meetings. Xie, Davidson III & DaDalt (2003) concluded that the frequency of audit committee meetings is associated with less discretionary accruals. Additionally, Lin & Hwang (2010) found that the audit

committee meeting is negatively related to earnings management. AUD_MEET is calculated as the natural logarithm of the sum of audit committee meetings during the year.

Firm-specific variables

This study controls for firm-specific characteristics that are expected to influence the level of accrual quality and gender diversity. Prior research suggests controlling for the financial condition, performance, firm size and growth and risk levels (Gull, Nekhili, Nagati, & Chtioui, 2018; Gray, Kang, Lin & Tang, 2015; Arun, Almahrog & Aribi, 2015 and Srinidhi, Gul, and Tsui, 2011). The following variables capture the Firm's characteristics:

Reported Losses:

Gull, Nekhili, Nagati, & Chtioui (2018) and Gray, Kang, Lin, & Tang (2015) found that losses and earnings management are positively correlated. They contend that managers in firms experiencing losses are more likely to engage in earnings management practices. Consistent with prior research, the current study uses the variable, $LOSS$, which is a dichotomous variable. The variable has the value of one when if the firm reports negative earnings and zero otherwise.

Firm Performance:

The study controls for financial performance, which is important for the estimation of abnormal accruals (Kothari, Leoneand & Wasley, 2005). Lara, Osma, Mora & Scapin (2017) suggest that poor performing companies tend to manipulate earnings extensively. Barua, Davidson, Rama, & Thiruvadi (2010) found that return on assets (ROA) is negatively associated with absolute performance-matched total accruals and current accruals. Following Srinidhi, Gul, & Tsui (2011), the current study uses ROA to proxy for financial performance. This variable is calculated as net

income before extraordinary items, NI, scaled by average total assets, TA using the following formula:

$$ROA = \frac{NI}{TA} \quad (9)$$

Growth:

Prior studies found that managers in growing firms are more likely to manage earnings to meet and/or beat predetermined benchmarks (Srinidhi, Gul, and Tsui, 2011). Lara, Osma, Mora & Scapin, (2017) found a significant positive association between market to book value and absolute discretionary accruals. Additionally, Srinidhi, Gul, and Tsui (2011) found a significant positive association between market to book value and the practice of managing earnings to meet and beat benchmarks. Following the approach of Srinidhi, Gul, and Tsui (2011), price to book value PB will be used as a proxy for growth. PB is calculated as the ratio of market value (MV) to book value (BV) of equity, as shown in the following formula:

$$PB = \frac{MV}{BV} \quad (10)$$

Where the market value (MV) is the company's share price, and the BV is the book value of equity per share.

Leverage (LEV):

Although the link between firm leverage and accrual quality is inconclusive, several studies found that distressed companies maintain high earnings quality. Gull, Nekhili, Nagati, & Chtioui (2018) found that leverage is negatively associated with current discretionary accruals. Arun, Almahrog, & Aribi (2015) found that highly leveraged firms are more likely to engage in decreasing income earnings management and employing fewer females. Following Srinidhi, Gul, and Tsui (2011), LEV is calculated as total debt divided by total assets, as shown in the following equation:

$$LEV = \frac{TD}{TA} \quad (11)$$

where TD is the total debt, and TA is the total assets.

Firm Size:

Lara, Osma, Mora & Scapin, (2017) found that firm size is positively associated with board gender diversity. Barua, Davidson, Rama, & Thiruvadi (2010) found a negative association between firm size and several accrual quality measures. Similarly, Xie, Davidson III & DaDalt (2003) concluded that smaller firms are associated with higher levels of current discretionary accruals. This could be because larger firms often have a well-established governance structure and higher levels of monitoring (Peni & Vähämaa, 2010). Following Peni & Vähämaa (2010), this thesis controls for $SIZE$, which is measured as the natural logarithm of total assets.

Country-specific variables

Prior research suggests that it is key to control for country-specific variables such as the level of investor protection, and female economic empowerment in the country through the existence of gender quotas. The following measures are used to represent country-specific variables:

Investor protection:

Strong investor protection levels curb practices of earnings manipulation through influencing transparent financial reporting. (Gray, Kang, Lin, & Tang, 2015). As found by Francis & Wang (2008), firms audited by the Big 4 accounting firms ($BIG4$) in countries with strong investor protection tend to experience higher earnings quality. This finding is because the Big 4 firms are more cautious of investor rights and especially minority investors (Francis, & Wang, 2008). The study uses the variable, INV_PRT, to represent investor protection. The variable scales from zero to ten with a higher score indicating higher investor protection level within the country. The information for investor protection is an international index, which was retrieved

from the World Bank.

Gender Quota:

Gender quota is expected to influence the effect of females on corporate boards. According to Kanter (1977), the percentage of female representation of 15% or less on boards will be considered token. Female tokens face discrimination and struggle to influence the decisions made by the group (Kanter 1977). It is expected that gender quota helps alleviate the problem of tokenism. However, enforcement of gender quota, when there is a low supply of experienced females, could dampen the effectiveness of the board and nullify the impact of females on boards. This thesis controls for the existence of board gender quota via the variable $QUOTA$. This a dichotomous variable that takes on the value of one if there is a gender quota implemented in the country and zero otherwise.

3.3. Inferential analysis and model:

This thesis uses moderating analysis to assess gender diversity-accrual quality relationship nested in different cultural contexts. This is done by introducing an interaction term between gender diversity variable and culture variables. However, to avoid multicollinearity between the interaction term and the gender diversity and culture variables that formed the interaction, the study mean-centers gender percentage, cultural dimension, and accounting value scores (Field, 2018). The statistical model is tested at different levels. Level one assesses how the control variables relate to accrual quality, while level two assesses the gender diversity – accrual quality relationship. Finally, level three takes into consideration the moderating effect of different cultural dimensions and accounting values.

At level one, the study predicts the relationship between accrual quality and specific board, firm, and country controls variables. The linear model is represented as follow:

$$AQ_{ij} = \beta_0 + \beta_1 BOD\_SIZE_{ij} + \beta_2 BOD\_IND_{ij} + \beta_3 AC\_IND_{ij} + \beta_4 DUALITY_{ij} + \beta_5 BOD\_MEET_{ij} + \beta_6 AC\_MEET_{ij} + \beta_7 ROA_{ij} + \beta_8 PB_{ij} + \beta_9 LEV_{ij} + \beta_{10} LOSS_{ij} + \beta_{11} SIZE_{ij} + \beta_{12} INV\_PRT_{ij} + \beta_{13} QUOTA_{ij} + \varepsilon_{ij} \quad (12)$$

Where AQ_{ij} is the accrual quality value (AQ_DD, AQ_Dis, and AQ_Innate) for firm i in country j. β_0 is the intercept or the value of AQ_{ij} when other variables are zero and $\beta_x$is the slope of the relation between the variable and accrual quality when all other variables are zero.

At level two, the thesis predicts the extent of accrual quality in firms with gender-diverse boards. In this level, the gender diversity variable is introduced into the model. The linear model is represented as follow:

$$AQ_{ij} = \beta_0 + \beta_1 GENDER_{ij} + \beta_2 BOD\_SIZE_{ij} + \beta_3 BOD\_IND_{ij} + \beta_4 AC\_IND + \beta_5 DUALITY_{ij} + \beta_6 BOD\_MEET_{ij} + \beta_7 AC\_MEET_{ij} + \beta_8 ROA_{ij} + \beta_9 PB_{ij} + \beta_{10} LEV_{ij} + \beta_{11} LOSS_{ij} + \beta_{12} SIZE_{ij} + \beta_{13} INV\_PRT_{ij} + \beta_{14} QUOTA_{ij} + \varepsilon_{ij} \quad (13)$$

Where $GENDER_{ij}$ is the gender diversity measure (GENDER_PCT and GENDER_DUMY) for firm i in country j.

Finally, level three analysis is conducted to assess the main hypotheses of this thesis. It addresses the moderating effect of cultural dimensions ($CULDIM_{ij}$) and accounting values ($ACCTVAL_{ij}$) on the relationship predicted in level two. In level three, cultural dimension and accounting value score, along with their interaction terms, are introduced to the model. This moderating effect is presented in the following two models:

$$AQ_{ij} = \beta_0 + \beta_1 GENDER_{ij} + \beta_2 BOD\_SIZE_{ij} + \beta_3 BOD\_IND_{ij} + \beta_4 AC\_IND_{ij} + \beta_5 DUALITY_{ij} + \beta_6 BOD\_MEET_{ij} + \beta_7 AC\_MEET_{ij} + \beta_8 ROA_{ij} + \beta_9 PB_{ij} + \beta_{10} LEV_{ij} + \beta_{11} LOSS_{ij} + \beta_{12} SIZE_{ij} + \beta_{13} INV\_PRT_{ij} + \beta_{14} QUOTA_{ij} + \beta_{15} CULDIM_{ij} + \beta_{16} GENDER_{ij} * CULDIM_{ij} + \varepsilon_{ij} \quad (14)$$

Where $CULDIM_{ij}$ is the cultural dimensions of power distance, individualism, masculinity, and uncertainty avoidance.

$$AQ_{ij} = \beta_0 + \beta_1 GENDER_{ij} + \beta_2 BOD\_SIZE_{ij} + \beta_3 BOD\_IND_{ij} + \beta_4 AC\_IND_{ij} + \beta_5 DUALITY_{ij} + \beta_6 BOD\_MEET_{ij} + \beta_7 AC\_MEET_{ij} + \beta_8 ROA_{ij} + \beta_9 PB_{ij} + \beta_{10} LEV_{ij} + \beta_{11} LOSS_{ij} + \beta_{12} SIZE_{ij} + \beta_{13} INV\_PRT_{ij} + \beta_{14} QUOTA_{ij} + \beta_{15} ACCTVAL_{ij} + \beta_{16} GENDER_{ij} * ACCTVAL_{ij} + \varepsilon_{ij} \quad (15)$$

Where $ACCTVAL_{ij}$ is the accounting values of professionalism, uniformity, secrecy, and conservatism.

Table 3.3 summarizes the variables used in the study.

Table 3.3. Summary of Variables

Variables	Proxy	Measurement
Dependent variable		
AQ_DD	*Accrual quality - DD (2002) model*	Standard deviation of the residuals from equation 1 for the years t-5 to t
AQ_Dis	*Accrual quality – discretionary accruals*	Residuals from equation 2
AQ_Innate	*Accrual quality – Innate accruals*	Predicted values from equation 2
AQ_MJones	cross sectional Modified Jones model	Residuals from equation 3
Independent variable		
GENDER_PCT	*Female participation on boards of directors*	Percentage of female directors on the board.
GENDER_DUMY	*At least one female in the board of directors*	Dummy variable of 1 if there is at least one female in the board 0 otherwise
Moderator variable – Cultural dimensions (*CULDIM)*		
PD	*Power distance*	Power distance index number
UA	*Uncertainty avoidance*	Uncertainty avoidance index number
IND	*Individualism vs collectivism*	Individualism index number
MAS	*Masculinity vs. femininity*	Masculinity index number
Moderator variables – Accounting values (*ACCTVAL)*		
PROF	*Professionalism*	Calculated using equation 5
UNIF	*Uniformity vs. flexibility*	Calculated using equation 6
SEC	*Secrecy vs. transparency*	Calculated using equation 7
CONS	*Conservatism vs. optimism*	Calculated using equation 8
Control variables – board specific variables		
BOD_SIZE	*Size of the board of directors*	Natural log of board members
BOD_IND	*Independence of the boards*	Percentage of the number of independent directors in the board of directors
BOD_MEET	*Number of board meetings*	Natural log of the number of the annual board meetings
DUALITY	*The duality of CEO and Chairman roles*	Dummy variable of 1 if the CEO is the Chairman; 0 otherwise
AC_IND	*Independence of the audit committee*	Percentage of the number of independent directors in the audit committee
AC_MEET	*Number of audit committee meetings*	Natural log of the number of the annual audit committee meetings
Control variables – firm-specific variables		
ROA	*Return on assets*	Calculated from formula 9
PB	*Price to book value*	Calculated from formula 10
LEV	*Leverage*	Calculated from formula 11
LOSS	*Negative reported earnings*	Dummy variable of 1 if the company reported negative earnings; 0 otherwise
Size	*Firm size*	Natural log of the number of employees
Control variables – Country specific variables		
INV_PRT	*Level of investor protection*	Score from 1 to 10, with 10 being the highest investor protection country
QUOTA	*Gender quota*	Dummy variable of 1 if there is a gender quota enforced; 0 otherwise

CHAPTER 4: RESULTS

This Chapter presents the results of the analyses. The first section discusses the descriptive statistics for the sample. The second section previews analyses of variance based on different categories. Finally, the last section presents the regression analyses and additional tests to assess the robustness of the results.

4.1. Descriptive statistics:

This section provides descriptive statistics for the dependent, independent, moderator, and control variables

4.1.1. Dependent variables:

The study utilizes alternative, dependent variables, which represent various forms of accruals' quality. Table 4.1 presents descriptive statistics for the dependent variables used in the primary and supplementary analyses. The mean for AQ_DD is -0.032, with a standard deviation of 0.020. It ranges from -0.112 to zero. Similarly, AQ_Innate has a mean of -0.036 with a standard deviation of 0.013. It ranges from -0.127 to -0.013. However, AQ_Dis yields a noticeable different result with a mean of 0.004, a standard deviation of 0.015, and a range from -0.056 to 0.058. In addition, the mean for AQ_MJones is 0.000, with a range from -0.211 to 0.175 and a standard deviation of 0.051.

Table 4.1. Descriptive Statistics for Dependent Variables

Variable	Mean	Min	Max	SD
AQ_DD	-0.032	-0.112	0.000	0.020
AQ_Dis	0.004	-0.056	0.058	0.015
AQ_Innate	-0.036	-0.127	-0.013	0.013
AQ_MJones	0.000	-0.211	0.175	0.051

4.1.2. Independent variables:

The independent variables in the study represent females on the board. The GENDER_PCT and GENDER_DUMY descriptive statistics are presented in Table 4.2. The sample has a mean of 15% of females on corporate boards with a standard deviation of 12.9%. The maximum representation in the sample is 75% female. The table shows that GENDER_DUMY has an average of 74%, which suggests that the majority of companies have at least one female represented on the board.

Table 4.2. Descriptive Statistics for Independent Variables

Variable	Mean	Min	Max	SD
GENDER_PCT	15.318	0.000	75.000	12.896
GENDER_DUMY	0.740	0.000	1.000	0.440
GENDER_MASS	0.130	0.000	1.000	0.333

4.1.3. Moderators:

Table 4.3 presents the descriptive statistics of the moderator variables in two

sections. The first section presents the descriptive scores for the cultural dimension, while the second section presents the scores for the accounting values. Cultural dimension scores range as follows: PD 18 to 100; IND 13 to 91; MAS 5 to 95; and UA 8 to 100. The results suggest that the sample is slightly skewed towards high power distance, high individualist, and more masculine countries with means of 55, 60, and 61, respectively. However, accounting values scores in section two show a narrower range and a smaller deviation from the mean than cultural dimensions. PROF, UNIF, SEC, and CONS range from 30 to 95, 19 to 84, 26 to 81, and 23 to 77, respectively. The results also show that the sample consists of more uniform, secretive, and conservative countries. Finally, the descriptive analysis suggest that there is a relatively equal share of firms from high and low uncertainty avoidance countries (*UA* mean of 52) and professional and statutory control countries (*PROF* mean of 51).

Table 4.3. Descriptive Statistics for Moderator Variables

Variable	Mean	Min	Max	SD
Cultural dimensions				
PD	55.030	18.000	100.000	18.364
IND	60.330	13.000	91.000	27.893
MAS	61.330	5.000	95.000	17.228
UA	51.630	8.000	100.000	21.516
Accounting values				
PROF	50.916	29.714	94.714	18.456
UNIF	63.152	19.354	84.354	18.456
SEC	59.126	25.883	80.883	17.019
CONS	55.088	22.844	77.177	17.323

4.1.4. Control Variables:

Table 4.4 represents the descriptive statistics for the control variables. The first section of Table 4.4 represents board-related control variables. The results show that companies in the sample have an average natural log board size (BOD_SIZE) of 2.201, with an average of 59% independent members (BOD_IND). Furthermore, the natural log of board meetings is 2 (BOD_MEET). Recall that 34% of boards are chaired by the CEOs (DUALITY). The descriptive analysis shows that audit committees had 1.7 meetings and an 87% independence level. The second section of Table 4.4 presents the descriptive statistics for firm-related control variables. The companies in the sample have an average ROA of 4.8 and a range of -51.8 to 38.2. They also have a PB and leverage of 3.2 and 2.8, respectively. The average SIZE of the companies represented by the natural log of total assets was 23. In 2017, 11% of the companies reported LOSS in their operating income. The last section of the table presents descriptive statistics for the two country control variables: investor protection (INV_PRT) and gender quota (QUOTA). The results show that the average score for investor rights was 6.2 out of 10. This indicates that counties in the sample, on average, provide relatively strong protection to their investors. Additionally, the range for investor protection was from 2.7 to 8.3. Finally, the data also shows that 16% of the firms in the sample were from countries that have mandatory gender quota in place. Descriptive statistics by country can be found in Appendix A.

Table 4.4. Descriptive Statistics for Control Variables

Variable	Mean	Min	Max	SD
Board control variables				
BOD_SIZE	2.201	1.099	3.045	0.274
BOD_IND	58.623	8.333	100.000	22.737
BOD_MEET	2.075	0.000	4.078	0.478
DUALITY	0.340	0.000	1.000	0.472
AC_IND	87.234	0.000	100.000	18.391
AC_MEET	1.772	0.000	3.401	0.487
Firm control variables				
ROA	4.792	-51.790	38.150	7.402
PB	3.159	0.080	67.351	3.730
LEV	2.841	1.026	56.457	2.873
LOSS	0.106	0.000	1.000	0.308
SIZE	23.003	16.215	33.341	2.470
Country Control variables				
INV_PRT	6.181	2.700	8.300	1.048
QUOTA	0.160	0.000	1.000	0.366

4.2. Analysis of variance (ANOVA):

Analysis of variance assesses the differences in the means of variables between two categories based on different factors. This study assesses differences in means based on the presence of at least one female on the board (GENDER_DUMY), the presence of gender quota (QUOTA), and the cultural and accounting values. Welch's test of the equality of means was used in the cases where the assumption of homogeneity of variances was violated using Levene's test.

Tables 4.5 and 4.6 present the analysis of variance for variables used in the primary analysis and the supplementary analysis based on the presence of at least one female on the board and the presence of gender quota. The results show that almost 26% of the companies do not have female directors on their boards, while 74% of the companies have at least one female on their boards. Table 4.5 shows a significant difference in the means

of accrual quality measures between the two subsets of gender dummy. The means of AQ_DD ($p < 0.05$), and AQ_Innate ($p < 0.01$) were significantly higher in companies that have at least one female director. The results indicate that companies with at least one female on their boards have higher accrual quality.

Furthermore, concerning having a quota in place, panel B in table 4.5 shows that 84% of firms were based in countries with no mandatory gender quota, while only 16% of the companies in the sample were from countries with compulsory gender quota. The means of accrual quality measured using discretionary accruals (AQ_Dis) and modified Jones model (AQ_MJones) were significant ($p < 0.01$) across gender quota subgroups. Companies with no gender quota appeared to have higher accrual quality measured using discretionary accruals and modified Jones model ($P < 0.01$). However, there was no significant difference between the means of AQ_DD, AQ_Innate, and among the two subsets of the gender quota.

Table 4.5. ANOVA for dependent variables based on Gender Dummy and Gender Quota

Panel A: Gender Dummy[b]					**Panel B: Gender Quota[c]**				
	Factor	Mean	SD	F		Factor	Mean	SD	F
AQ_DD[a]	No female	-0.034	0.022	**5.925***	AQ_DD	No Quota	-0.032	0.020	3.513
	At least one female	-0.032	0.019			Quota	-0.034	0.021	
	Total	-0.032	0.020			Total	-0.032	0.020	
AQ_Dis[a]	No female	0.004	0.016	0.261	AQ_Dis	No Quota	0.004	0.015	**12.054****
	At least one female	0.004	0.014			Quota	0.002	0.015	
	Total	0.004	0.015			Total	0.004	0.015	
AQ_Innate[a]	No female	-0.037	0.015	**8.665****	AQ_Innate[a]	No Quota	-0.036	0.014	1.455
	At least one female	-0.036	0.013			Quota	-0.035	0.012	
	Total	-0.036	0.013			Total	-0.036	0.013	
AQ_MJones	No female	0.003	0.053	3.246	AQ_MJones[a]	No Quota	-0.001	0.050	**18.701****
	At least one female	-0.001	0.051			Quota	0.010	0.056	
	Total	0.000	0.051			Total	0.000	0.051	

** $p < 0.01$ * $p < 0.05$

[a] Assumption of homogeneity of variances violated, so Welch test of equity of means was used

[b] 813 companies had no females while 2279 had at least one female

[c] 2601 companies based in countries with no gender quota while 491 of them are based in countries that have a gender quota

Table 4.6 also presents the results of the ANOVA for the control variables for the two factors. Panel A shows that all the means of the control variables are significantly different ($p < 0.01$) across the two groups of gender dummy. Panel B shows that, except for LOSS, all the means of the variables are significantly different ($P < 0.01$) for the countries that implemented gender quota and those that did not. A noticeable result is a significant difference in the mean percentage of gender representation for countries that have gender quota in place and those that did not. The results show that companies with quotas have a higher percentage or gender representation than companies without quotas.

Table 4.6. ANOVA for Control Variables Based on Gender Dummy and Gender Quota

Panel A: Gender Dummy[b]					**Panel B: Gender Quota[c]**				
	Factor	Mean	SD	F		Factor	Mean	SD	F
BOD_SIZE	No female	2.102	0.277	**151.853****	BOD_SIZE[a]	No Quota	2.191	0.259	**15.959****
	At least one female	2.237	0.265			Quota	2.255	0.341	
	Total	2.201	0.274			Total	2.201	0.274	
BOD_IND	No female	47.647	21.703	**280.285****	BOD_IND[a]	No Quota	59.480	23.725	**40.063****
	At least one female	62.539	21.800			Quota	54.088	15.810	
	Total	58.623	22.737			Total	58.623	22.737	
BOD_MEET[a]	No female	2.215	0.550	**79.142****	BOD_MEET[a]	No Quota	2.122	0.477	**211.645****
	At least one female	2.025	0.439			Quota	1.827	0.399	
	Total	2.075	0.478			Total	2.075	0.478	
DUALITY[a]	No female	0.500	0.500	**128.936****	DUALITY[a]	No Quota	0.340	0.475	**7.096****
	At least one female	0.280	0.447			Quota	0.290	0.452	
	Total	0.340	0.472			Total	0.340	0.472	
AC_IND[a]	No female	83.329	19.767	**45.447****	AC_IND	No Quota	88.457	18.177	**74.22****
	At least one female	88.627	17.671			Quota	80.752	18.172	
	Total	87.234	18.391			Total	87.234	18.391	
AC_MEET[a]	No female	1.864	0.586	**30.512****	AC_MEET[a]	No Quota	1.806	0.506	**157.228****
	At least one female	1.739	0.441			Quota	1.591	0.310	
	Total	1.772	0.487			Total	1.772	0.487	
ROA	No female	3.775	7.137	**20.934****	ROA	No Quota	4.655	7.433	**5.592***
	At least one female	5.154	7.462			Quota	5.516	7.198	
	Total	4.792	7.402			Total	4.792	7.402	
PB[a]	No female	2.218	2.364	**115.588****	PB[a]	No Quota	3.074	3.593	**6.569***
	At least one female	3.495	4.056			Quota	3.610	4.359	
	Total	3.159	3.730			Total	3.159	3.730	

Table 4.6. ANOVA for Control Variables Based on Gender Dummy and Gender Quota

Panel A: Gender Dummy[b]					**Panel B: Gender Quota[c]**				
	Factor	Mean	SD	F		Factor	Mean	SD	F
LEV[a]	No female	2.494	2.374	**20.244****	LEV[a]	No Quota	2.774	2.708	**5.939***
	At least one female	2.964	3.022			Quota	3.192	3.607	
	Total	2.841	2.873			Total	2.841	2.873	
LOSS[a]	No female	0.129	0.336	**5.369***	LOSS[a]	No Quota	0.110	0.312	1.953
	At least one female	0.098	0.298			Quota	0.090	0.286	
	Total	0.106	0.308			Total	0.106	0.308	
LN_SIZE[a]	No female	23.514	3.188	**33.212****	LN_SIZE[a]	No Quota	22.932	2.534	**18.032****
	At least one female	22.820	2.128			Quota	23.380	2.064	
	Total	23.003	2.470			Total	23.003	2.470	
INV_PRT[a]	No female	5.947	0.972	**60.912****	INV_PRT[a]	No Quota	6.031	1.055	**920.135****
	At least one female	6.265	1.062			Quota	6.977	0.517	
	Total	6.181	1.048			Total	6.181	1.048	
					GENDER_PCT	No Quota	14.344	12.655	**96.312****
						Quota	20.478	12.950	
						Total	15.318	12.896	

** $p < 0.01$ * $p < 0.05$

[a] Assumption of homogeneity of variances violated so Welch test of equity of means was used

[b] 813 companies had no females while 2279 had at least one female

[c] 2601 companies based in countries with no gender quota while 491 of them are based in countries that have a gender quota

4.2.1. Based on cultural dimensions:

Panels A through D, in Table 4.7, present the variations in the means of the dependent and independent variables across the two levels of each cultural dimension. Panel A presents the differences in the means between high and low power distance countries. The means of AQ_Dis, AQ_Innate, AQ_MJones, and GENDER_PCT are significantly different ($p < 0.01$) across the different levels of power distance. These results

indicate that countries with small power distance have relatively lower accrual quality based on innate accruals measure. However, they have higher quality accruals than large power distance countries based on discretionary accruals and modified Jones model measures. The results also indicate that small power distance countries have a higher percentage of female representation than do large power distance countries.

Panel B, in Table 4.7, presents the differences in the means of the variables between individualist and collectivist countries. Results show that the means of AQ_Dis, AQ_Innate, AQ_MJones, and GENDER_PCT are significantly different between the two levels of individualism ($p < 0.01$). This indicates that individualist societies tend to have higher quality accruals measured using AQ_Dis and the modified Jones model measure. Collectivist societies tend to have higher accrual quality measured using AQ_Innate. However, the means of AQ_DD were not significantly different. Panel B, of Table 4.7, also shows a significant difference between the percentage of female representation in individualist and collectivist societies. This indicates that individualist countries have almost 10% more females on their boards compared to collectivist countries.

The difference in the means of the variables between masculine and feminine and high and low uncertainty avoidance societies is shown in Panel C and D of Table 4.7, respectively. The results show that feminine societies have higher quality accruals measured using AQ_DD, AQ_Innate ($P < 0.01$), and AQ_Dis ($P<0.05$). Furthermore, the results showed that, on average, companies in masculine societies employ 6% fewer females on their boards than companies in feminine societies. Panel D, of Table 4.7, shows that the means for AQ_DD and AQ_Innate were significantly different ($p < 0.01$) between

high and low uncertainty avoidance. Results signify that companies in high uncertainty avoidance societies have higher accruals quality measures using AQ_DD and AQ_Innate than companies in low uncertainty avoidance societies. The findings also suggest that low uncertainty avoidant countries have a higher percentage of females in their corporate boards than high uncertainty avoidance countries.

Table 4.7. ANOVA for Dependent and Independent Variables Based on Cultural Dimensions

Panel A: Power Distance[b]					**Panel B Individualism[c]**				
	Factor	Mean	SD	F		Factor	Mean	SD	F
AQ_DD	Low PD	-0.032	0.020	0.332	AQ_DD	Collectivism	-0.033	0.019	1.639
	High PD	-0.032	0.019			Individualism	-0.032	0.020	
	Total	-0.032	0.020			Total	-0.032	0.020	
AQ_Dis[a]	Low PD	0.005	0.015	**36.225****	AQ_Dis	Collectivism	0.002	0.014	**49.777****
	High PD	0.002	0.014			Individualism	0.006	0.015	
	Total	0.004	0.015			Total	0.004	0.015	
AQ_Innate[a]	Low PD	-0.038	0.015	**56.547****	AQ_Innate[a]	Collectivism	-0.035	0.011	**35.919****
	High PD	-0.034	0.011			Individualism	-0.037	0.015	
	Total	-0.036	0.013			Total	-0.036	0.013	
AQ_MJones	Low PD	-0.008	0.050	**73.926****	AQ_MJones[a]	Collectivism	0.009	0.052	**72.409****
	High PD	0.008	0.051			Individualism	-0.007	0.049	
	Total	0.000	0.051			Total	0.000	0.051	
GENDER_PCT[a]	Low PD	19.462	12.485	**334.822****	GENDER_PCT[a]	Collectivism	9.739	10.257	**642.623****
	High PD	11.389	12.024			Individualism	20.349	12.966	
	Total	15.318	12.896			Total	15.318	12.896	
Panel C: Masculinity[d]					**Panel D: Uncertainty Avoidance[e]**				
	Factor	Mean	SD	F		Factor	Mean	SD	F
AQ_DD[a]	Femininity	-0.028	0.018	**39.776****	AQ_DD[a]	Low UA	-0.034	0.020	**83.685****
	Masculinity	-0.033	0.020			High UA	-0.027	0.017	
	Total	-0.032	0.020			Total	-0.032	0.020	
AQ_Dis[a]	Femininity	0.005	0.014	**4.454***	AQ_Dis[a]	Low UA	0.004	0.016	0.509
	Masculinity	0.004	0.015			High UA	0.004	0.013	
	Total	0.004	0.015			Total	0.004	0.015	
AQ_Innate[a]	Femininity	-0.033	0.012	**49.965****	AQ_Innate[a]	Low UA	-0.038	0.014	**191.318****
	Masculinity	-0.037	0.014			High UA	-0.031	0.010	
	Total	-0.036	0.013			Total	-0.036	0.013	
AQ_MJones[a]	Femininity	0.000	0.041	0.005	AQ_MJones[a]	Low UA	0.000	0.054	3.663
	Masculinity	0.001	0.053			High UA	0.003	0.044	
	Total	0.000	0.051			Total	0.000	0.051	
GENDER_PCT[a]	Femininity	20.310	16.471	**58.037****	GENDER_PCT[a]	Low UA	16.225	11.915	**33.724****
	Masculinity	14.376	11.874			High UA	12.896	14.953	
	Total	15.318	12.896			Total	15.318	12.896	

** $p < 0.01$ * $p < 0.05$

[a] Assumption of homogeneity of variances violated, so Welch test of equity of means was used

[b] 1505 companies are from low power distance countries while 1626 are from high power distance countries.

[c] 1466 companies are from collectivistic countries while 1712 are from individualistic countries

[d] 491 companies are from feminine countries while 2601 are from masculine countries.

[e] 2250 companies are from low uncertainty avoidant countries while 842 are from high uncertainty avoidant countries.

4.2.2. Based on accounting values:

Table 4.8 presents the analysis of variance for the dependent and independent variables based on the different levels of the accounting values. Panel A, of Table 4.8 shows the differences in the means across professionalism and statutory control societies. There were significant differences in the means for AQ_Dis, AQ_Innate, AQ_MJones ($P < 0.01$), and GENDER_PCT ($P < 0.05$). Professionalism societies had higher accrual quality measured using AQ_Innate. Furthermore, there was a higher percentage of female representation in professionalism societies relative to statutory control societies. However, accrual quality measured using AQ_Dis and AQ_MJones was higher in statutory control societies than professionalism societies. The differences between the means of the variables across flexible and uniform societies are presented in Panel B of Table 4.8. The results show a significant difference in the means of accrual quality measured using AQ_DD, AQ_Innate ($P < 0.05$), and AQ_MJones ($P < 0.01$). The means of GENDER_PCT were also different across flexible and statutory control societies ($P < 0.01$). Flexible countries tend to have higher accrual quality and a higher percentage of females on the board.

Panel C, in Table 4.8, presents the differences in the means for variables across secrecy and transparency accounting values. The results suggest a significant difference in the means of AQ_DD, AQ_Innate, and GENDER_PCT ($P < 0.01$), indicating that transparent societies tend to have higher accrual quality and a higher percentage of female representation. Finally, Panel D, in Table 4.8, presents the differences among the means for the variables across conservative and optimist countries. The results show a significant

difference in the means of all variables ($P < 0.01$) except AQ_DD. Results indicate that optimist societies have higher accrual quality measured using AQ_Innate, while conservative societies had a higher accrual quality measured using AQ_Dis and AQ_MJones. The results also indicate that conservative societies have higher female representation than optimist societies.

Table 4.8. ANOVA for Dependent and Independent Variables Based on Accounting Values

Panel A: Professionalism[b]					**Panel B Uniformity[c]**				
PD	Factor	Mean	SD	F		Factor	Mean	SD	F
AQ_DD	Statutory control	-0.032	0.020	0.008	AQ_DD	Flexibility	-0.031	0.019	**4.395***
	Professionalism	-0.032	0.019			Uniformity	-0.033	0.020	
	Total	-0.032	0.020			Total	-0.032	0.020	
AQ_Dis[a]	Statutory control	0.006	0.016	**33.344****	AQ_Dis	Flexibility	0.004	0.015	0.788
	Professionalism	0.003	0.014			Uniformity	0.004	0.015	
	Total	0.004	0.015			Total	0.004	0.015	
AQ_Innate[a]	Statutory control	-0.038	0.016	**36.173****	AQ_Innate[a]	Flexibility	-0.035	0.013	**4.938***
	Professionalism	-0.035	0.012			Uniformity	-0.036	0.014	
	Total	-0.036	0.013			Total	-0.036	0.013	
AQ_MJones	Statutory control	-0.007	0.052	**38.176****	AQ_MJones[a]	Flexibility	-0.004	0.046	**6.787****
	Professionalism	0.005	0.051			Uniformity	0.002	0.052	
	Total	0.000	0.051			Total	0.000	0.051	
GENDER_PCT[a]	Statutory control	14.695	12.029	**4.901***	GENDER_PCT	Flexibility	25.223	11.517	**441.912****
	Professionalism	15.721	13.415			Uniformity	13.218	12.178	
	Total	15.318	12.896			Total	15.318	12.896	
Panel C: Secrecy[d]					**Panel D: Conservatism[e]**				
	Factor	Mean	SD	F		Factor	Mean	SD	F
AQ_DD[a]	Transparency	-0.030	0.019	**17.717****	AQ_DD	Optimism	-0.033	0.020	2.284
	Secrecy	-0.033	0.020			Conservatism	-0.032	0.020	
	Total	-0.032	0.020			Total	-0.032	0.020	
AQ_Dis[a]	Transparency	0.003	0.014	1.62	AQ_Dis	Optimism	0.002	0.014	**44.215****
	Secrecy	0.004	0.015			Conservatism	0.006	0.015	
	Total	0.004	0.015			Total	0.004	0.015	
AQ_Innate[a]	Transparency	-0.033	0.012	**64.067****	AQ_Innate[a]	Optimism	-0.035	0.012	**24.278****
	Secrecy	-0.037	0.014			Conservatism	-0.037	0.015	
	Total	-0.036	0.013			Total	-0.036	0.013	
AQ_MJones[a]	Transparency	0.000	0.047	0.168	AQ_MJones	Optimism	0.006	0.052	**47.647****
	Secrecy	0.001	0.053			Conservatism	-0.007	0.050	
	Total	0.000	0.051			Total	0.000	0.051	
GENDER_PCT[a]	Transparency	16.588	14.386	**10.842****	GENDER_PCT[a]	Optimism	14.129	12.264	**34.071****
	Secrecy	14.794	12.193			Conservatism	16.884	13.530	
	Total	15.318	12.896			Total	15.318	12.896	

** $p < 0.01$ * $p < 0.05$

[a] Assumption of homogeneity of variances violated so Welch test of equity of means was used

[b] 1214 companies are from statutory control countries while 1878 are from professionalism countries.

[c] 541 companies are from flexible countries while 2551 are from uniform countries

[d] 904 companies are from transparent countries while 2188 companies are from secretive countries.

[e] 1757 companies are from optimist countries while 1335 are from conservative countries.

4.3. Correlations:

This study analyzes the correlation results between dependent and independent variables. The correlations between the variables across the four cultural dimension scores are reported in Table 4.9, while the correlations for the same variables by accounting values are reported in 4.10.

The dependent variables AQ_DD, AQ_Dis, AQ_Innate, and AQ_MJones, are significantly correlated with each other. AQ_MJones positively correlates with AQ_DD ($P < 0.05$) and AQ_Dis ($P < 0.01$), while AQ_Innate negatively correlates with it ($p < 0.01$). All measures of the DD model are positively correlated with the GENDER_PCT ($P < 0.01$). While GENDER_DUMY only correlates with AQ_DD ($P < 0.05$) and AQ_Dis ($P < 0.01$). AQ_MJones was negatively correlated with gender percentage ($P < 0.05$).

AQ_DD is positively related to board size (BOD_SIZE), board duality (DUALITY), audit committee meetings (AC_MEET), return on assets (ROA), and Firm size (SIZE) ($P < 0.01$). Reported losses (LOSS) was negatively related to AQ_DD ($P < 0.01$). AQ_DD does not correlate with any of the country control variables. AQ_Dis is positively correlated ($P < 0.01$) with board independence (BOD_IND), audit committee independence (AC_IND), price to book value (PB), and reported losses (LOSS). However, AQ_Dis negatively correlates with return on assets (ROA), firm size (SIZE), investor protection (INV_PRT), gender quota (QUOTA) ($P < 0.01$). The last measure for accrual quality, AQ_Innate, is significantly correlated with all the control variables ($P < 0.01$) except financial leverage (LEV) and gender quota. AQ_Innate is positively related to BOD_SIZE, DUALITY, BOD_MEET, AUD_MEET, ROA, SIZE, and INV_PRT.

However, AQ_Innate is negatively related to BOD_IND, AUD_IND, PB, and LOSS. The modified Jones model measure is negatively correlated ($P < 0.01$) with BOD_IND, AC_IND, AUD_MEET, and LOSS. On the other hand, BOD_SIZE, ROA, PB, SIZE, and QUOTA positively correlate with AQ_MJones.

Both proxies for gender diversity are positively related to BOD_SIZE, BOD_IND, AUD_IND, ROA, PB, LEV, INV_PRT, and QUOTA ($P < 0.01$). GENDER_PCT and GENDER_DUMY are negatively correlated with DUALITY, BOD_MEET, AUD_MEET, LOSS, and SIZE ($P < 0.01$).

In both tables, there is no multicollinearity between the variables used in the same model as the highest correlation among the independent, and the control variables do not exceed 0.8 (Field, 2018). The various inflation factors (VIF) also support the lack of multicollinearity as none of the VIF values exceeded 10, and none of the tolerance values is less than 0.1 (Field, 2018). BOD_IND and AC_IND have 65% significant correlation ($P < 0.01$). This finding is normal, as members of the audit committee are also members of the board of directors. As a result, audit committee independence is expected to be related to the independence of the board of directors. Additionally, ROA and LOSS show a negative correlation ($P < 0.01$) of -56%.

The correlations between the dependent and independent variables and the cultural dimensions are presented in Table 4.9. The results show a significant negative correlation between PD cultural dimension and both AQ_DD ($P < 0.05$) and AQ_Dis ($P < 0.01$). A positive correlation was depicted between AQ_Innate ($P < 0.05$) and AQ_MJones ($P < 0.01$) and power distance. IND shows a negative correlation with AQ_Innate and

AQ_MJones ($P < 0.01$), while it shows a positive correlation with AQ_Dis ($P < 0.01$). However, MAS is only positively correlated with AQ_Innate ($P < 0.05$). UA is positively correlated with AQ_DD and AQ_Innate ($P < 0.01$). Additionally, UA shows no correlation with AQ_Dis and AQ_MJones. All four cultural dimensions are negatively correlated with both proxies for gender diversity (GENDER_PCT and GENDER_DUMY) ($P < 0.01$), except for IND, which is positively correlated with both variables ($P < 0.01$).

The correlation between accounting values and the dependent and independent variables is shown in Table 4.10. The results suggest that professionalism is positively related to AQ_Innate, and AQ_MJones ($P < 0.01$), while it negatively correlates with AQ_Dis ($P < 0.01$). Uniformity shows the exact opposite, as it negatively correlates with AQ_Innate and AQ_MJones ($P < 0.01$) and positively correlates with AQ_Dis ($P < 0.01$). Furthermore, SEC and CONS are negatively correlated with AQ_Innate, and AQ_MJones ($P < 0.01$) and positively correlated with AQ_Dis. All accounting value measures are negatively correlated with GENDER_PCT and GENDER_DUMY, except PFOR, which is positively correlated with both gender diversity measures ($P < 0.01$).

Table 4.9. Correlation Analysis Based on Cultural Dimensions

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	AQ_DD	1																						
2	AQ_Innate	.660**	1																					
3	AQ_Dis	.736**	-.022	1																				
4	AQ_MJones	.040*	.113**	-.049**	1																			
5	GENDER_PCT	.105**	.100**	.049**	-.046*	1																		
6	GENDER_DUMY	.046*	.058**	.01	-.032	.710**	1																	
7	LN_BOD_SIZE	.202**	.301**	-0.002	.048**	.128**	.216**	1																
8	BOD_IND	.006	-.103**	.101**	-.148**	.318**	.288**	-.140**	1															
9	AC_IND	-.017	-.096**	.064**	-.093**	.104**	.127**	-.159**	.653**	1														
10	DUALITY	.055**	.086**	-0.005	.028	-.144**	-.211**	-.018	-.124**	-.052**	1													
11	LN_BOD_MEET	.017	.058**	-0.03	-.021	-.091**	-.175**	.051**	-.202**	-.218**	.109**	1												
12	LN_AC_MEET	.052**	.097**	-0.018	-.058**	-.099**	-.113**	.178**	.001	-.076**	.224**	.418**	1											
13	ROA	.187**	.340**	-.057**	.354**	.088**	.082**	.096**	-.047**	-.023	-.005	-.127**	-.066**	1										
14	PB	-.01	-.073**	.053**	.088**	.121**	.151**	.044*	.139**	.078**	-.039*	-.105**	-.029	.315**	1									
15	Finl_LEV	.019	.028	0	.017	.071**	.072**	.099**	.053**	.021	-.049**	.049**	.004	-.140**	.309**	1								
16	LOSS	-.284**	-.531**	.100**	-.328**	-.046*	-.044*	-.187**	.100**	.066**	-.070**	.004	-.022	-.561**	-.066**	.029	1							
17	LN_SIZE	.238**	.447**	-.086**	.073**	-.148**	-.124**	.358**	-.357**	-.242**	.160**	.251**	.166**	.106**	-.099**	.074**	-.254**	1						
18	INV_PRT	-.004	.055**	-.055**	.022	.113**	.133**	-.01	.052**	.181**	-.059**	-.147**	-.177**	.065**	.018	.012	-.042*	.086**	1					
19	QUOTA	-.034	0.019	-.062**	.084**	.174**	.223**	.086**	-.087**	-.153**	-.046*	-.226**	-.162**	.043*	.052**	.053**	-.024	.066**	.330**	1				
20	PD	-.038*	.045*	-.092**	.145**	-.212**	-.085**	.049**	-.598**	-.383**	-0.015	-.041*	-.201**	.029	-.076**	-.011	-.051**	.347**	-.082**	.320**	1			
21	IND	-.012	-.124**	.095**	-.140**	.292**	.231**	-.041*	.706**	.463**	-0.032	-.133**	.159**	-.046*	.139**	.049**	.103**	-.524**	.069**	-.073**	-.830**	1		
22	MAS	-.002	.035*	-.035	.029	-.354**	-.272**	.088**	-.295**	-.168**	.291**	.209**	.390**	-.058**	-.081**	-.041*	-.017	.056**	-.289**	-.171**	.018	-.050**	1	
23	UA	.130**	.175**	.016	.005	-.166**	-.294**	.121**	-.266**	-.237**	.360**	.388**	.449**	-.019	-.122**	-.029	-.082**	.326**	.017	.009	-.099**	-.064**	.319**	1

**. Correlation is significant at the 1% significance level (2-tailed).
*. Correlation is significant at the 5% significance level (2-tailed).

Table 4.10. Correlation Analysis Based on Accounting Values

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	AQ_DD	1																						
2	AQ_Innate	.660**	1																					
3	AQ_Dis	.736**	-.022	1																				
4	AQ_MJones	.040*	.113**	-.049**	1																			
5	GENDER_PCT	.105**	.100**	.049**	-.046*	1																		
6	GENDER_DUMY	.046*	.058**	.01	-.032	.710**	1																	
7	LN_BOD_SIZE	.202**	.301**	-0.002	.048**	.128**	.216**	1																
8	BOD_IND	.006	-.103**	.101**	-.148**	.318**	.288**	-.140**	1															
9	AC_IND	-0.017	-.096**	.064**	-.093**	.104**	.127**	-.159**	.653**	1														
10	DUALITY	.055**	.086**	-0.005	.028	-.144**	-.211**	-.018	-.124**	-.052**	1													
11	LN_BOD_MEET	.017	.058**	-0.03	-.021	-.091**	-.175**	.051**	-.202**	-.218**	.109**	1												
12	LN_AC_MEET	.052**	.097**	-0.018	-.058**	-.099**	-.113**	.178**	.001	-.076**	.224**	.418**	1											
13	ROA	.187**	.340**	-.057**	.354**	.088**	.082**	.096**	-.047**	-.023	-.005	-.127**	-.066**	1										
14	PB	-.01	-.073**	.053**	.088**	.121**	.151**	.044*	.139**	.078**	-.039*	-.105**	-.029	.315**	1									
15	Finl_LEV	.019	.028	0	.017	.071**	.072**	.099**	.053**	.021	-.049**	.049**	.004	-.140**	.309**	1								
16	LOSS	-.284**	-.531**	.100**	-.328**	-.046*	-.044*	-.187**	.100**	.066**	-.070**	.004	-.022	-.561**	-.066**	.029	1							
17	LN_SIZE	.238**	.447**	-.086**	.073**	-.148**	-.124**	.358**	-.357**	-.242**	.160**	.251**	.166**	.106**	-.099**	.074**	-.254**	1						
18	INV_PRT	-.004	.055**	-.055**	.022	.113**	.133**	-.01	.052**	.181**	-.059**	-.147**	-.177**	.065**	.018	.012	-.042*	.086**	1					
19	QUOTA	-.034	.019	-.062**	.084**	.174**	.223**	.086**	-.087**	-.153**	-.046*	-.226**	-.162**	.043*	.052**	.053**	-.024	.066**	.330**	1				
20	PROF	.015	.101**	-.072**	.061**	.215**	.164**	.055**	-.223**	-.192**	-.237**	.044*	-.296**	.087**	-.038*	.018	-.094**	.106**	.487**	.262**	1			
21	UNIF	-.015	-.101**	.072**	-.061**	-.215**	-.164**	-.055**	.223**	.192**	.237**	-.044*	.296**	-.087**	.038*	-.018	.094**	-.106**	-.487**	-.262**	-1.00**	1		
22	SEC	-.021	-.134**	.092**	-.088**	-.074**	-.049**	-.091**	.406**	.309**	.134**	-.131**	.187**	-.076**	.082**	-.001	.114**	-.205**	-.397**	-.240**	-.949**	.949**	1	
23	CONS	.005	-.109**	.105**	-.106**	-.044*	-.065**	-.090**	.451**	.326**	.152**	-.075**	.227**	-.072**	.074**	-.004	.103**	-.188**	-.347**	-.292**	-.906**	.906**	.976**	1

**. Correlation is significant at the 1% significance level (2-tailed).

*. Correlation is significant at the 5% significance level (2-tailed).

4.4. Regression analysis:

This study uses multivariate analysis to test the hypotheses formulated in earlier chapters. The results are supported by robustness tests, which examine the different measures of earnings quality. Finally, an endogeneity test is performed to ensure the effects of the independent variable on the dependent variable.

4.4.1. Accrual quality DD (2002) model and gender percentage:

The hierarchical linear regression (HLR) results for gender percentage and accrual quality measured using DD (2002) model are presented in Table 4.11. The first column in the table shows the relationship between the control variables and AQ_DD. The results indicate that BOD_SIZE, BOD_IND, ROA, and SIZE were positively related to AQ_DD ($P < 0.01$). PB, LOSS, and QUOTA ($P < 0.01$) were negatively related to AQ_DD. The adjusted R square for the model is 13.6%.

The independent variable gender percentage is added to the model in the second level of HLR. The addition of the gender percentage increased the explanatory power of the model (adjusted R square) from 13.6 to 14.4%. Gender diversity is found to be positively related to AQ_DD ($P < 0.01$). This supports the first proposed hypothesis that board gender diversity increases the quality of accruals in the company.

Cultural dimensions as moderators:

The last four columns in Table 4.11 include the cultural dimension variables as well as the interaction (each cultural dimension at a time). Power distance and individualism add 0.004 and 0.003 to the model fit, respectively. Uncertainty avoidance added 0.009, while masculinity didn't enhance the model fit. The results suggest a negative association

between PD and AQ_DD ($P < 0.01$) and a positive association between both IND and UA and AQ_DD ($P < 0.01$). These results indicate that low power distance, individualistic, and high uncertainty avoidance societies possess high accrual quality. However, hypotheses two through five assess the moderation effect of cultural dimensions over the relationship between gender diversity and accrual quality. None of the cultural dimensions were found to moderate the relationship between GENDER_PCT and AQ_DD. Hence, hypotheses two, three, four, and five are rejected.

Accounting values as moderators:

The moderation effect of accounting values on the relationship between gender diversity and accrual quality is presented in Table 4.12. All the accounting values variables added 0.002 to the model fit except CONS, which added 0.003. GEND_P*PROF was positively associated with AQ_DD ($P<0.01$), GEND_P*UNIF, GEND_P*SEC ($P<0.05$), and GEND_P*CONS ($P<0.01$) were negatively associated with AQ_DD. The results indicate that all the accounting values moderate the relationship between AQ_DD and GENDER_PCT. These findings indicate that the effect of a gender-diverse board on accrual quality is high in professional, flexible, transparent, and optimist societies. These results support hypotheses six, seven, eight, and nine.

Table 4.11. The Relationship Between Gender Percentage and Discretionary Accruals (DD 2002) for Different Cultural Dimensions

	Controls	GENDER percentage	PD	IND	MAS	UA
GENDER_PCT		**0.102****	**0.099****	**0.096****	**0.105****	**0.107****
		(5.422)	(5.247)	(5.085)	(5.33)	(5.717)
BOD_SIZE	**0.116****	**0.096****	**0.089****	**0.081****	**0.094****	**0.093****
	(6.243)	(5.094)	(4.708)	(4.212)	(4.966)	(4.845)
BOD_IND	**0.133****	**0.09****	0.047	0.037	**0.096****	**0.097****
	(5.646)	(3.626)	(1.675)	(1.267)	(3.769)	(3.942)
AC_IND	-0.034	-0.019	-0.014	-0.02	-0.019	-0.011
	(-1.457)	(-0.794)	(-0.577)	(-0.847)	(-0.781)	(-0.458)
DUALITY	0.03	**0.035***	0.024	0.027	0.031	0.009
	(1.714)	(2.007)	(1.366)	(1.543)	(1.725)	(0.471)
BOD_MEET	-0.026	-0.035	**-0.041***	-0.037	-0.037	**-0.058****
	(-1.319)	(-1.771)	(-2.038)	(-1.839)	(-1.806)	(-2.855)
AC_MEET	-0.01	0.001	-0.016	-0.018	-0.007	-0.033
	(-0.509)	(0.057)	(-0.802)	(-0.857)	(-0.316)	(-1.547)
ROA	**0.077****	**0.069****	**0.068****	**0.068****	**0.07****	**0.068****
	(3.416)	(3.08)	(3.039)	(3.011)	(3.085)	(3.047)
PB	**-0.056****	**-0.058****	**-0.056****	**-0.058****	**-0.057****	**-0.05***
	(-2.867)	(-2.937)	(-2.865)	(-2.942)	(-2.896)	(-2.57)
LEV	0.028	0.024	0.023	0.021	0.024	0.025
	(1.489)	(1.302)	(1.245)	(1.115)	(1.303)	(1.356)
LOSS	**-0.189****	**-0.186****	**-0.185****	**-0.184****	**-0.185****	**-0.184****
	(-8.939)	(-8.816)	(-8.789)	(-8.731)	(-8.775)	(-8.78)
LN_SIZE	**0.181****	**0.194****	**0.223****	**0.229****	**0.198****	**0.186****
	(8.861)	(9.502)	(10.233)	(9.35)	(9.503)	(8.867)
INV_PRT	-0.017	-0.023	**-0.043***	-0.035	-0.02	-0.031
	(-0.884)	(-1.247)	(-2.214)	(-1.849)	(-1.054)	(-1.578)
QUOTA	**-0.056****	**-0.072****	**-0.047***	**-0.068****	**-0.071****	**-0.088****
	(-2.982)	(-3.772)	(-2.296)	(-3.587)	(-3.731)	(-4.283)
PD_Centered			**-0.088****			
			(-3.549)			
GEND_P*PD			0.029			
			(1.675)			
IND_Centered				**0.093****		
				(3.226)		
GEND_P*IND				0.021		
				(1.169)		
MAS_Centered					0.022	
					(1.02)	
GEND_P*MAS					-0.007	
					(-0.351)	
UA_Centered						**0.122****
						(5.733)
GEND_P*UA						0.022
						(1.083)
R Square	0.14	0.148	0.152	0.151	0.148	0.157
Adjusted R Square	0.136	0.144	0.147	0.147	0.144	0.153
R Square Change	0.14	0.008	0.004	0.003	0	0.009

** p < 0.01 * p < 0.05

Table 4.12. The Relationship Between Gender Percentage and Discretionary Accruals (DD 2002) for Different Accounting Values

	Controls	GENDER percentage	PROF	UNIF	SEC	CONS
GENDER_PCT		**0.102****	**0.101****	**0.101****	**0.101****	**0.105****
		(5.422)	(5.229)	(5.229)	(5.326)	(5.531)
BOD_SIZE	**0.116****	**0.096****	**0.1****	**0.1****	**0.099****	**0.101****
	(6.243)	(5.094)	(5.286)	(5.286)	(5.255)	(5.361)
BOD_IND	**0.133****	**0.09****	**0.082****	**0.082****	**0.084****	**0.078****
	(5.646)	(3.626)	(3.27)	(3.27)	(3.229)	(2.956)
AC_IND	-0.034	-0.019	-0.017	-0.017	-0.019	-0.022
	(-1.457)	(-0.794)	(-0.718)	(-0.718)	(-0.788)	(-0.916)
DUALITY	0.03	**0.035***	**0.036***	**0.036***	**0.041***	**0.037***
	(1.714)	(2.007)	(2.019)	(2.019)	(2.271)	(2.05)
BOD_MEET	-0.026	-0.035	-0.038	-0.038	-0.038	-0.035
	(-1.319)	(-1.771)	(-1.867)	(-1.867)	(-1.858)	(-1.732)
AC_MEET	-0.01	0.001	0.001	0.001	0.008	0.005
	(-0.509)	(0.057)	(0.052)	(0.052)	(0.394)	(0.225)
ROA	**0.077****	**0.069****	**0.067****	**0.067****	**0.068****	**0.068****
	(3.416)	(3.08)	(2.985)	(2.985)	(3.001)	(3.008)
PB	**-0.056****	**-0.058****	**-0.056****	**-0.056****	**-0.056****	**-0.056****
	(-2.867)	(-2.937)	(-2.843)	(-2.843)	(-2.839)	(-2.876)
LEV	0.028	0.024	0.023	0.023	0.023	0.023
	(1.489)	(1.302)	(1.25)	(1.25)	(1.212)	(1.212)
LOSS	**-0.189****	**-0.186****	**-0.188****	**-0.188****	**-0.187****	**-0.189****
	(-8.939)	(-8.816)	(-8.902)	(-8.902)	(-8.885)	(-8.964)
LN_SIZE	**0.181****	**0.194****	**0.196****	**0.196****	**0.197****	**0.195****
	(8.861)	(9.502)	(9.569)	(9.569)	(9.611)	(9.56)
INV_PRT	-0.017	-0.023	-0.023	-0.023	-0.028	-0.026 (-
	(-0.884)	(-1.247)	(-1.064)	(-1.064)	(-1.363)	1.274)
QUOTA	**-0.056****	**-0.072****	**-0.068****	**-0.068****	**-0.071****	**-0.067****
	(-2.982)	(-3.772)	(-3.588)	(-3.588)	(-3.726)	(-3.489)
PROF_Centered			-0.024			
			(-1.007)			
GEND_P*PROF			**0.048****			
			(2.535)			
UNIF_Centered				0.024		
				(1.007)		
GEND_P*UNIF				**-0.048***		
				(-2.535)		
SEC_Centered					0.008	
					(0.366)	
GEND_P*SEC					**-0.045***	
					(-2.455)	
CONS_Centered						0.026
						(1.155)
GEND_P*CONS						**-0.051****
						(-2.895)
R Square	0.14	0.148	0.15	0.15	0.15	0.15
Adjusted R Square	0.136	0.144	0.145	0.145	0.145	0.146
R Square Change	0.14	0.008	0.002	0.002	0.002	0.003

** p < 0.01 * p < 0.05

4.4.2. Discretionary accruals and gender diversity:

The results of the hierarchical linear regression using discretionary accruals as the dependent variable are shown in Table 4.13 and 4.14. The variable AQ_Dis is positively related to BOD_SIZE (P<0.05) BOD_IND, PB, and LOSS (P < 0.01). However, AQ_Dis is negatively related to QUOTA and INV_PRT (P < 0.05). The adjusted R squares for the model is 0.026. Adding female percentage to the model in the second level did not increase the model fit as GENDER_PCT is not statistically related to AQ_Dis. Hence, hypothesis 1 is rejected when using AQ_Dis as the dependent variable.

Cultural dimensions as moderators:

The cultural dimensions were included in the model to test the moderation effect of each cultural dimension on the relationship between GENDER_PCT and AQ_Dis. The results in Table 4.13 show that the interaction between gender percentage and power distance was the only significant interaction (P<0.05). This implies that female directors influence accruals quality in large power distance societies. These results reject hypotheses two, three, four, and five. This result indicates that the effect of gender diversity on accrual quality is similar in all cultural dimensions except power distance. Nevertheless, it is worth mentioning that UA is positively related to AQ_Dis (P < 0.01). This implies that higher uncertainty avoidance societies have higher quality accruals.

Accounting values as moderators:

The hierarchical linear regression results presented in Table 4.14 focus on the moderating effect of accounting values on the relationship between GENDER_PCT and AQ_Dis. All the interactions of the accounting values were significant (P < 0.01).

Professionalism, uniformity, secrecy, and conservatism were found to moderate the relationship between gender percentage and accrual quality when measured using the discretionary accruals component. GEND_P*PROF is positively related to AQ_Dis ($P < 0.01$), while GENDER_PCT*UNIF, GENDER_PCT*SEC, and GENDER_PCT*CONS were negatively related to AQ_Dis ($P < 0.01$). These results suggest that the effect of gender diversity on accrual quality is higher in flexible, transparent, optimist countries, and countries with high professionalism. These results support hypotheses six, seven, eight, and nine, which state that the effect of gender diversity on accrual quality is reduced in statutory control, uniform, secretive, and conservative societies.

Table 4.13. The Relationship Between Gender Percentage and Discretionary Accruals for Different Cultural Dimensions

	Controls	GENDER percentage	PD	IND	MAS	UA
GENDER_PCT		0.032	0.033	0.031	0.026	0.038
		(1.61)	(1.615)	(1.556)	(1.252)	(1.88)
BOD_SIZE	**0.05***	**0.043***	**0.041***	0.039	**0.046***	**0.043***
	(2.514)	(2.153)	(2.019)	(1.89)	(2.253)	(2.089)
BOD_IND	**0.081****	**0.067***	0.047	0.05	**0.06***	**0.076****
	(3.25)	(2.56)	(1.585)	(1.595)	(2.224)	(2.888)
AC_IND	-0.003	0.002	0.003	0.001	0.004	0.01
	(-0.128)	(0.068)	(0.116)	(0.043)	(0.168)	(0.403)
DUALITY	0.022	0.024	0.014	0.022	0.028	-0.002
	(1.18)	(1.264)	(0.729)	(1.146)	(1.44)	(-0.123)
BOD_MEET	-0.01	-0.013	-0.014	-0.012	-0.013	-0.034
	(-0.477)	(-0.609)	(-0.658)	(-0.584)	(-0.617)	(-1.586)
AC_MEET	-0.037	-0.033	**-0.046***	-0.041	-0.026	**-0.068****
	(-1.77)	(-1.592)	(-2.137)	(-1.87)	(-1.167)	(-3.013)
ROA	-0.035	-0.037	-0.037	-0.038	-0.038	-0.039
	(-1.458)	(-1.557)	(-1.544)	(-1.574)	(-1.575)	(-1.629)
PB	**0.064****	**0.064****	**0.065****	**0.064****	**0.063****	**0.07****
	(3.059)	(3.043)	(3.101)	(3.055)	(3.022)	(3.356)
LEV	-0.029	-0.03	-0.03	-0.031	-0.029	-0.028
	(-1.439)	(-1.496)	(-1.532)	(-1.564)	(-1.484)	(-1.441)
LOSS	**0.077****	**0.078****	**0.077****	**0.078****	**0.077****	**0.079****
	(3.423)	(3.47)	(3.438)	(3.463)	(3.439)	(3.531)
LN_SIZE	-0.032	-0.027	-0.005	-0.009	-0.031	-0.039
	(-1.464)	(-1.255)	(-0.223)	(-0.358)	(-1.395)	(-1.725)
INV_PRT	**-0.041***	**-0.043***	**-0.054***	**-0.046***	**-0.047***	**-0.054***
	(-2.056)	(-2.159)	(-2.585)	(-2.293)	(-2.33)	(-2.589)
QUOTA	**-0.05***	**-0.055****	**-0.044***	**-0.055****	**-0.056****	**-0.064****
	(-2.503)	(-2.716)	(-1.993)	(-2.724)	(-2.739)	(-2.937)
PD_Centered			-0.052			
			(-1.944)			
GEND_P*PD			**0.045***			
			(2.412)			
IND_Centered				0.033		
				(1.078)		
GEND_P*IND				-0.012		
				(-0.648)		
MAS_Centered					-0.024	
					(-1.049)	
GEND_P*MAS					-0.002	
					(-0.107)	
UA_Centered						**0.113****
						(4.955)
GEND_P*UA						0.005
						(0.251)
R Square	0.03	0.031	0.034	0.031	0.031	0.038
Adjusted R Square	0.026	0.026	0.028	0.026	0.026	0.033
R Square Change	0.03	0.001	0.003	0.001	0.001	0.008

** p < 0.01 * p < 0.05

Table 4.14. The Relationship Between Gender Percentage and Discretionary Accruals for Different Accounting Values

	Controls	GENDER percentage	PROF	UNIF	SEC	CONS
GENDER_PCT		0.032	0.037	0.037	0.036	0.039
		(1.61)	(1.775)	(1.775)	(1.768)	(1.915)
BOD_SIZE	**0.05***	**0.043***	**0.049***	**0.049***	**0.048***	**0.051***
	(2.514)	(2.153)	(2.417)	(2.417)	(2.387)	(2.512)
BOD_IND	**0.081****	**0.067***	0.053	0.053	0.047	0.041
	(3.25)	(2.56)	(1.96)	(1.96)	(1.715)	(1.452)
AC_IND	-0.003	0.002	0	0	-0.003	-0.005
	(-0.128)	(0.068)	(-0.014)	(-0.014)	(-0.122)	(-0.186)
DUALITY	0.022	0.024	0.02	0.02	0.026	0.021
	(1.18)	(1.264)	(1.059)	(1.059)	(1.386)	(1.123)
BOD_MEET	-0.01	-0.013	-0.012	-0.012	-0.01	-0.008
	(-0.477)	(-0.609)	(-0.539)	(-0.539)	(-0.444)	(-0.395)
AC_MEET	-0.037	-0.033	-0.04	-0.04	-0.03	-0.034
	(-1.77)	(-1.592)	(-1.841)	(-1.841)	(-1.393)	(-1.583)
ROA	-0.035	-0.037	-0.04	-0.04	-0.039	-0.039
	(-1.458)	(-1.557)	(-1.653)	(-1.653)	(-1.635)	(-1.64)
PB	**0.064****	**0.064****	**0.065****	**0.065****	**0.064****	**0.064****
	(3.059)	(3.043)	(3.1)	(3.1)	(3.075)	(3.062)
LEV	-0.029	-0.03	-0.031	-0.031	-0.032	-0.031
	(-1.439)	(-1.496)	(-1.549)	(-1.549)	(-1.598)	(-1.592)
LOSS	**0.077****	**0.078****	**0.074****	**0.074****	**0.074****	**0.072****
	(3.423)	(3.47)	(3.292)	(3.292)	(3.284)	(3.227)
LN_SIZE	-0.032	-0.027	-0.026	-0.026	-0.024	-0.026
	(-1.464)	(-1.255)	(-1.184)	(-1.184)	(-1.092)	(-1.204)
INV_PRT	**-0.041***	**-0.043***	-0.03	-0.03	-0.035	-0.037
	(-2.056)	(-2.159)	(-1.297)	(-1.297)	(-1.609)	(-1.734)
QUOTA	**-0.05***	**-0.055****	**-0.05***	**-0.05***	**-0.052***	**-0.046***
	(-2.503)	(-2.716)	(-2.447)	(-2.447)	(-2.579)	(-2.232)
PROF_Centered			**-0.06***			
			(-2.343)			
GEND_P*PROF			**0.065****			
			(3.232)			
UNIF_Centered				**0.06***		
				(2.343)		
GEND_P*UNIF				**-0.065****		
				(-3.232)		
SEC_Centered					0.047	
					(1.958)	
GEND_P*SEC					**-0.061****	
					(-3.148)	
CONS_Centered						**0.062***
						(2.586)
GEND_P*CONS						**-0.066****
						(-3.513)
R Square	0.03	0.031	0.035	0.035	0.035	0.036
Adjusted R Square	0.026	0.026	0.03	0.03	0.03	0.031
R Square Change	0.03	0.001	0.004	0.004	0.004	0.006

** $p < 0.01$ * $p < 0.05$

4.4.3. Innate accruals and gender diversity:

Innate accruals are used as the dependent variable in Tables 4.15 and 4.16. The first column of the results presents the relationship between the control variables and AQ_Innate. BOD_SIZE, BOD_IND, ROA, LEV, and SIZE are positively related to AQ_Innate ($P < 0.01$). AQ_Innate is negatively related to AC_IND ($P < 0.05$), PB and LOSS ($P < 0.01$). The model has an adjusted R square of 0.42. The second column adds the independent variable GENDER_PCT to the model to test hypothesis one. The results indicate that gender percentage and innate discretionary accruals are positively related ($P < 0.01$). This result shows that more female directors increase quality accruals as measured by innate accrual. This result supports hypothesis one.

Cultural dimensions as moderators:

The results for the second level of HLR are reported in the last four columns in Table 4.15, where cultural dimensions and interaction terms were added to the model interchangeably to test their moderation effect on the analysis. The interaction between gender percentage and individualism was significant, which means that the individualistic cultural dimension moderates the association between gender percentage and innate accruals. Hypothesis three was accepted, while hypotheses two, four, and five were rejected. It is crucial to mention that PD was negatively related to AQ_Innate ($P < 0.01$), while IND and MAS ($P < 0.01$) were positively related to the same variable. This result indicates that AQ_Innate tends to be higher in individualistic, masculine, and low power distance societies relative to societies with other cultural dimensions**.**

Accounting values as moderators:

The results for the moderating effect of accounting values on the relationship between the percentage of gender diversity and accrual quality are presented in Table 4.16. The table does not show any association between the interaction variables and AQ_Innate, thus suggesting that none of the accounting values moderate the relationship between gender diversity and innate accruals. As a result, hypotheses six, seven, eight, and nine are rejected. Nevertheless, it is worth indicating that the secrecy variable is negatively related to innate accruals ($P < 0.05$). This signifies that in secretive societies, innate accruals tend to be lower than in transparent societies.

Table 4.15. The Relationship Between Gender Percentage and Innate Accruals for Different Cultural Dimensions

	Controls	GENDER percentage	PD	IND	MAS	UA
GENDER_PCT		**0.115****	**0.11****	**0.107****	**0.126****	**0.117****
		(7.502)	(7.174)	(6.983)	(7.869)	(7.614)
BOD_SIZE	**0.116****	**0.094****	**0.087****	**0.077****	**0.089****	**0.089****
	(7.66)	(6.116)	(5.608)	(4.905)	(5.749)	(5.734)
BOD_IND	**0.106****	**0.057****	0.017	-0.001	**0.075****	**0.059****
	(5.52)	(2.86)	(0.733)	(-0.025)	(3.615)	(2.94)
AC_IND	**-0.047***	-0.029	-0.023	-0.03	-0.032	-0.027
	(-2.448)	(-1.541)	(-1.218)	(-1.605)	(-1.665)	(-1.413)
DUALITY	0.02	0.026	0.021	0.016	0.015	0.015
	(1.397)	(1.805)	(1.418)	(1.135)	(1.038)	(1.029)
BOD_MEET	-0.028	**-0.038***	**-0.045***	**-0.04***	**-0.039***	**-0.047****
	(-1.697)	(-2.329)	(-2.742)	(-2.494)	(-2.385)	(-2.863)
AC_MEET	0.026	**0.038***	0.027	0.019	0.019	0.027
	(1.632)	(2.42)	(1.656)	(1.172)	(1.125)	(1.575)
ROA	**0.153****	**0.144****	**0.142****	**0.142****	**0.145****	**0.144****
	(8.278)	(7.859)	(7.766)	(7.781)	(7.906)	(7.879)
PB	**-0.154****	**-0.156****	**-0.155****	**-0.156****	**-0.154****	**-0.152****
	(-9.596)	(-9.76)	(-9.718)	(-9.82)	(-9.67)	(-9.523)
LEV	**0.073****	**0.069****	**0.068****	**0.065****	**0.068****	**0.069****
	(4.767)	(4.54)	(4.492)	(4.314)	(4.533)	(4.547)
LOSS	**-0.364****	**-0.361****	**-0.359****	**-0.358****	**-0.359****	**-0.359****
	(-21.099)	(-21.056)	(-20.964)	(-20.954)	(-20.972)	(-21.014)
LN_SIZE	**0.302****	**0.317****	**0.336****	**0.348****	**0.328****	**0.317****
	(18.131)	(19.078)	(18.903)	(17.543)	(19.317)	(18.549)
INV_PRT	0.021	0.013	-0.004	0	0.023	0.014
	(1.368)	(0.877)	(-0.254)	(-0.016)	(1.478)	(0.904)
QUOTA	-0.028	**-0.045****	-0.021	**-0.039***	**-0.043***	**-0.058****
	(-1.78)	(-2.898)	(-1.267)	(-2.549)	(-2.794)	(-3.484)
PD_Centered			**-0.073****			
			(-3.613)			
GEND_P*PD			-0.007			
			(-0.471)			
IND_Centered				**0.101****		
				(4.297)		
GEND_P*IND				**0.044****		
				(3.075)		
MAS_Centered					**0.059****	
					(3.384)	
GEND_P*MAS					-0.007	
					(-0.482)	
UA_Centered						0.055
						(3.18)
GEND_P*UA						0.027
						(1.594)
R Square	0.426	0.436	0.438	0.441	0.438	0.438
Adjusted R Square	0.423	0.433	0.436	0.438	0.435	0.435
R Square Change	0.426	0.01	0.003	0.005	0.002	0.002

** $p < 0.01$ * $p < 0.05$

Table 4.16. The Relationship Between Gender Percentage and Innate Accruals for Different Accounting Values

	Controls	GENDER percentage	PROF	UNIF	SEC	CONS
GENDER_PCT		**0.115****	**0.109****	**0.109****	**0.11****	**0.112****
		(7.502)	(6.911)	(6.911)	(7.099)	(7.253)
BOD_SIZE	**0.116****	**0.094****	**0.094****	**0.094****	**0.093****	**0.094****
	(7.66)	(6.116)	(6.08)	(6.08)	(6.07)	(6.078)
BOD_IND	**0.106****	**0.057****	**0.063****	**0.063****	**0.071****	**0.07****
	(5.52)	(2.86)	(3.086)	(3.086)	(3.37)	(3.254)
AC_IND	**-0.047***	-0.029	-0.025	-0.025	-0.024	-0.027
	(-2.448)	(-1.541)	(-1.282)	(-1.282)	(-1.254)	(-1.392)
DUALITY	0.02	0.026	**0.031***	**0.031***	**0.031***	**0.03***
	(1.397)	(1.805)	(2.125)	(2.125)	(2.109)	(2.089)
BOD_MEET	-0.028	**-0.038***	**-0.043***	**-0.043***	**-0.045***	**-0.042***
	(-1.697)	(-2.329)	(-2.605)	(-2.605)	(-2.727)	(-2.568)
AC_MEET	0.026	**0.038***	**0.046***	**0.046***	**0.045***	**0.044***
	(1.632)	(2.42)	(2.768)	(2.768)	(2.74)	(2.706)
ROA	**0.153****	**0.144****	**0.144****	**0.144****	**0.144****	**0.144****
	(8.278)	(7.859)	(7.817)	(7.817)	(7.825)	(7.836)
PB	**-0.154****	**-0.156****	**-0.154****	**-0.154****	**-0.154****	**-0.154****
	(-9.596)	(-9.76)	(-9.662)	(-9.662)	(-9.623)	(-9.661)
LEV	**0.073****	**0.069****	**0.068****	**0.068****	**0.068****	**0.068****
	(4.767)	(4.54)	(4.519)	(4.519)	(4.523)	(4.508)
LOSS	**-0.364****	**-0.361****	**-0.359****	**-0.359****	**-0.358****	**-0.359****
	(-21.099)	(-21.056)	(-20.935)	(-20.935)	(-20.902)	(-20.942)
LN_SIZE	**0.302****	**0.317****	**0.317****	**0.317****	**0.317****	**0.317****
	(18.131)	(19.078)	(19.085)	(19.085)	(19.034)	(19.088)
INV_PRT	0.021	0.013	-0.001	-0.001	-0.002	0.003
	(1.368)	(0.877)	(-0.046)	(-0.046)	(-0.136)	(0.205)
QUOTA	-0.028	**-0.045****	**-0.046****	**-0.046****	**-0.047****	**-0.048****
	(-1.78)	(-2.898)	(-2.955)	(-2.955)	(-3.017)	(-3.089)
PROF_Centered			0.031			
			(1.577)			
GEND_P*PROF			-0.001			
			(-0.096)			
UNIF_Centered				-0.031		
				(-1.577)		
GEND_P*UNIF				0.001		
				(0.096)		
SEC_Centered					**-0.04***	
					(-2.181)	
GEND_P*SEC					0.002	
					(0.118)	
CONS_Centered						-0.03
						(-1.659)
GEND_P*CONS						-0.002
						(-0.152)
R Square	0.426	0.436	0.436	0.436	0.437	0.436
Adjusted R Square	0.423	0.433	0.434	0.434	0.434	0.434
R Square Change	0.426	0.01	0	0	0.001	0.001

** p < 0.01 * p < 0.05

4.5. Additional test:

This study performed several additional tests to assess the robustness of the results. The first set of analyses use gender dummy as an alternative proxy for gender diversity. These analyses also examine the moderation impact of cultural dimensions and accounting values on the relationship between gender dummy and accrual quality. Furthermore, the last analysis uses a modified Jones model instead of accrual estimation error as the dependent variable to measure earnings quality whiles using gender percentage as the independent variable.

4.5.1. Accrual quality DD (2002) model and gender dummy:

The results of the association between gender dummy and accrual quality measured by the DD (2002) model are presented in the second column of Table 4.17 in Appendix C. The results show that the gender dummy is not related to accrual quality, indicating that having at least one female director will not affect the quality of accruals reported by the company. This result further rejects hypothesis one.

Based on cultural dimensions

The moderation effect of cultural aspects on the relationship between GENDER_DUMY and AQ_DD are presented in the last four columns of Table 4.17 in Appendix C. The results showed a positive association between gender dummy and individualism interaction, and AQ_DD ($P < 0.05$). These results indicate that in individualistic countries, the relationship between gender diversity and AQ_DD tends to be higher than in collectivist countries. This finding further supports hypothesis three, which stats that gender diversity-accrual quality relationship is reduced in collective

societies. Power distance, individualism, and uncertainty avoidance added 0.005, 0.005, and 0.009 to the model fit, respectively. However, masculinity did increase the model fit.

Based on accounting values:

The results for the moderation effect of accounting values on gender dummy-accrual quality relationships are presented in Table 4.18 in Appendix C. Professionalism, and uniformity accounting values appeared to moderate the relationship between gender dummy and accrual estimation error. The results indicate that the effect of having at least one female director on accrual quality is higher in professional and flexible societies relative to statutory control and uniform societies. Hence, these results further support hypotheses six and seven.

4.5.2. Discretionary accruals and gender dummy:

Tables 4.19 and 4.20 in Appendix D present the regression results for the relationship between gender dummy and accrual quality measured by discretionary accruals. The results show that there is no association between GENDER_DUMY and AQ_Dis, indicating that having at least one female on the board would not affect the quality of accruals measured by discretionary accruals. Hence, hypothesis one is rejected.

Based on cultural dimensions:

The moderation effect of different cultural dimensions on the relationship between gender dummy and discretionary accruals is shown in Table 4.19 in Appendix D. The results suggest that none of the cultural dimensions moderate the relationship between gender dummy and AQ_Dis. This implies that the association between gender dummy and accrual quality tends to be the same in the presence of the four cultural dimensions. Hence,

hypothesis two, three, four, and five are rejected.

Based on accounting values:

The results shown in Table 4.20 in Appendix D demonstrate the moderating effect of accounting values on the relationship between gender dummy and discretionary accruals. The interaction between gender dummy and all accounting values was significant ($P < 0.01$), implying that different accounting values moderate the relationship between gender dummy and accrual quality as measured by discretionary accruals. These results indicate that the effect of at least one female director on accrual quality is higher in professional, flexible, transparent, and optimist countries. Therefore, these results support hypotheses six, seven, eight, and nine.

4.5.3. Innate accruals and gender dummy:

The relationship between innate accruals and gender diversity, measured by gender dummy, is shown in both Tables 4.21 and 4.22 in Appendix E. The results suggest that there is a positive association between gender dummy and innate accruals ($P < 0.01$). These findings indicate that having at least one female director on the board will significantly improve innate accruals. Hence, the result supports hypothesis one.

Based on cultural dimensions:

Table 4.21 in Appendix E presents the results for the moderating effect of cultural dimension on the relationship between gender dummy and innate accruals. The interaction between gender dummy and power distance was negatively related to AQ_Innate ($P < 0.01$), while the interaction between gender dummy and individualism was positively related to the same variable ($P < 0.01$). This result indicates that power distance and

individualism are the only dimensions that moderate the relationship between gender diversity and innate accruals. The result suggests that, in small power distance and individualist societies, the effect of gender-diverse boards on innate accruals tends to be higher than in large power distance and collective societies. This result further supports hypotheses two and three.

Based on accounting values:

The moderating effect of accounting values on the relationship between gender dummy and innate accruals is shown in Table 4.22 in Appendix E. The results showed no significant association between any of the interactions and innate accruals, thus indicating that none of the accounting values moderate the association between gender dummy and innate accruals. Hence, hypotheses six, seven, eight, and nine are rejected.

4.5.4. Modified Jones model and gender percentage:

This section assesses the relationship between gender percentage and the modified Jones model, which is an alternative proxy for earnings quality. Results in Tables 4.23 and 4.24 in Appendix F show the association between the control variable and gender percentage and modified Jones model. Tables 4.23 and 4.24 also present the moderating effect of the cultural dimension and accounting values on the relationship, which was proposed earlier. The results showed that there is a negative association between gender percentage and modified Jones model ($P < 0.01$), indicating that the increase in gender diversity leads to a decrease in abnormal accruals, and hence, an increase in earnings quality. This result is aligned with hypothesis one, which states that gender diversity enhances accrual quality.

Based on cultural dimensions:

Table 4.23 in Appendix F assesses the moderating effect of cultural dimensions on the impact of gender percentage on earnings quality by introducing an interaction effect. Results showed a positive association between the interaction term of individualism (GEND_P*IND) and accrual quality ($P < 0.05$). However, a negative association was found between the interaction term of power distance (GEND_P*PD) and accrual quality ($P < 0.01$). These results indicate that the association between a gender diverse board and accrual quality tends to be stronger in individualist and large power distance societies relative to other societies. The results support hypotheses three. Additionally, it is notable to mention that PD showed a positive association with accrual quality ($P < 0.01$), while IND showed a negative association ($P < 0.01$). These results indicate that accrual quality (measured using the modified Jones model) tends to be higher in large power distance and collective societies when compared to other societies.

Based on accounting values:

The moderating effect of the accounting values on the relationship between gender percentage and earnings quality is shown in Table 4.24 in Appendix F. the results point to a negative association between the interaction of professionalism and the modified Jones model ($P < 0.01$). This suggests that the effect of gender percentage on accrual quality tends to be higher in professional societies. Furthermore, the results show a positive association between the modified Jones model measure and the interaction terms of uniformity, secrecy, and conservatism ($P < 0.01$), implying that in, flexible, transparent, and optimist societies, female directors' effect on accrual quality tends to be

higher than in uniform, secretive and conservative societies. Hence, the results support hypotheses six, seven, eight, and nine.

4.6. Endogeneity test:

Endogeneity is often caused by the effect of omitted variables or reverse causality (Adams and Ferreira, 2009). Omitted or unobservable variables could affect both the independent and dependent variables. Hence, if they are not correctly controlled for, they might falsify non-existing associations. To reduce such an effect, this thesis controls for as many variables as possible. Reverse causality is the problem in which the change in the independent variable is caused by the change in the dependent variable and not the other way around. The main concern of this endogeneity test is to ensure the absence of reverse causality and to ensure that the change in earnings quality is affected by the change in the level of gender diversity. This study attempts to eliminate the effect of reverse causality by restricting the dataset to the countries that suffer from an exogenous shock of a gender quota. The presence of the quota will ensure the direction of the relationship as companies will be forced to include females on their board of directors regardless of the level of their earnings.

After limiting the data to only the countries that have board gender quotas in place, the sample is reduced to 491 companies. The results in Table 4.25 show a positive association between gender diversity and accrual quality measured using AQ_DD and AQ_Dis ($P < 0.01$). However, female representation does not have any significant effect on AQ_Innate. The results also show a negative association between AQ_MJones and gender diversity ($P < 0.01$). These results indicate that gender-diverse boards significantly

increase accrual quality and, hence, enhance earnings quality. Additionally, the 491 companies are spread over six countries with different quota requirements; Germany (30%), Belgium (33%), Italy (33%), France (40%), Norway (40%), and India (At least one). Table 4.26 in Appendix G presents the results after controlling for the different quota requirements. The analysis controls for different quota requirements of 30%, 33%, and 40% female representation, keeping "at least one female requirement" as the reference category. Results show that gender percentage increase the quality of the company earnings measured using both AQ_DD and AQ_Dis ($P < 0.05$). However, female presence on boards does not significantly affect AQ_Innate and AQ_MJones.

Table 4.25. The Relationship Between Gender Percentage and Earnings Quality Measures for Countries That Have Gender Quota in Place

	AQ_DD	AQ_Dis	AQ_Innate	AQ_MJones
GENDER_PCT	**0.175****	**0.174****	0.091	**-0.159****
	(3.427)	(3.264)	(1.963)	(-3.095)
LN_BOD_SIZE	0.055	0.012	0.083	0.042
	(1.047)	(0.224)	(1.731)	(0.788)
BOD_IND	-0.033	-0.052	0.008	-0.028
	(-0.641)	(-0.977)	(0.168)	(-0.538)
AC_IND	0.027	0.03	0.009	0.051
	(0.525)	(0.566)	(0.204)	(0.997)
DUALITY	0.025	-0.027	**0.08***	0.044
	(0.587)	(-0.608)	(2.045)	(1.021)
LN_BOD_MEET	-0.062	-0.031	-0.072	0.028
	(-1.232)	(-0.58)	(-1.575)	(0.549)
LN_AC_MEET	0.038	-0.013	0.086	-0.03
	(0.741)	(-0.246)	(1.819)	(-0.576)
ROA	-0.018	-0.01	-0.019	**0.301****
	(-0.299)	(-0.165)	(-0.346)	(5.034)
PB	-0.042	0.078	**-0.174****	-0.053
	(-0.839)	(1.502)	(-3.851)	(-1.063)
Finl_LEV	0.008	-0.002	0.017	**0.152****
	(0.179)	(-0.033)	(0.401)	(3.208)
LOSS	**-0.162****	0.097	**-0.413****	**-0.18****
	(-3.267)	(1.876)	(-9.177)	(-3.615)
LN_SIZE	0.057	0.007	0.093	**-0.149****
	(1.04)	(0.131)	(1.855)	(-2.707)
INV_PRT	**-0.238****	**-0.195****	**-0.176****	0.054
	(-4.01)	(-3.155)	(-3.27)	(0.908)
R Square	0.169	0.097	0.313	0.162
Adjusted R Square	0.146	0.072	0.294	0.139

** p < 0.01 * p < 0.05

CHAPTER 5: DISCUSSION

This Chapter highlights and discusses the results of the analyses, which are presented in the previous chapter. The Chapter consists of four sections. The first section discusses the results of hypothesis one, the effect of board gender diversity on accrual quality. The second section discusses the results of hypotheses two through five that test the moderating effect of Hofstede's cultural dimensions on the relationship stated in hypothesis one. Finally, the third section discusses the results of hypotheses six through nine, which represents the moderating effect of accounting values on the relationship stated in hypothesis one.

5.1. Accruals quality and board gender diversity:

A summary of the results pertaining to the nine hypotheses is presented in Table 5.1.

Table 5.1. Summary of Results

	AQ_DD		AQ_Dis		AQ_Innate		AQ_MJones
	GENDER_PCT	GENDER_DUMY	GENDER_PCT	GENDER_DUMY	GENDER_PCT	GENDER_DUMY	GENDER_PCT
H1	**P < 0.01**	Reject	Reject	Reject	**P < 0.01**	**P < 0.01**	**P < 0.01**
H2	Reject	Reject	**Reject**	Reject	Reject	**P < 0.01**	**Reject**
H3	Reject	**P < 0.01**	Reject	Reject	**P < 0.01**	**P < 0.01**	**P < 0.05**
H4	Reject	Reject	Reject	Reject	Reject	Reject	Reject
H5	Reject	Reject	Reject	Reject	Reject	Reject	Reject
H6	**P < 0.01**	**P < 0.05**	**P < 0.01**	**P < 0.01**	Reject	Reject	**P < 0.05**
H7	**P < 0.05**	**P < 0.05**	**P < 0.05**	**P < 0.01**	Reject	Reject	**P < 0.05**
H8	**P < 0.05**	Reject	**P < 0.01**	**P < 0.01**	Reject	Reject	**P < 0.05**
H9	**P < 0.01**	Reject	**P < 0.01**	**P < 0.01**	Reject	Reject	**P < 0.01**

The analyses of the results show that hypothesis one is significant, thus indicating that female directors enhance the company's accrual quality as measured by using various proxies. This is in line with results worldwide such as those from the United States (Srinidhi, Gul, & Tsui, 2011), China (Ran, Fang, Luo, & Chan, 2015), Europe (Kyaw, Olugbode, & Petracci, 2015; Panzer & Müller, 2015; Triki Damak, 2018) and Vietnam (Hoang, Abeysekera, & Ma, 2017). This finding can be explained by referring to agency theory, where board composition, represented by the inclusion of outside directors, impacts agency problems, and board effectiveness (Fama & Jensen, 1983). Carter, Simkins, & Simpson (2003) argued that board gender, ethnic, or cultural diversity improved the independence of the board. The argument presented in Carter et al. (2003) was supported by Adams & Ferreira (2009) and Terjesen, Couto, & Francisco (2016), who emphasize the role of female directors in mimicking and supporting the monitoring role of independent directors.

In addition to the multivariate results, the univariate and correlation results presented in Chapter 4 also support prior research arguments and indicate that female directors increase accrual quality through enhancing the effectiveness of the board's independence. More specifically, results from the previous chapter show that companies with at least one female director appear to have higher accrual quality and higher board independence relative to other companies. The results also confirm a high correlation between accrual quality and board independence and gender diversity.

This finding could be rooted in the cognitive mindset of female directors. Being

more conservative and detail-oriented, women directors are more cautious regarding strategic decisions and financial reporting. Male executives can be overconfident when compared to their female counterparts (Huang & Kisgen, 2013). According to Huang et al. (2013), overconfident managers are less likely to question their estimates. Relative to female executives, overconfident male managers are more likely to engage in value-destroying acquisitions that can lead to lower returns. Furthermore, female CEOs are more risk-averse than male CEOs (Zalata, Ntim, Aboud, & Gyapong, 2018). Additionally, female CFOs are found to be more conservative and engage less in earnings management (Liu, Wei, & Xie, 2016). Even within in audit committees, female members are found to enhance monitoring through demanding extensive audit work (Aldamen, Hollindale, & Ziegelmayer, 2018). Therefore, given their risk aversion, conservatism, and unadventurous nature, female directors are expected to enhance accrual quality (Qi, Lin, Tian, & Lewis, 2017; Barua, Davidson, Rama, & Thiruvadi, 2010; Belot & Serve, 2018).

5.2. Cultural dimensions:

Hypotheses two through five tests the moderation effect of Hofstede's cultural dimensions (power distance, individualism, masculinity, and uncertainty avoidance) on the relationship between gender diversity and accrual quality. There are mixed results using different proxies, as shown in Table 5.1. The following are discussions for each of Hofstede's cultural dimensions.

5.2.1. Power distance:

Hypothesis two states that the impact of gender diversity on accrual quality is reduced in large power distance societies. Power distance is found to moderate the

association between gender dummy and AQ_Innate negatively. These results indicate that, in large power distance societies, the effect of having any number of female directors is decreased relative to low power distance societies. However, power distance yields unexpected results regarding gender percentage and both discretionary accruals and modified Jones model measures. The findings point to the fact that an increase in gender percentage results in higher quality accruals within high power distance societies where it would be expected to result in lower accruals quality.

The interactions between accrual quality and gender percentage in small and large power distance societies are shown in Figures 5.1 and 5.2. Both figures demonstrate that having female directors does not make any significant difference in the quality of accruals in small power distance societies. However, increasing the percentage of female directors will positively enhance the quality of accruals in large power distance societies. Figure 5.3 shows that the effect of at least one female director on accruals quality measures using innate accruals is reduced in large power distance societies. All the graphs lead to a key conclusion, which is having a sufficient number of female directors, in large power distance societies, is needed in order to have influence earnings quality. Several reasons could explain these findings.

The first reason is that large power distance societies are less likely to have governance codes regarding board gender diversity (Humphries & Whelan, 2017) and lower gender representation than in small power distance societies (Carrasco, Francoeur, Réal, Laffarga, & Ruiz-Barbadillo, 2012). Results from Chapter 4 show a low representation of female directors in high power distance societies. This could be caused

by the intensity of traditional gender roles in high power distance societies, which could marginalize women and leave them at the bottom of the hierarchy (Parboteeah, Hoegl, & Cullen, 2008). Besides the lower gender diversity, large power distance societies appear to have higher accounting errors (Chan, Lin & Mo, 2003) and corruption rates (Kimbro 2002).

Hili & Affess (2012) did not find any significant association between gender diversity and earnings persistence in France, a large power distance country with a score of 68 on the Hofstede power distance scale. Similar to Hili & Affess (2012), the second reason can be traced back to the socio-psychological factors and female ascension barriers imposed by traditional gender role expectations. The high gender role stereotypical expectations in large power distance societies prevent women from being promoted to higher managerial roles. In such societies, managers should possess qualities that are inconsistent with female expected gender roles. Therefore, to be promoted to such positions, females would need to adopt the qualities and norms compatible with the social expectation of such a role (Hili & Affess, 2012).

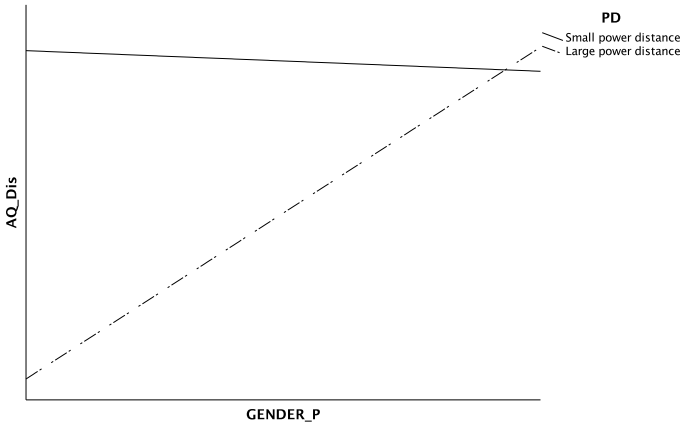

Figure 5.1. The effect of gender percentage on discretionary accrual in large versus small power distance societies.

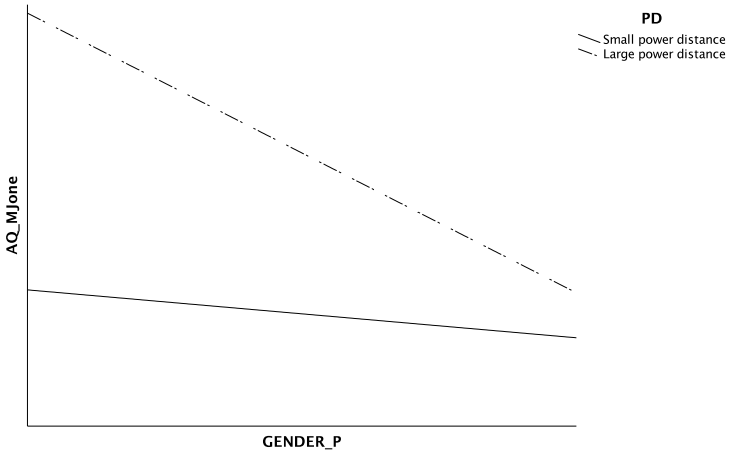

Figure 5.2. The effect of gender percentage on modified Jones model in large versus small power distance societies.

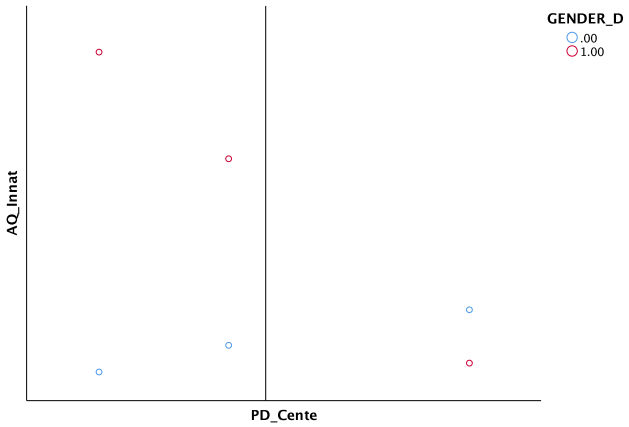

Figure 5.3. The effect of gender dummy on innate accruals in large versus small power distance societies.

5.2.2. Individualism versus collectivism:

Hypothesis three states that gender diversity should have a weaker impact on accrual quality in collectivistic societies. The model was significant when using gender dummy and accrual quality, as measured by the DD (2002) accrual estimation error and the innate accruals component of the decomposed DD model. These results indicate that the effect of at least one female director on accrual quality is enhanced in individualistic societies. The model was also significant regarding gender percentage and innate accruals. However, the results for the relationship between gender percentage and modified Jones model was the opposite of what was expected. This indicates that the effect of gender percentage on accruals quality is reduced when measured using innate accruals but not modified Jones model. Figures 5.4, 5.5, 5.6, and 5.7 graphically illustrate the results. Figures 5.3 and 5.4 depicts the association between gender percentage and accrual quality in individualistic and collectivistic societies. Figure 5.3, which represents the results of the interactions between innate accruals quality and gender diversity, shows that the increase in female directors enhances the quality of accruals in collectivistic and individualist societies. However, the effect is higher in individualistic societies. Inversely, Figure 5.4 shows that due to a higher level of earnings quality in individualist societies, increasing the number of female directors does not show any significant impact on the quality of earnings. While in collectivistic societies, adding more female directors is associated with higher quality accruals. The interaction in Figures 5.6 and 5.7 show how gender dummy affect accruals quality measured using accruals estimation error and innate accruals across individualistic and collectivistic societies. The results show that, in

individualistic societies, the effect of having at least one female director is significantly higher than in collectivistic societies.

This finding is in line with the results reported in Li, Griffin, Yue, & Zhao (2013), which argue that managerial discretion strengthens the positive association between individualism and corporate risk-taking. Prior studies also found that individualism is associated with higher risk-taking (Shao, Kwok, & Zhang, 2013; Kanagaretnam, Lim, & Lobo (2011) and higher accounting errors than collective societies (Chan, Lin & Mo (2003). Boards in collective societies tend to marginalize and undervalue the opinion of minorities or outgroups, which occurs when there is a female director (Chen, Crossland, & Huang, 2016). There is evidence to suggest that male directors form a collective group based on their gender and consider the opposite gender as an outgroup (Schneid, Isidor, Li, & Kabst, 2015).

Humphries & Whelan (2017) show that individualistic societies are more likely to have governance codes in place regarding board gender diversity. Results from Chapter Four show that individualistic societies have a significantly higher representation of female directors on corporate boards compared to collective societies. Higher female representation and having a board composition enforcement code enhances diversity in the board as it represents valuing perspectives and ideas of individuals (Humphries & Whelan, 2017). As a result, female directors, with their conservative and risk-averse nature, are likely to influence boards of individualistic countries, which are less conservative and risk-taking. Female presence on the board would contribute to minimize risk-taking and hence increase the quality of accrual estimation.

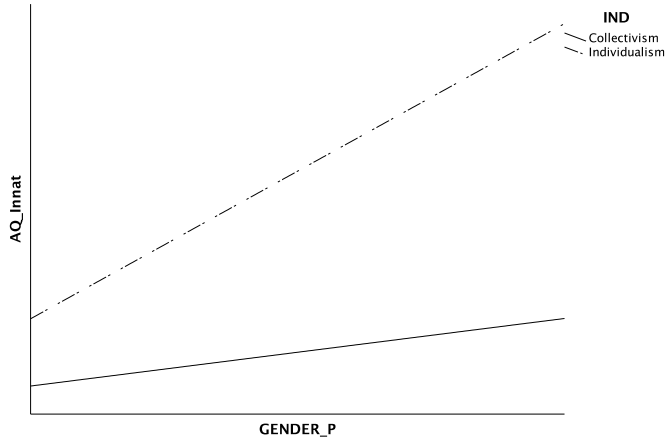

Figure 5.4. The effect of gender percentage on innate accruals in individualistic versus collectivistic societies.

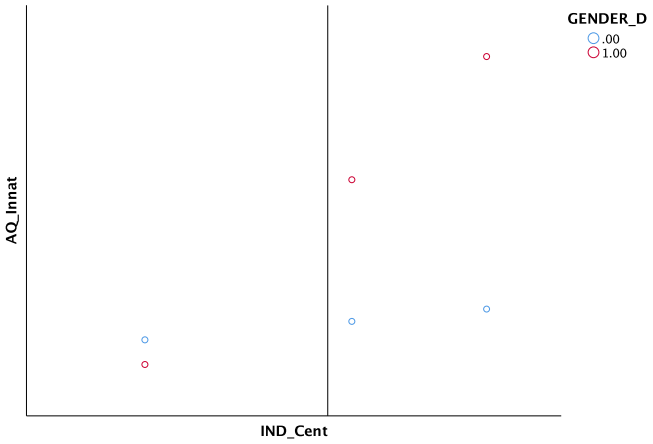

Figure 5.5. The effect of gender dummy on innate accruals quality in individualistic versus collectivistic societies.

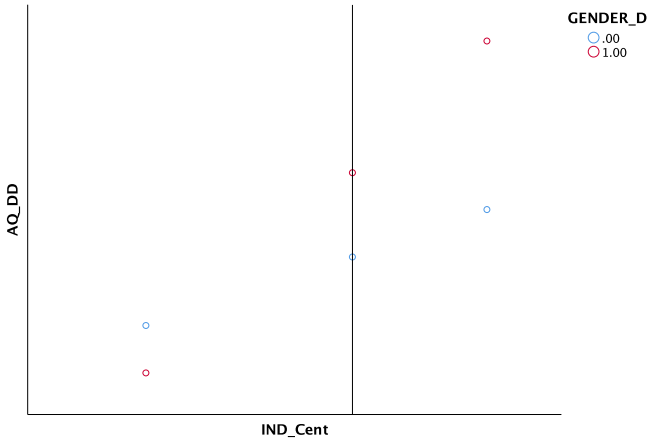

Figure 5.6. The effect of gender dummy on accruals estimation error in individualistic versus collectivistic societies.

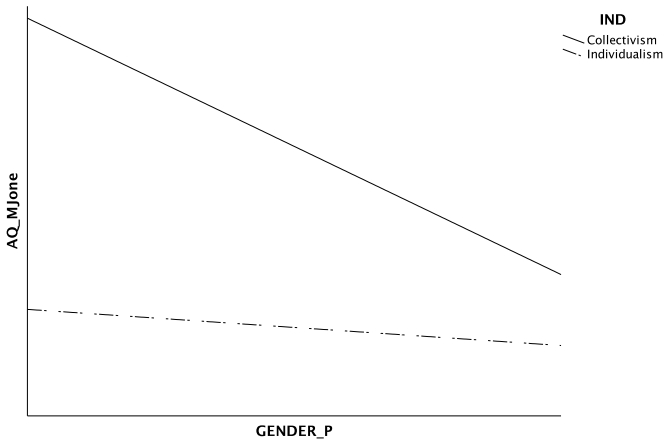

Figure 5.7. The effect of gender percentage on modified Jones model in individualistic versus collectivistic societies.

5.2.3. Masculinity versus femininity:

Hypothesis four states that gender diversity's impact on accrual quality is reduced in masculine societies relative to feminine societies. The hypothesis was not supported using all different proxies. This indicates that there is no difference between masculine and feminine societies when it comes to the effect of female directors on earnings quality.

Prior studies, such as Carrasco, Francoeur, Labelle, Laffarga, & Ruiz-Barbadillo (2015) Humphries & Whelan (2017); and Kanagaretnam, Lim, & Lobo (2011), provide similar results. The results from the current thesis also show that feminine societies have higher female representation on boards of directors and a higher quality of accruals. Similarly, Carrasco, Francoeur, Labelle, Laffarga, & Ruiz-Barbadillo (2015) found that feminine societies appoint more female directors than masculine societies. Likewise, Humphries & Whelan (2017) found that masculine societies are less likely to put board gender diversity codes in place. Furthermore, Kanagaretnam, Lim, & Lobo (2011) found that banks in masculine societies tend to manage earnings to meet or beat predetermined targets and have higher earnings smoothing. García-Sánchez, Rodríguez-Ariza, & Frías-Aceituno (2013) found that feminine societies are more concerned with integrated reporting. It can be concluded that having higher female representation in feminine societies that value reporting quality will enhance companies' accrual quality.

5.2.4. Uncertainty avoidance

Hypothesis five states that the impact of gender diversity on accrual quality is reduced in high uncertainty avoidance societies. This hypothesis was rejected using different proxies for gender diversity and accrual quality. This indicates that the

uncertainty avoidance cultural dimension does not mediate the impact of gender diversity on accrual quality. However, it is worth motioning that uncertainty avoidance was positively related to accrual quality measured using accrual estimation error and discretionary accruals. These findings imply that companies in high uncertainty avoidance countries have higher quality earnings than low uncertainty avoidance companies. This result is contrary to the results of Doupnik (2008) and Nabar & Boonlert-U-Thai (2007), who found that uncertainty avoidance is highly associated with earnings management.

5.3. Accounting values:

Hypotheses six through nine tests the moderating effect of Gray's accounting values on the relationship between gender diversity and accrual quality. Mixed results were found with respect to the relationships stated in hypotheses six, seven, eight, and nine, as shown in Table 5.1.

5.3.1. Professionalism versus statutory control and Uniformity versus flexibility:

Due to the perfect negative correlation between accounting values of professionalism and uniformity presented in chapter four, hypotheses six and seven are discussed simultaneously. Hypotheses six and seven focus on the relationship between the accrual estimation error and the discretionary component of accrual quality and both gender percentage and dummy. Analysis of the results with respect to hypotheses six and seven suggest that they should be accepted. Both hypotheses are also accepted when assessing the effect of gender percentage on the modified Jones model. The results are graphically illustrated in Figures 5.8 through 5.17. Those figures depict the relationship

between gender diversity and accrual quality using several proxies in professional versus statutory control and uniformity versus flexibility accounting values. The results for professionalism and uniformity accounting values are exactly the same; hence the interaction graphs for uniformity accounting values are presented in appendix H.

Figures 5.8, 5.13 show that an increase in the percentage of female directors enhances the quality of earnings, which is measured using discretionary accruals in both dimensions of the two accounting values. However, the impact is higher in professional and flexible societies. Figures 5.9 and 5.14 show that in statutory control and uniform societies increasing female directors will decrease accruals quality, which is measured using discretionary accruals. Nevertheless, figures 5.10, 5.11, 5.15, and 5.16 show the effect of gender dummy on accruals estimation error and discretionary accruals across the two accounting values. Results revealed that based on accruals estimation error, at least one female director would enhance earnings quality in professional and flexible societies, while the effect does not change using discretionary accruals across different dimensions. Additionally, figures 5.12 and 5.17 show the interaction of gender diversity and modified Jones model across professional versus statutory control societies and uniform versus flexible societies. These results show that gender diversity decreases abnormal accruals in both dimensions of the two accounting values. However, the effect is higher in professional and flexible societies.

As predicted, these results indicate that statutory control and uniform accounting values negatively moderate the association between gender diversity and accrual quality. This is based on the findings of Braun & Rodriguez (2008), who found that earnings

management is positively associated with statutory control and uniformity accounting values. Another supporting reason is the low representation of female directors in both accounting values, as found in the result in Chapter Four.

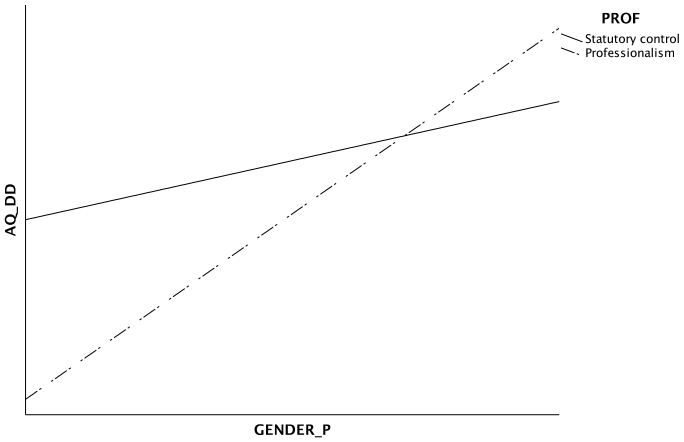

Figure 5.8. The effect of gender percentage on accrual estimation error in professional versus statutory control societies.

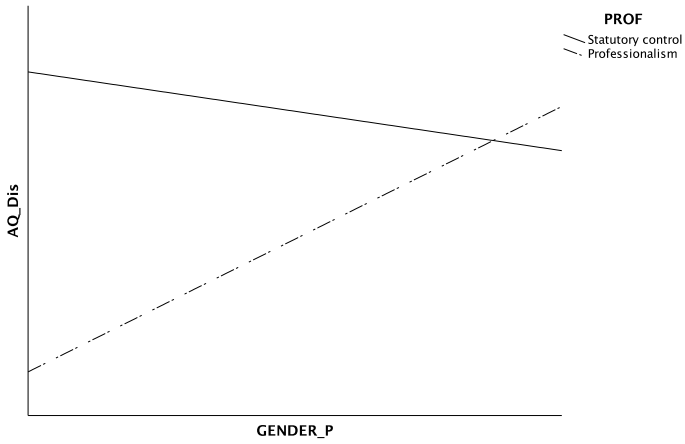

Figure 5.9. The effect of gender percentage on discretionary accrual quality in professional versus statutory control societies.

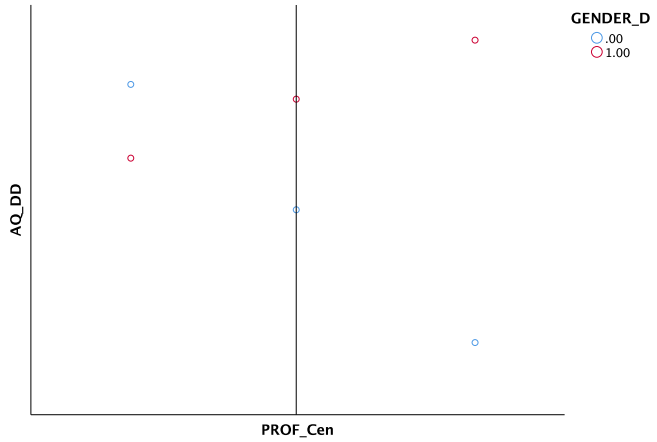

Figure 5.10. The effect of gender dummy on accruals estimation error in professional versus statutory control societies.

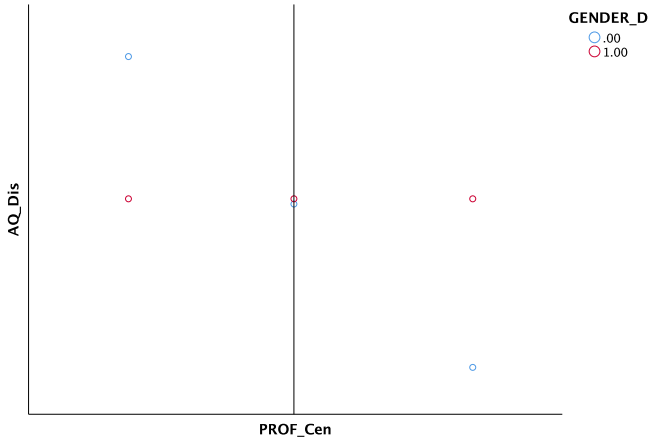

Figure 5.11. The effect of gender dummy on discretionary accruals in professional versus statutory control societies.

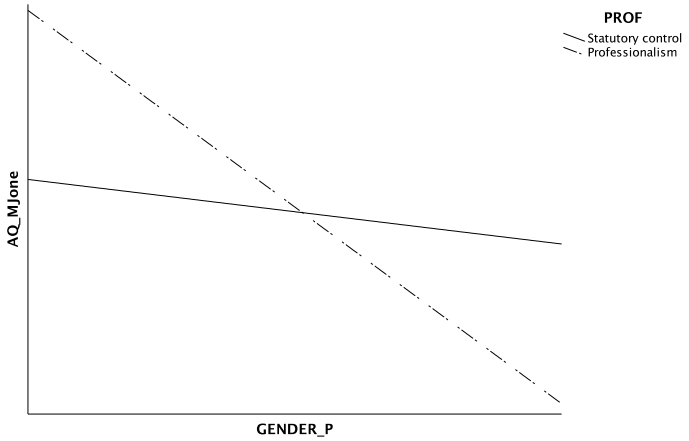

Figure 5.12. The effect of gender percentage on modified Jones model in professional versus statutory control societies.

Secrecy versus transparency:

Hypothesis eight states that gender diversity–accrual quality relationship is reduced in secretive societies. This model is significant when using accruals estimation error, the discretionary component of accrual quality, and the modified Jones model. The interaction effect is presented in Figure 5.18, 5.19, 5.20, and 5.21. Figure 5.18 shows that gender diversity does influence accruals estimation error in both dimensions; however, the effect is higher in transparent societies. The interaction between gender diversity and discretionary accruals in secretive and transparent societies is presented in figures 5.19 and 5.20. Figures depict that adding at least one female director would not have a significant impact on accrual quality, however, when gender percentage is considered, an

increase in female directors would lead to an increase in accruals quality. Lastly, figure 5.21 shows that an increase in female directors will have no effect on the modified Jones model in secretive societies while increasing accruals quality in transparent societies.

These results can be explained through the findings of Braun & Rodriguez (2008), who showed that earnings management is positively associated with secretive societies. Geiger & Van Der Laan Smith (2010) found that people in secretive societies are more likely to accept earnings management practices. Additionally, Zarzaski (1996) concluded that secrecy is associated with less financial disclosure. Hope, Kang, Thomas & Yoo (2008) found that companies in secretive societies are less likely to appoint Big4 auditors. Results reported in Chapter Four show a significant difference in accrual quality and gender representation between secrecy and transparency accounting values.

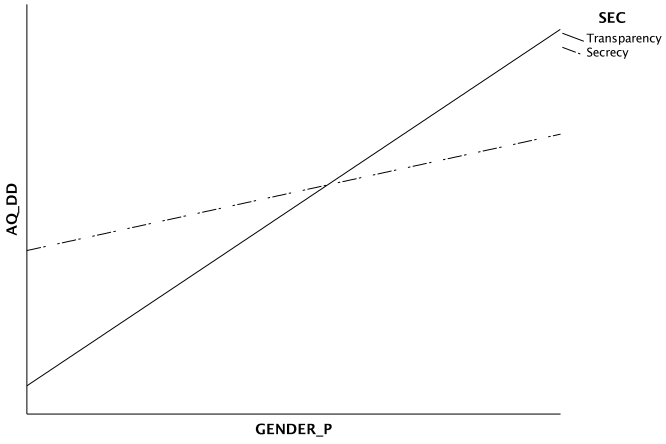

Figure 5.18. The effect of gender percentage on accruals estimation error in secretive versus transparent societies.

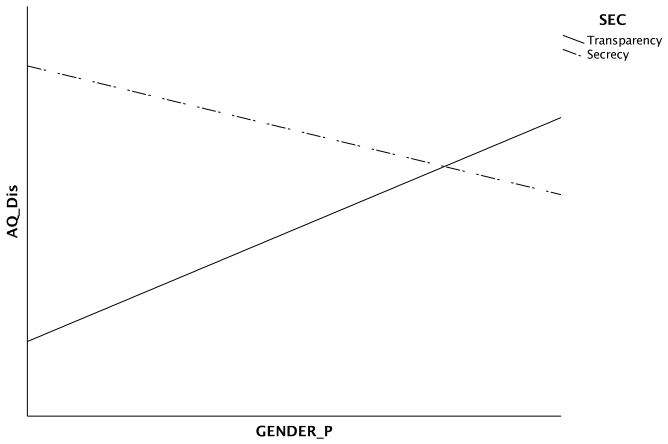

Figure 5.19. The effect of gender percentage on discretionary accruals in secretive versus transparent societies.

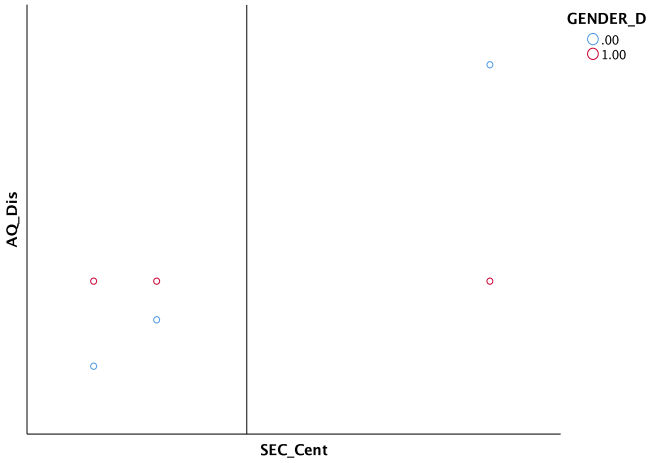

Figure 5.20. The effect of gender dummy on discretionary accrual quality in secretive versus transparent societies.

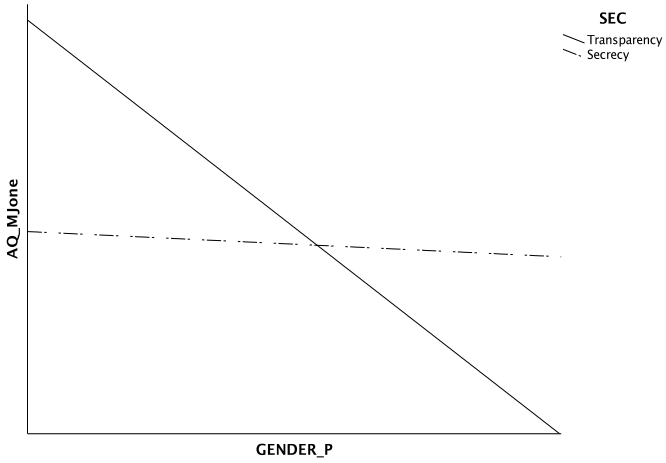

Figure 5.21. The effect of gender percentage on modified Jones model in secretive versus transparent societies.

Conservatism versus optimism:

Hypothesis nine states that the relationship between gender diversity and accrual quality is reduced in conservative societies. This model is significant when testing the effect of gender percentage on accruals estimation error, the discretionary component of accrual quality, and modified Jones model as proxies for earnings quality. Figures 5.22, 5.23, and 5.24 show that gender percentage enhances accrual quality in optimist societies vis-à-vis conservative societies. However, the effect of gender diversity on accruals quality in conservative societies is different based on various proxies. Gender diversity shows a positive effect on accruals quality measured using accruals estimation error, and negative effect when measured using the discretionary component of accruals. However, no effect is detected when measured using a modified Jones model.

Figure 5.25 depicts the relationship between the gender dummy and discretionary accruals. Results revealed that the effect of at least one female director on discretionary accruals is relatively the same in both conservative and optimist societies. This finding is partially confirmed by the results of Braun & Rodriguez (2008), who found that conservative societies are more likely to practice earnings management and Kang, Lee, Ng & Tay (2004), who found that conservative societies tend to practice more conservative accounting choices. These results indicate that they might engage more in income decreasing earnings management. Additionally, due to their conservative nature Arun, Almahrog, & Aribi (2015) found that female directors engage more in income decreasing earnings management practices. These findings might be the reason why female directors have less impact on accrual quality in conservative societies.

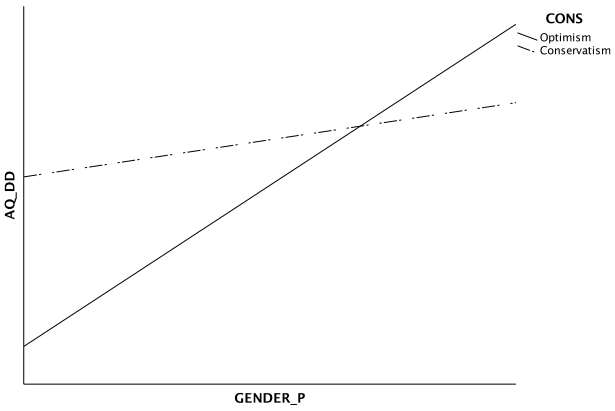

Figure 5.22. The effect of gender diversity on innate accrual quality in conservative versus optimist societies.

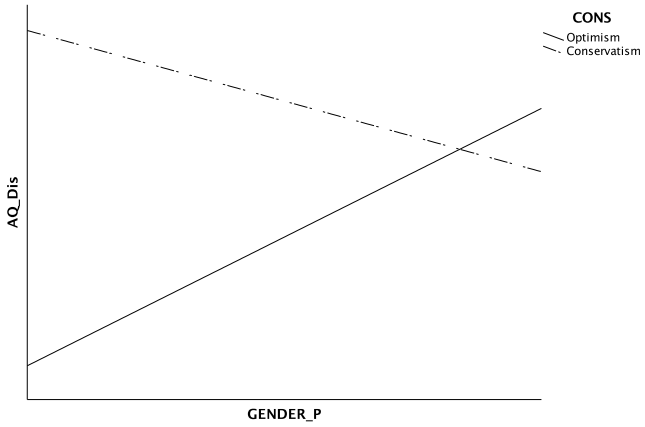

Figure 5.23. The effect of gender diversity on modifies Jones model in conservative versus optimist societies.

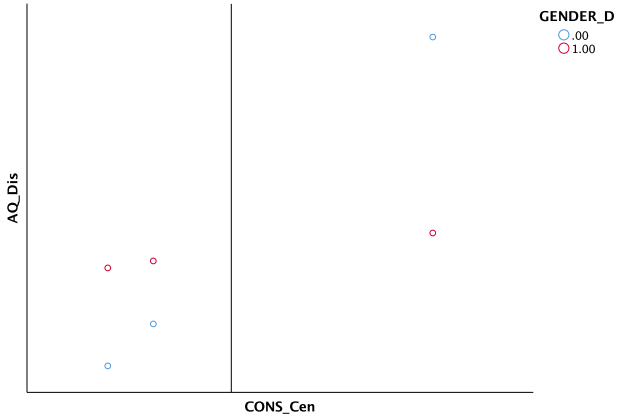

Figure 5.24. The effect of gender diversity on discretionary accrual quality in conservative versus optimist societies.

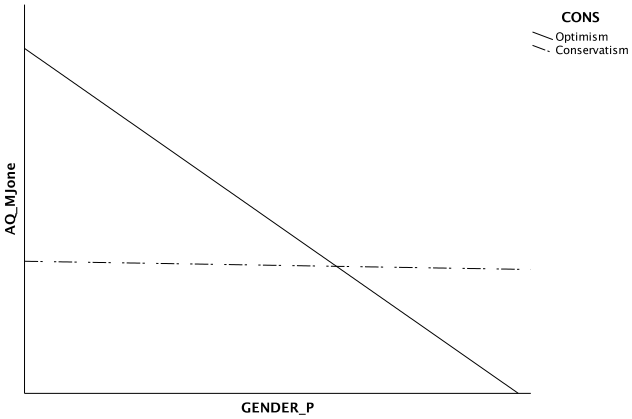

Figure 5.25. The effect of gender diversity on discretionary accrual quality in conservative versus optimist societies.

CHAPTER 6: CONCLUSION

This Chapter provides the conclusion to the study. The first section summarizes the study. The second section states the conclusion of the study. The third section discusses the implications of the study. The fourth section examines the limitations of the study and set forth future research suggestions. Finally, the last section represents the contribution of the study.

6.1. Summary of the study:

Corporate governance often moves into the spotlight in the aftermath of a financial crisis or corporate collapse. In light of such events, corporate governance is relied upon to restore investor confidence and trust in the information provided by management and disclosed in the financial statements. It is used to provide an internal control mechanism to regain shareholders' trust in the credibility of the financial statements and to restrain opportunistic managerial behaviors. The core of an effective corporate governance structure is the board of directors. Diversity in the composition of the board of directors is a crucial factor that affects the long-term and short-term financial value of the company (Carter, Simkins, & Simpson, 2003).

There are two arguments regarding board diversity: ethical and economic. The ethical arguments focus on equality and that the boards should have a structure representative to the shareholders and population in general. The economic argument claims that diverse boards are more productive, creative, and make more decent decisions (Carter, Simkins, & Simpson, 2003). This study links the economic and ethical arguments regarding board gender diversity, expecting that the economic impact of female directors is affected by the cultural and cognitive perception regarding the female role in the country.

Board diversity represents diversity in terms of age, gender, nationality,

ethnicity, educational background, and organizational membership (Campbell & Mínguez-Vera, 2008). Gender diversity is a vital board composition factor that contributes to the effectiveness of corporate governance and enhances firm value (Adams & Ferreira, 2009; Gul, Srinidhi & Ng, 2011). Hence, the first objective of this study is to investigate the relationship between board gender diversity and the quality of the company's earnings. Additionally, this study introduces the institutional theory due to the relationship between board gender diversity and earnings quality. It proposes that the national culture of the country mediates the effect of female directors on accrual quality. Therefore, this study combines both the agency theory and institutional theory to study the proposed relationship.

The sample of the study consists of 3,092 companies from 46 countries. The financial and corporate governance data for the companies were retrieved from the Bloomberg database. The study uses descriptive and inferential statistics to describe the data. Hierarchical linear regression models are used to test the nine hypotheses proposed. The dependent variable of the study is accrual quality. The Dechow & Dichev (DD) (2002) accrual estimation error model, as well as the decomposed DD model and modified Jones model, were used as proxies for accrual quality. The independent variable of the study is gender diversity, which is measured using the percentage of female directors and a gender dummy (presence of at least one female director on the board). The study uses Hofstede's cultural dimensions and Gray's accounting values to moderate the relationship between gender diversity and accrual quality. The study further controls for board, firm, and specific control variables to mitigate the effect of omitted variables.

6.2. Conclusion of the study:

This study failed to reject hypothesis one, which indicates that female directors

enhance the quality of the company earnings. The results remained constant even after testing for endogeneity to ensure the absence of reverse causality. Nevertheless, this effect varied across different cultural dimensions and accounting values. The results revealed that the effect of gender diversity on accrual quality is reduced in large power distance and collective societies. This led to accepting hypotheses two and three. Furthermore, several models supported all four hypotheses related to accounting values. The findings indicate that the impact of gender diversity on accrual quality is reduced in statutory control, uniform, secretive, and conservative societies.

6.3. Implications and recommendations:

Based on the empirical findings, this study proposes several suggestions and recommendations. Results of hypothesis one support the position that female directors enhance the quality of the company earnings. Hence, it is recommended that organizations appoint female directors on their boards. However, the differences among the effect of female directors on earnings quality across different national cultural dimensions suggest that it is not a "one size fits all." More specifically, considerations that depend on the national culture must be considered.

The broad implication of this research can be linked to the gender quota research. In effect, the question here is not whether gender quota is effective or not. Instead, the question should be where a gender quota is needed. These results imply that for collective and masculine societies to ensure having higher quality accruals, they must have more than one female director represented on the board. Hence, the recommendation is that governments of collective and masculine countries should put gender quotas in place to ensure the presence of a sufficient number of females on boards. This counteracts the psychological nature of the board that makes it difficult for a female to interact in a group where gender is considered the base of social

categorization (Chen, Crossland, & Huang, 2016) and where she is stereotyped for performing the wrong role (Hili & Affess, 2012).

Furthermore, companies operating in countries with high gender role expectations should promote an organizational culture that grants equal opportunities for men and women through implementing regulations and social programs. Setting the tone for gender equality will grant female employees and, especially, directors the capacity to share their opinions and influence the decisions of the board. Regulations regarding females might reduce the intensity of traditional gender role expectations and encourage females to participate in the workplace. This recommendation is also appropriate for multinational companies that wish to operate in those countries as well.

Nonetheless, for these recommendations to be effective and convey the desired impact, there must be a paradigm shift in the culture. People's perceptions of gender roles must shift. Males should increasingly value the role of females in decision-making and leadership, and females should believe that they can and are allowed to possess such roles. This shift in perceptions must start in the early stage of people's lives. Therefore, it is recommended that governments urge educational institutions to begin implementing programs and activities that facilitate this social shift and change the perception of gender roles.

6.4. Limitations and future research:

This study encountered several limitations. First, the study is limited to the use of Hofstede's cultural dimensions and Gray's accounting values. Thus, it is suggested that future research employs additional cultural dimensions, such as Globe's cultural dimensions (House, Hanges, Javidan, Dorfman & Gupta, 2004). Further, the study only tests board gender diversity as the presence of female directors. However, it is recommended that future research consider different demographic attributes of female

directors. Gull, Nekhili, Nagati & Chtioui (2018) found that female directors with specific demographic characteristics influence the company accruals. Parboteeah, Hoegl, & Cullen (2008) also found that the level of education helps decrease gender role expectations. As a result, future research might control for the level of education in the country. It is also recommended that future research should test other board diversity attributes such as age, ethnicity, and cultural background that might affect the board differently in various cultural dimensions. Additionally, the study was limited by using data only from 2017. Despite the adequacy of this method, it is still recommended that future researchers employ a longitudinal research method in order to provide a more comprehensive view of the issues at hand.

Being aware of the limitations that surround Hofstede's scores, the results of this study must be interpreted with caution. These results are not based on individual countries; instead, they are based on the general concept of culture. Hence, this study is not testing the national culture per country. Rather, it is using the countries as a sample to test the overall notion of each national culture and accounting value. Effectively, in order to interpret the results accurately in a single country, the cultural scores for that country must be calculated. Using the scores found, the results of this study can be interpreted in that context.

6.5. Contribution of the study:

This study adds a crucial contribution to the body of literature. It expanded on the literature of earnings quality and gender diversity by considering culture as an institutional factor that moderates the relationship. Prior literature examined the level of gender representation based on different cultural dimensions. Past studies also examined companies' earnings quality based on the national culture in which they operate. However, to date, the current study is the only one of its kind that assesses the

effect of gender diversity on earnings quality based on Hofstede's cultural dimensions and Gray's accounting values.

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Appendix A: Descriptive Statistics by Country

Table A.1. Average Data by Country

Panel A. Independent and Board control Variables

	Country	N	GENDER_PCT	BOD_SIZE	BOD_IND	BOD_MEET	DUALITY	AC_IND	AC_MEET
1	*Bangladesh*	1	20.00	2.30	20.00	2.64	0	33.33	2.08
2	*Belgium*	14	27.35	2.39	45.94	2.11	1	66.43	1.64
3	*Brazil*	1	0.00	1.95	42.86	2.56	0	66.67	1.39
4	*Canada*	83	20.98	2.25	77.48	2.08	1	100.00	1.61
5	*Chile*	3	13.47	2.18	28.38	2.42	0	66.67	1.89
6	*China*	409	11.86	2.19	38.13	2.14	1	73.86	1.51
7	*Colombia*	4	21.03	2.10	52.83	2.76	0	91.67	2.25
8	*Denmark*	13	26.83	2.27	61.59	2.17	0	92.44	1.70
9	*Finland*	36	32.97	1.99	85.03	2.53	0	84.54	1.68
10	*France*	64	40.44	2.45	51.61	1.99	1	73.20	1.53
11	*Germany*	51	24.93	2.47	68.93	1.84	0	71.80	1.56
12	*Greece*	5	14.65	2.32	36.35	3.26	1	86.67	2.32
13	*Hong Kong*	87	11.73	2.23	41.46	1.67	1	92.89	1.07
14	*India*	325	13.73	2.18	51.84	1.73	1	83.56	1.58
15	*Ireland*	14	19.27	2.39	75.42	2.12	1	100.00	1.76
16	*Italy*	23	33.15	2.39	54.86	2.21	1	91.30	1.84
17	*Japan*	364	3.80	2.28	30.94	2.63	1	69.86	2.47
18	*Jordan*	2	7.69	2.26	18.68	1.99	0	20.83	1.59
19	*Kenya*	1	37.50	2.08	50.00	1.61	0	100.00	1.39
20	*Kuwait*	2	7.14	2.01	19.64	1.79	0	33.33	1.50
21	*Lithuania*	1	33.33	1.79	33.33	2.64	0	33.33	1.39
22	*Luxembourg*	4	20.75	2.16	57.62	2.13	1	83.33	1.62
23	*Malaysia*	41	18.96	2.17	50.97	1.83	1	88.86	1.72
24	*Mexico*	3	11.11	2.48	50.00	1.65	0	100.00	1.46
25	*Netherlands*	25	26.96	1.94	90.71	2.07	0	92.67	1.56
26	*Nigeria*	1	6.67	2.71	33.33	1.95	0	50.00	1.39
27	*Norway*	14	41.89	2.07	70.47	2.48	0	79.76	1.79
28	*Pakistan*	11	6.54	2.12	14.22	1.58	1	30.61	1.48
29	*Philippines*	16	12.35	2.34	27.19	2.16	1	56.98	1.62
30	*Poland*	3	11.11	2.01	28.73	2.41	0	50.00	1.92
31	*Portugal*	3	20.37	2.29	51.85	2.21	1	88.89	1.96
32	*Qatar*	1	0.00	2.20	33.33	1.79	0	33.33	0.69

33	*Russia*	24	7.08	2.37	37.92	2.83	0	79.44	2.11
34	*Singapore*	25	11.77	2.19	63.08	1.73	1	94.06	1.52
35	*South Africa*	43	21.59	2.36	63.95	1.70	1	100.00	1.43
36	*South Korea*	91	1.98	1.97	55.64	2.26	1	97.80	1.44
37	*Spain*	40	19.79	2.44	45.22	2.30	1	73.52	2.04
38	*Sri Lanka*	5	7.00	2.27	41.33	1.96	1	86.67	1.62
39	*Sweden*	45	34.92	2.23	58.23	2.32	0	68.75	1.58
40	*Switzerland*	24	18.69	2.18	85.93	2.05	0	100.00	1.76
41	*Thailand*	25	12.08	2.48	47.61	2.22	1	100.00	2.06
42	*Turkey*	10	5.28	2.19	35.57	1.85	0	96.67	1.51
43	*Ukraine*	3	18.06	1.83	36.94	1.99	0	83.33	1.06
44	*United Arab Emirates*	3	13.26	2.14	62.23	1.72	1	100.00	1.46
45	*United Kingdom*	165	22.67	2.12	64.83	2.11	1	97.88	1.42
46	*USA*	964	16.23	2.16	79.89	1.95	1	99.83	1.91
	Grand Total	3092	15.32	2.20	58.62	2.08	1	87.23	1.77

Table A.1. Average Data by Country (Cont.)

Panel B. Firm and Country Control variables

	Country	N	ROA	PB	LEV	LOSS	SIZE	INV_PRT	QUOTA
1	Bangladesh	1	21.04	18.10	3.80	0.00	25.59	5.70	0
2	Belgium	14	7.69	3.34	2.46	0.00	22.22	5.80	1
3	Brazil	1	3.07	1.08	2.59	0.00	23.75	6.50	0
4	Canada	83	2.37	2.32	2.64	0.18	21.93	7.70	0
5	Chile	3	5.60	3.03	2.69	0.00	27.30	6.50	0
6	China	409	4.48	2.65	2.81	0.10	23.59	4.50	0
7	Colombia	4	3.32	1.72	2.30	0.00	28.92	7.30	0
8	Denmark	13	11.95	6.54	2.39	0.00	23.88	7.20	0
9	Finland	36	4.98	2.80	2.58	0.17	21.33	5.70	0
10	France	64	4.29	2.80	3.68	0.06	22.74	6.50	1
11	Germany	51	6.07	3.33	3.99	0.02	22.63	6.00	1
12	Greece	5	1.89	1.85	4.09	0.00	21.90	6.30	0
13	Hong Kong	87	5.65	2.24	2.42	0.10	23.48	8.00	0
14	India	325	5.63	3.87	3.00	0.11	23.78	7.30	1
15	Ireland	14	5.54	3.21	2.57	0.07	22.54	7.30	0
16	Italy	23	4.66	3.31	3.72	0.09	21.90	6.30	1
17	Japan	364	4.26	1.66	2.22	0.04	25.01	6.00	0
18	Jordan	2	-4.43	1.84	2.25	0.50	19.85	3.50	0
19	Kenya	1	3.74	2.22	1.58	0.00	24.58	5.30	0
20	Kuwait	2	4.70	1.16	1.99	0.00	21.55	5.50	0
21	Lithuania	1	8.61	1.84	2.01	0.00	20.16	6.20	0
22	Luxembourg	4	6.18	1.88	2.14	0.00	22.82	4.50	0
23	Malaysia	41	5.81	3.45	2.53	0.15	22.64	8.00	0
24	Mexico	3	8.22	8.04	3.67	0.00	23.23	6.00	0
25	Netherlands	25	4.56	3.18	2.90	0.12	22.40	5.70	0
26	Nigeria	1	12.43	5.10	2.12	0.00	28.14	6.50	0
27	Norway	14	5.62	3.11	2.44	0.07	23.30	7.50	1
28	Pakistan	11	15.19	6.12	2.02	0.00	24.22	6.70	0
29	Philippines	16	5.40	2.41	3.18	0.06	25.43	4.20	0
30	Poland	3	5.56	1.02	2.18	0.00	23.14	6.30	0
31	Portugal	3	3.96	2.66	3.38	0.00	22.48	5.70	0
32	Qatar	1	-3.97	1.70	1.42	1.00	22.61	2.70	0
33	Russia	24	8.43	2.11	3.59	0.00	25.98	6.00	0
34	Singapore	25	6.12	2.21	2.72	0.00	22.07	8.30	0

35	South Africa	43	3.91	2.03	2.27	0.14	23.41	7.00	0
36	South Korea	91	4.43	1.75	2.40	0.04	29.29	7.30	0
37	Spain	40	3.82	3.39	4.42	0.08	22.20	6.50	0
38	Sri Lanka	5	8.20	2.32	2.15	0.00	25.21	6.30	0
39	Sweden	45	7.24	3.17	2.55	0.02	23.76	7.20	0
40	Switzerland	24	9.28	3.70	2.27	0.04	22.68	5.00	0
41	Thailand	25	8.09	3.86	2.48	0.00	25.32	6.70	0
42	Turkey	10	8.16	2.70	3.78	0.00	23.23	7.00	0
43	Ukraine	3	10.17	1.12	1.96	0.00	21.02	5.70	0
44	United Arab Emirates	3	5.80	3.40	2.36	0.00	22.98	7.50	0
45	United Kingdom	165	6.61	3.97	3.54	0.05	21.49	7.80	0
46	USA	964	3.91	3.87	2.91	0.17	21.40	5.70	0
	Grand Total	3092	4.79	3.16	2.84	0.11	23.00	6.18	1

Appendix B: Regression assumptions

Outliers

Before proceeding to the regression analysis, the data should be checked for outliers and violations of assumptions. An outlier is “a score very different from the rest of the data” (Field, 2018, P 685). The existence of an outlier would influence the perimeters’ and error estimates; hence data must be winsorized (Field, 2018). The data used in this study are winsorized to 150% of the three times standards deviations value. Outliers' values based on the standardized residuals were deleted.

Normality

Normality relates to the normal distribution of residuals as well as the sampling distribution of parameters when plotted it takes a bell-shaped curve. When the residuals curve deviates from a normal shape, it can form two different distributions; the case of a lake of symmetry, which is called “*skew*” and the pointiness which is called “*kurtosis.*” The skewed shape can take a form of positively or negatively skewed distribution where the frequency of data is clustered either in the right or the left side of the graph. The second form of distributions “kurtosis” relates to the distribution being flatter or pointier than usual (Field, 2018). The normality plots for the predictor variables are as follows:

Accrual estimation error:

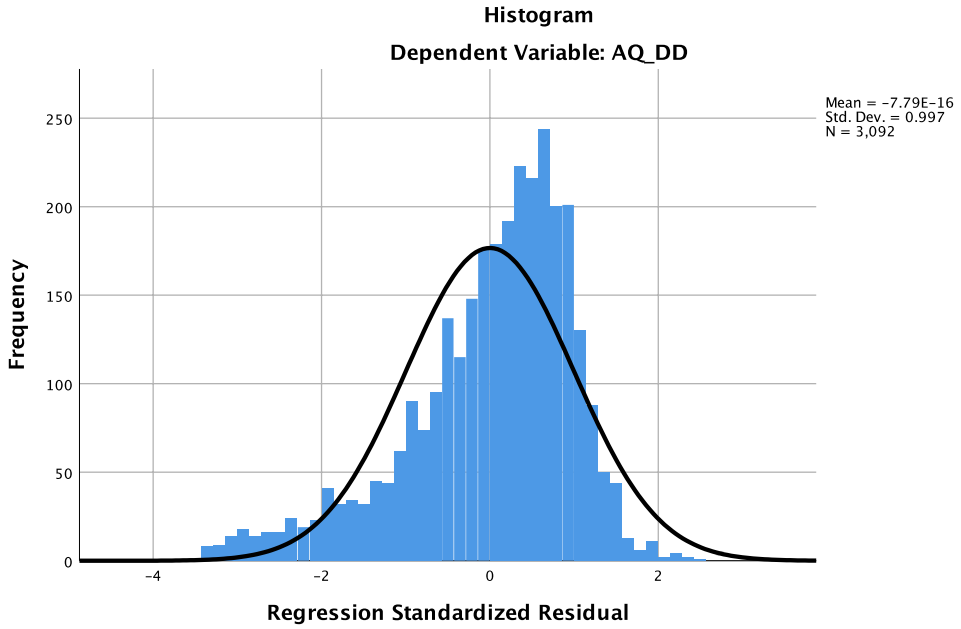

Figure B.1. Histogram AQ_DD

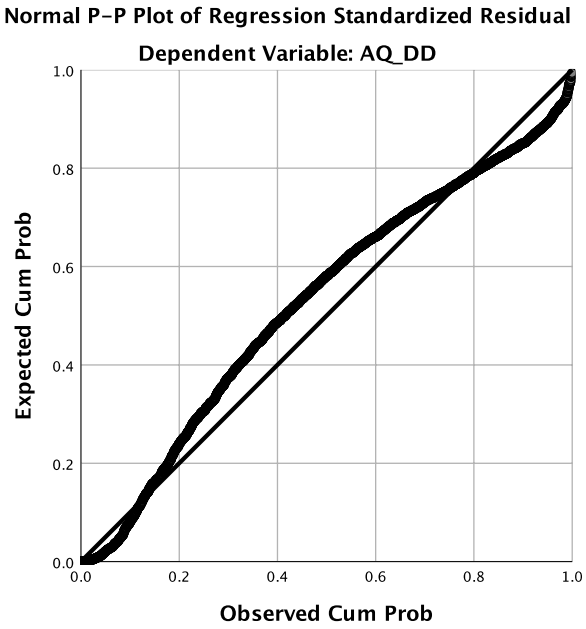

Figure B.2. P-P plot AQ_DD

Discretionary accrual quality:

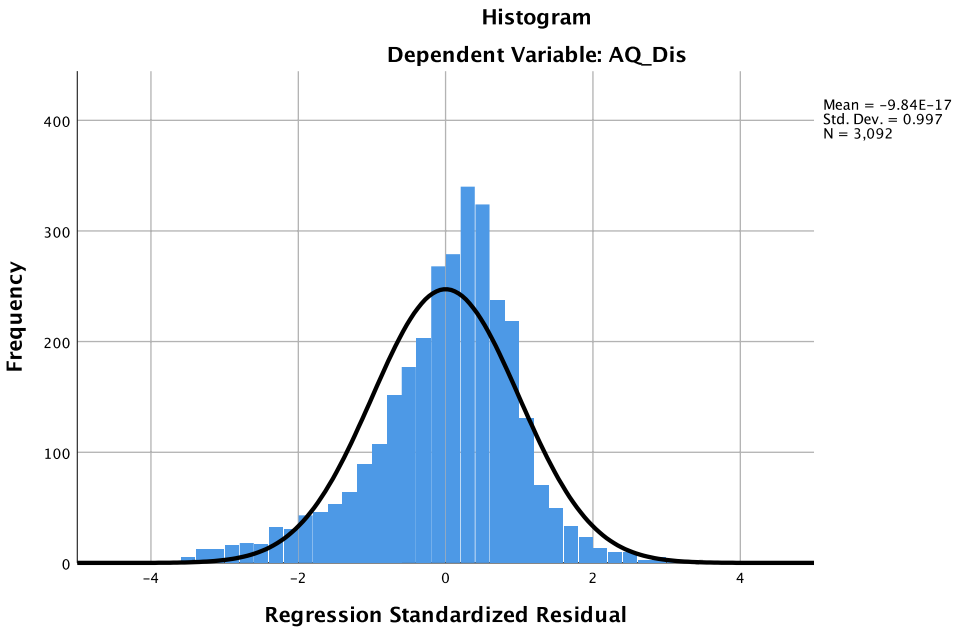

Figure B.3. Histogram AQ_Dis

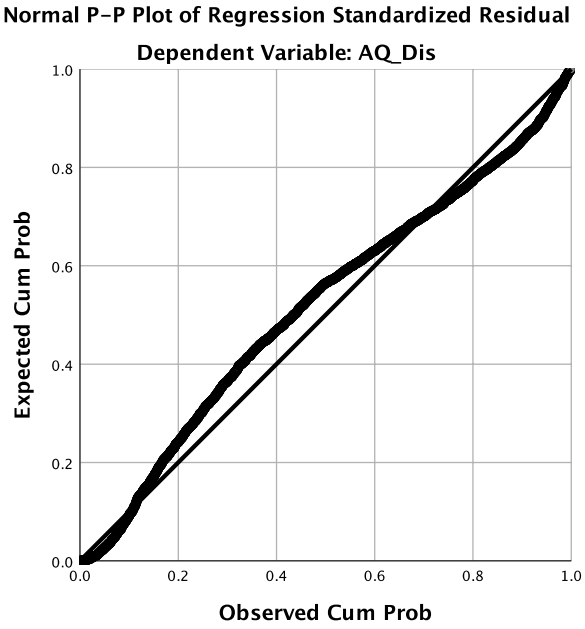

Figure B.4. P-P plot AQ_Dis

Innate accrual quality

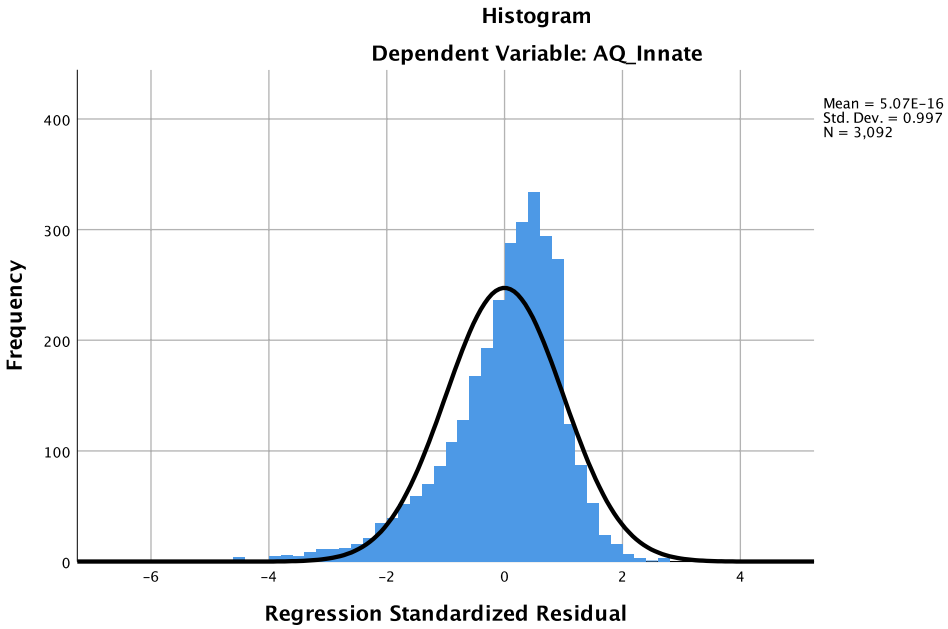

Figure B.5. Histogram AQ_Innate

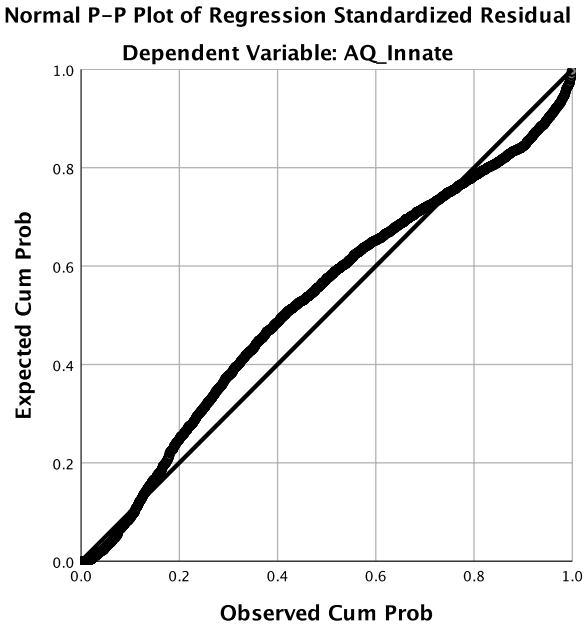

Figure B.6. P-P plot AQ_Innate

Modified Jones model

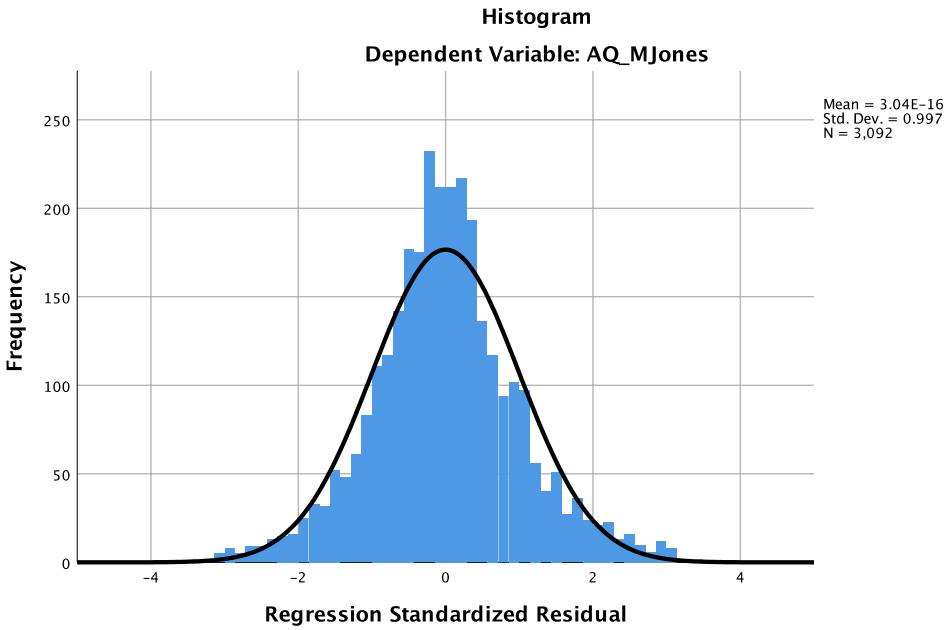

Figure B.7. Histogram AQ_MJones

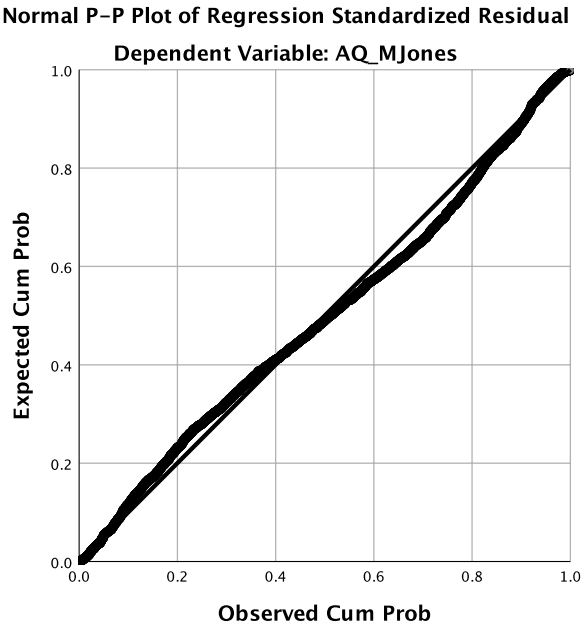

Figure B.8. P-P plot AQ_MJones

Predictor variables:

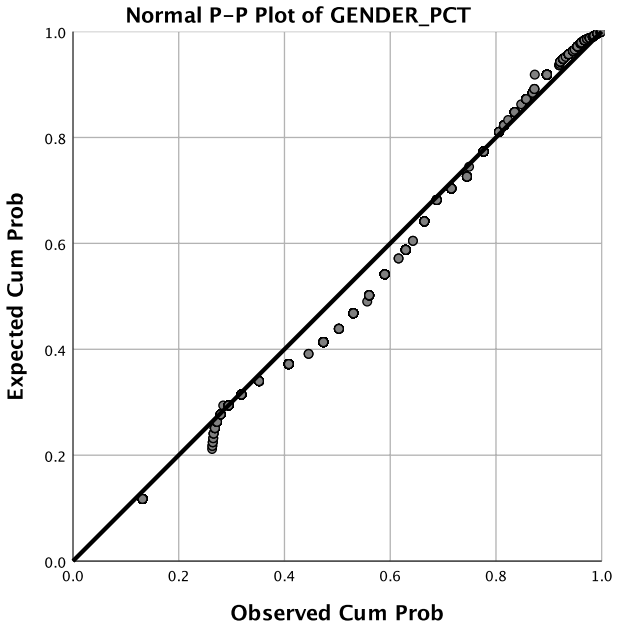

Figure B.9. P-P plot GENDER_PCT

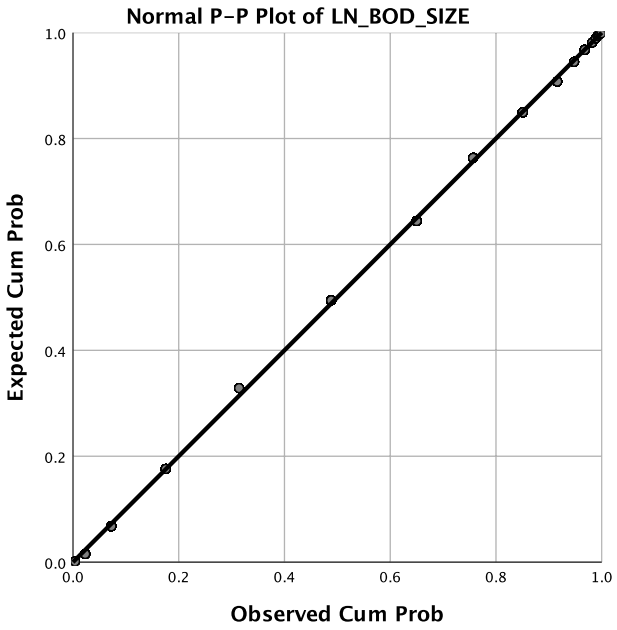

Figure B.10. P-P plot BOD_SIZE

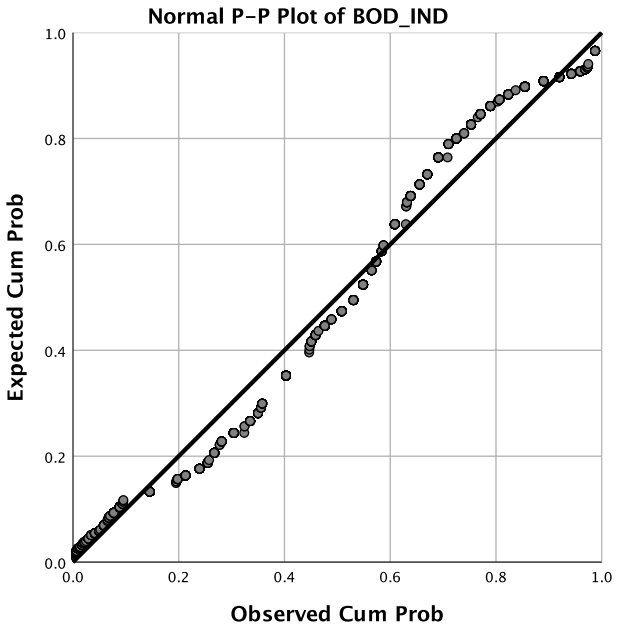

Figure B.11. P-P plot BOD_IND

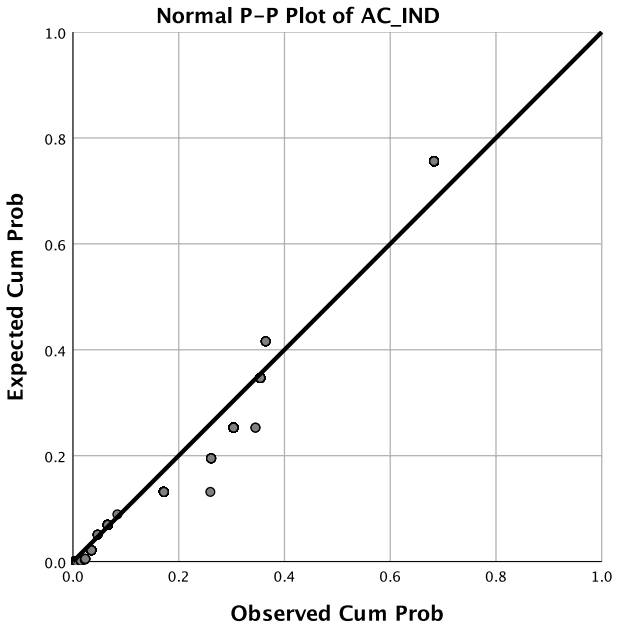

Figure B.12. P-P plot AC_IND

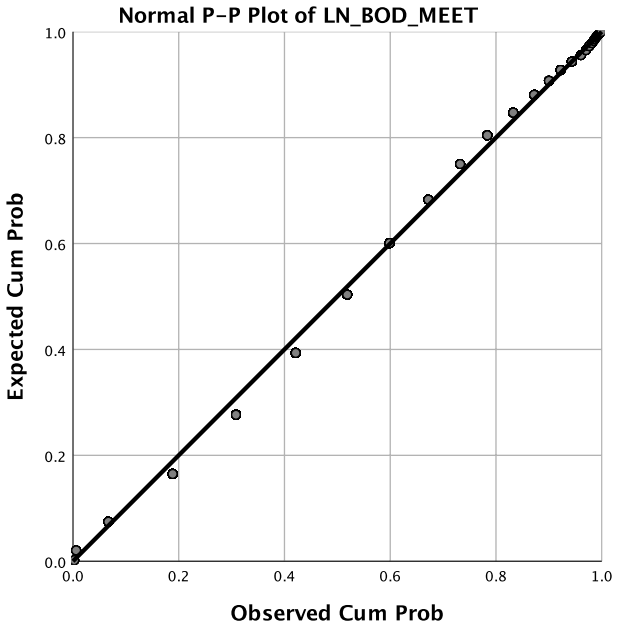

Figure B.13. P-P plot BOD_MEET

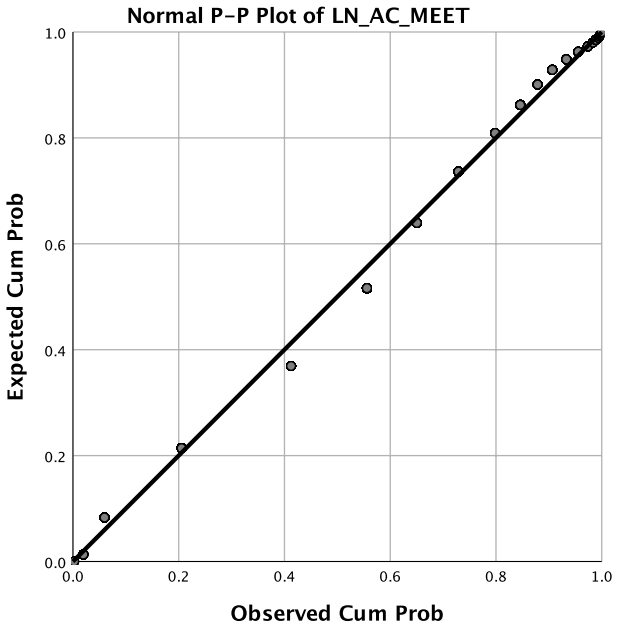

Figure B.14. P-P plot AC_MEET

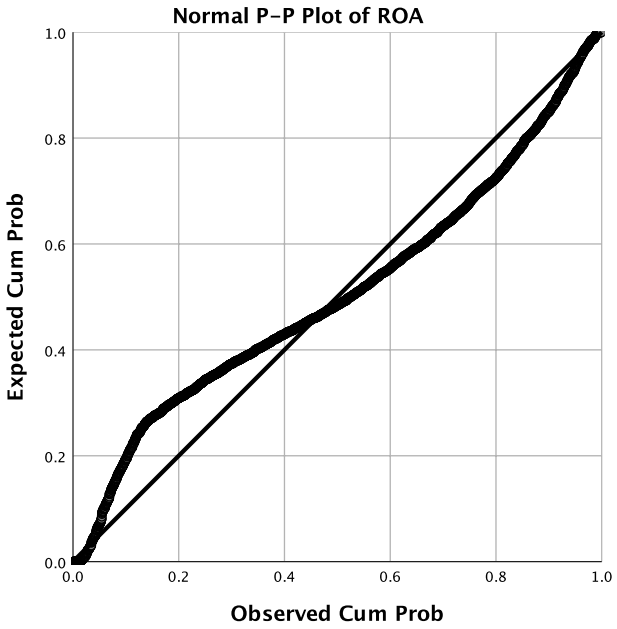

Figure B.15. P-P plot ROA

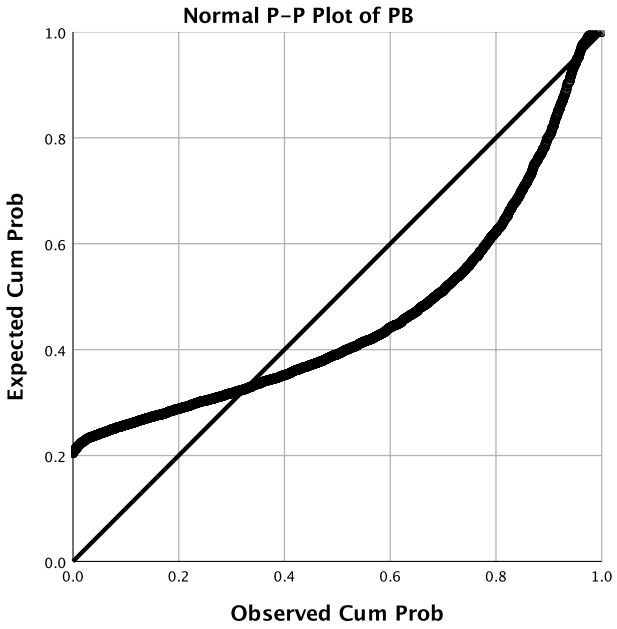

Figure B.16. P-P plot PB

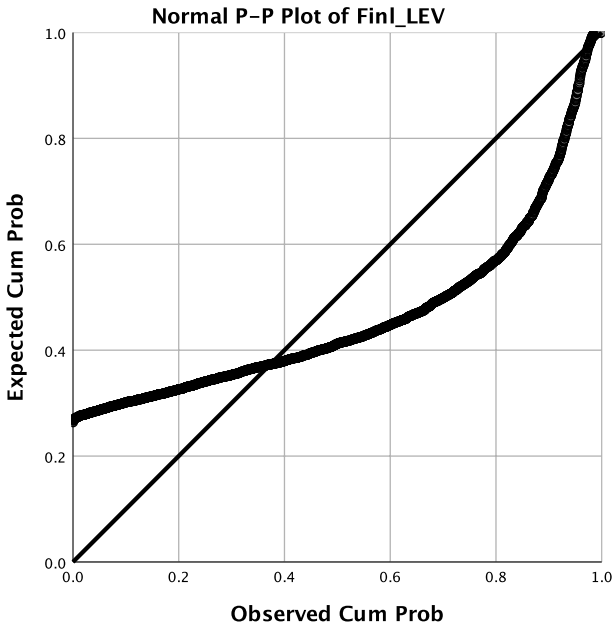

Figure B.17. P-P plot Fin_LEV

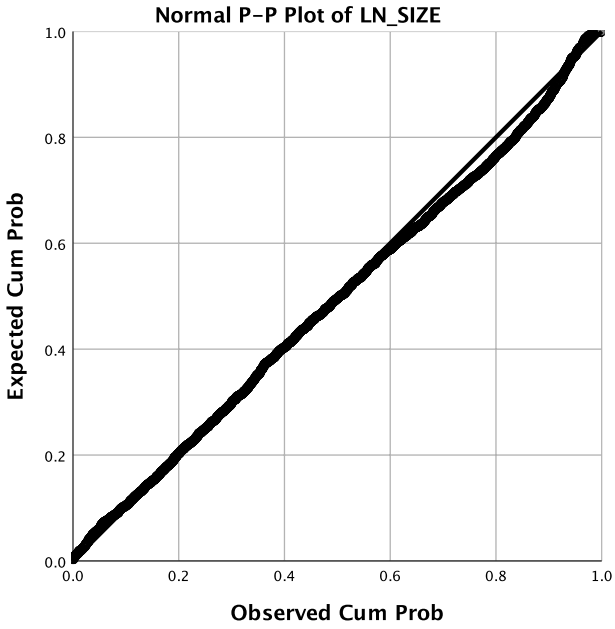

Figure B.18. P-P plot SIZE

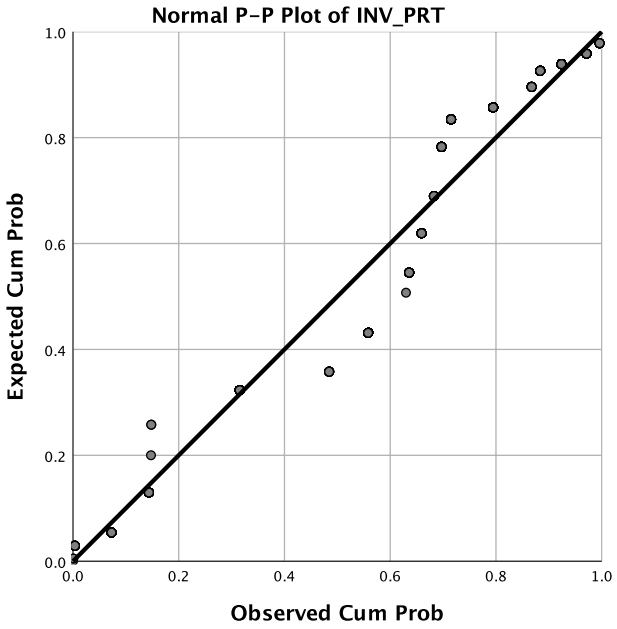

Figure B.19. P-P plot INV_PRT

Homoscedasticity

Homogeneity of variance or Homoscedasticity assumes that the variance of the outcomes

is equal across the levels of the predictor variable.

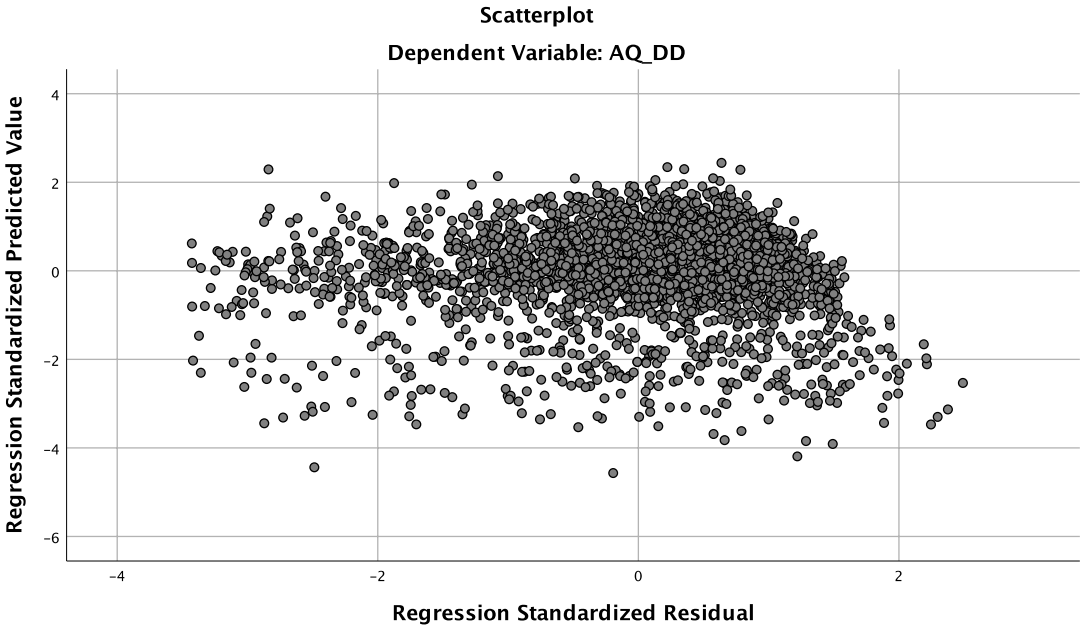

Figure B.20. Scatterplot AQ_DD

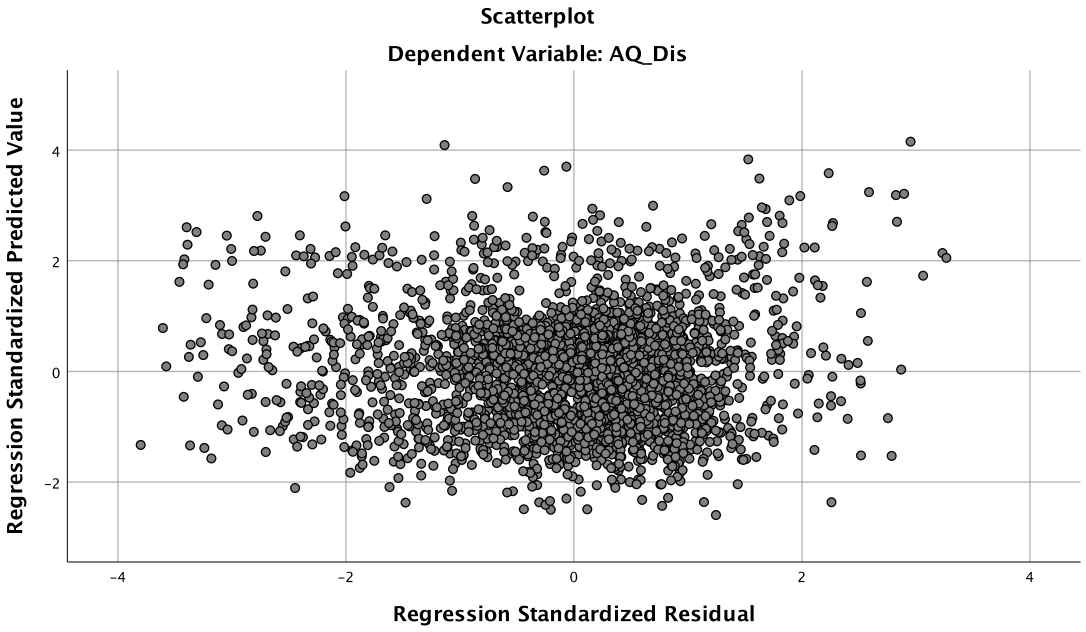

Figure B.21. Scatterplot AQ_Dis

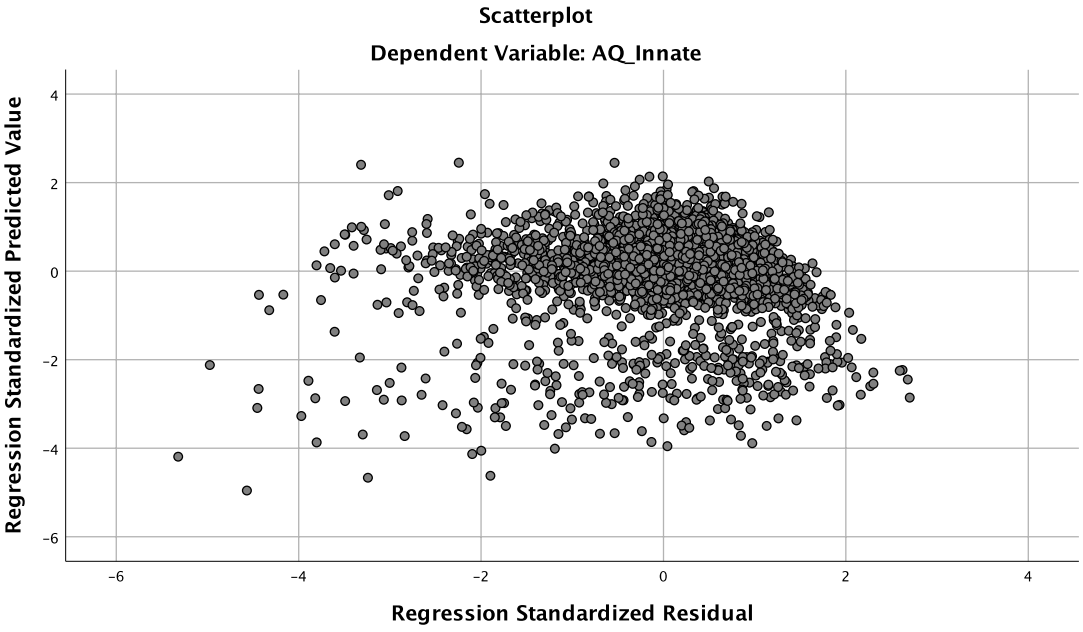

Figure B.22. Scatterplot AQ_Innate

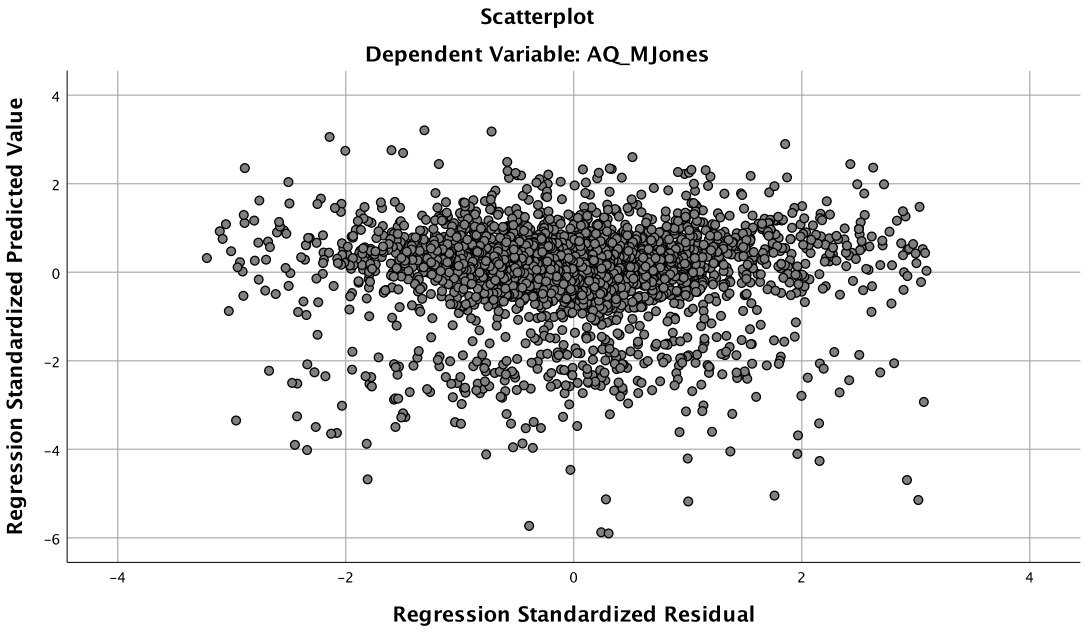

Figure B.23. Scatterplot AQ_MJones

Multicollinearity

The last assumption tested for regression models is multicollinearity. Multicollinearity is problematic in multilevel models when an interaction occurs between different level variables. To overcome the problem of multicollinearity, the predictor variables used in the interaction are mean-centered (Field, 2018).

Appendix C: Gender Dummy and AQ_DD

Table 4.17 Appx. C. The Relationship Between Gender Dummy and Discretionary Accruals (DD 2002) For Different Cultural Dimensions

Variables	Controls	GENDER Dummy	PD	IND	MAS	UA
GENDER_DUMY		0.023	0.032	0.032	0.019	**0.043***
		(1.163)	(1.626)	(1.627)	(0.939)	(2.186)
BOD_SIZE	**0.116****	**0.11****	**0.095****	**0.091****	**0.112****	**0.103****
	(6.243)	(5.679)	(4.844)	(4.602)	(5.72)	(5.342)
BOD_IND	**0.133****	**0.125****	**0.066***	**0.061***	**0.123****	**0.13****
	(5.646)	(5.159)	(2.343)	(2.065)	(4.833)	(5.356)
AC_IND	-0.034	-0.033	-0.024	-0.033	-0.035	-0.023
	(-1.457)	(-1.393)	(-1.015)	(-1.425)	(-1.458)	(-0.985)
DUALITY	0.03	0.033	0.029	0.024	0.034	0.008
	(1.714)	(1.853)	(1.604)	(1.347)	(1.902)	(0.412)
BOD_MEET	-0.026	-0.026	-0.037	-0.029	-0.024	**-0.049***
	(-1.319)	(-1.312)	(-1.835)	(-1.448)	(-1.211)	(-2.394)
AC_MEET	-0.01	-0.008	-0.019	-0.028	-0.004	**-0.045***
	(-0.509)	(-0.42)	(-0.962)	(-1.345)	(-0.173)	(-2.164)
ROA	**0.077****	**0.077****	**0.073****	**0.073****	**0.077****	**0.075****
	(3.416)	(3.386)	(3.218)	(3.25)	(3.405)	(3.322)
PB	**-0.056****	**-0.058****	**-0.057****	**-0.058****	**-0.058****	**-0.052****
	(-2.867)	(-2.926)	(-2.885)	(-2.958)	(-2.944)	(-2.628)
LEV	0.028	0.028	0.026	0.024	0.028	0.029
	(1.489)	(1.477)	(1.393)	(1.268)	(1.474)	(1.535)
LOSS	**-0.189****	**-0.188****	**-0.185****	**-0.186****	**-0.189****	**-0.186****
	(-8.939)	(-8.901)	(-8.748)	(-8.806)	(-8.917)	(-8.861)
LN_SIZE	**0.181****	**0.183****	**0.205****	**0.219****	**0.179****	**0.173****
	(8.861)	(8.935)	(9.407)	(8.876)	(8.414)	(8.375)
INV_PRT	-0.017	-0.018	**-0.039***	-0.032	-0.017	-0.029
	(-0.884)	(-0.948)	(-1.976)	(-1.67)	(-0.893)	(-1.51)
QUOTA	**-0.056****	**-0.06****	-0.028	**-0.056****	**-0.06****	**-0.074****
	(-2.982)	(-3.145)	(-1.343)	(-2.889)	(-3.116)	(-3.789)
PD_Centered			-0.037			
			(-0.844)			
GEND_D*PD			-0.066			
			(-1.64)			
IND_Centered				0.044		
				(1.056)		
GEND_D *IND				**0.067***		
				(1.998)		
MAS_Centered					-0.025	
					(-0.714)	
GEND_D *MAS					0.022	
					(0.712)	
UA_Centered						**0.106****
						(3.268)
GEND_D *UA						0.02
						(0.757)
R Square	0.14	0.14	0.145	0.145	0.14	0.149
Adjusted R Square	0.136	0.136	0.141	0.14	0.136	0.145
R Square Change	0.14	0	0.005	0.005	0	0.009

** $p < 0.01$ * $p < 0.05$

Table 4.18 Appx. C. The Relationship Between Gender Dummy and Discretionary Accruals (DD 2002) for Different Accounting Values

Variables	Controls	GENDER Dummy	PROF	UNIF	SEC	CONS
GENDER_DUMY		0.023	0.033	0.033	0.025	0.027
		(1.163)	(1.589)	(1.589)	(1.294)	(1.378)
BOD_SIZE	**0.116****	**0.11****	**0.112****	**0.112****	**0.112****	**0.114****
	(6.243)	(5.679)	(5.771)	(5.771)	(5.787)	(5.829)
BOD_IND	**0.133****	**0.125****	**0.123****	**0.123****	**0.126****	**0.12****
	(5.646)	(5.159)	(4.994)	(4.994)	(4.987)	(4.612)
AC_IND	-0.034	-0.033	-0.029	-0.029	-0.031	-0.034
	(-1.457)	(-1.393)	(-1.213)	(-1.213)	(-1.308)	(-1.455)
DUALITY	0.03	0.033	**0.038***	**0.038***	**0.038***	0.034
	(1.714)	(1.853)	(2.108)	(2.108)	(2.129)	(1.871)
BOD_MEET	-0.026	-0.026	-0.03	-0.03	-0.029	-0.024
	(-1.319)	(-1.312)	(-1.46)	(-1.46)	(-1.394)	(-1.187)
AC_MEET	-0.01	-0.008	-0.001	-0.001	0	-0.005
	(-0.509)	(-0.42)	(-0.048)	(-0.048)	(0.012)	(-0.249)
ROA	**0.077****	**0.077****	**0.075****	**0.075****	**0.076****	**0.077****
	(3.416)	(3.386)	(3.309)	(3.309)	(3.358)	(3.388)
PB	**-0.056****	**-0.058****	**-0.055****	**-0.055****	**-0.056****	**-0.057****
	(-2.867)	(-2.926)	(-2.797)	(-2.797)	(-2.818)	(-2.896)
LEV	0.028	0.028	0.026	0.026	0.026	0.027
	(1.489)	(1.477)	(1.387)	(1.387)	(1.403)	(1.44)
LOSS	**-0.189****	**-0.188****	**-0.189****	**-0.189****	**-0.189****	**-0.19****
	(-8.939)	(-8.901)	(-8.913)	(-8.913)	(-8.902)	(-8.964)
LN_SIZE	**0.181****	**0.183****	**0.186****	**0.186****	**0.184****	**0.182****
	(8.861)	(8.935)	(9.051)	(9.051)	(8.97)	(8.877)
INV_PRT	-0.017	-0.018	-0.031	-0.031	-0.028	-0.02
	(-0.884)	(-0.948)	(-1.417)	(-1.417)	(-1.344)	(-0.99)
QUOTA	**-0.056****	**-0.06****	**-0.062****	**-0.062****	**-0.063****	**-0.061****
	(-2.982)	(-3.145)	(-3.238)	(-3.238)	(-3.258)	(-3.146)
PROF_Centered			-0.075			
			(-1.407)			
GEND_D *PROF			**0.102***			
			(1.975)			
UNIF_Centered				0.075		
				(1.407)		
GEND_D *UNIF				**-0.102***		
				(-1.975)		
SEC_Centered					0.046	
					(1.05)	
GEND_D *SEC					-0.07	
					(-1.665)	
CONS_Centered						0.063
						(1.536)
GEND_D *CONS						-0.063
						(-1.556)
R Square	0.14	0.14	0.141	0.141	0.141	0.141
Adjusted R Square	0.136	0.136	0.137	0.137	0.137	0.136
R Square Change	0.14	0	0.001	0.001	0.001	0.001

** p < 0.01 * p < 0.05

Appendix D: Gender Dummy and AQ_Dis

Table 4.19 Appx. D. The Relationship Between Gender Dummy and Discretionary Accruals for Different Cultural Dimensions

Variables	Controls	GENDER Dummy	PD	IND	MAS	UA
GENDER_DUMY		-0.019	-0.018	-0.02	-0.029	0.001
		(-0.907)	(-0.861)	(-0.945)	(-1.384)	(0.056)
BOD_SIZE	**0.05***	**0.055****	**0.051***	**0.049***	**0.061****	**0.05***
	(2.514)	(2.667)	(2.424)	(2.332)	(2.928)	(2.433)
BOD_IND	**0.081****	**0.087****	**0.062***	**0.067***	**0.073****	**0.092****
	(3.25)	(3.373)	(2.062)	(2.13)	(2.712)	(3.558)
AC_IND	-0.003	-0.004	0	-0.005	-0.006	0.005
	(-0.128)	(-0.176)	(-0.016)	(-0.188)	(-0.249)	(0.183)
DUALITY	0.022	0.02	0.015	0.017	0.027	-0.004
	(1.18)	(1.049)	(0.806)	(0.908)	(1.416)	(-0.188)
BOD_MEET	-0.01	-0.01	-0.014	-0.01	-0.007	-0.031
	(-0.477)	(-0.483)	(-0.642)	(-0.482)	(-0.321)	(-1.416)
AC_MEET	-0.037	-0.038	**-0.047***	**-0.046***	-0.021	**-0.072****
	(-1.77)	(-1.833)	(-2.186)	(-2.117)	(-0.919)	(-3.254)
ROA	-0.035	-0.034	-0.035	-0.035	-0.034	-0.036
	(-1.458)	(-1.435)	(-1.468)	(-1.457)	(-1.416)	(-1.518)
PB	**0.064****	**0.065****	**0.065****	**0.065****	**0.064****	**0.07****
	(3.059)	(3.104)	(3.127)	(3.112)	(3.048)	(3.358)
LEV	-0.029	-0.028	-0.029	-0.03	-0.028	-0.027
	(-1.439)	(-1.43)	(-1.458)	(-1.506)	(-1.435)	(-1.375)
LOSS	**0.077****	**0.076****	**0.077****	**0.077****	**0.075****	**0.078****
	(3.423)	(3.394)	(3.428)	(3.408)	(3.319)	(3.47)
LN_SIZE	-0.032	-0.034	-0.019	-0.016	**-0.046***	**-0.044***
	(-1.464)	(-1.552)	(-0.813)	(-0.603)	(-2.045)	(-1.994)
INV_PRT	**-0.041***	**-0.04***	**-0.051***	**-0.044***	**-0.043***	**-0.052***
	(-2.056)	(-2.001)	(-2.463)	(-2.178)	(-2.103)	(-2.533)
QUOTA	**-0.05***	**-0.047***	-0.035	**-0.047***	**-0.047***	**-0.057****
	(-2.503)	(-2.294)	(-1.598)	(-2.29)	(-2.29)	(-2.766)
PD_Centered			-0.069			
			(-1.483)			
GEND_D*PD			0.026			
			(0.613)			
IND_Centered				0.046		
				(1.035)		
GEND_D *IND				-0.01		
				(-0.281)		
MAS_Centered					**-0.077***	
					(-2.089)	
GEND_D *MAS					0.046	
					(1.437)	
UA_Centered						**0.106****
						(3.073)
GEND_D *UA						0.005
						(0.17)
R Square	0.03	0.03	0.031	0.031	0.032	0.037
Adjusted R Square	0.026	0.026	0.026	0.026	0.027	0.032
R Square Change	0.03	0	0.001	0	0.001	0.007

** p < 0.01 * p < 0.05

Table 4.20 Appx. D. The Relationship Between Gender Dummy and Discretionary Accruals for Different Accounting Values

Variables	Controls	GENDER Dummy	PROF	UNIF	SEC	CONS
GENDER_DUMY		-0.019	0.003	0.003	-0.009	-0.007
		(-0.907)	(0.16)	(0.16)	(-0.436)	(-0.322)
BOD_SIZE	**0.05***	**0.055****	**0.058****	**0.058****	**0.06****	**0.062****
	(2.514)	(2.667)	(2.834)	(2.834)	(2.904)	(3.014)
BOD_IND	**0.081****	**0.087****	**0.076****	**0.076****	**0.072****	**0.064***
	(3.25)	(3.373)	(2.915)	(2.915)	(2.671)	(2.328)
AC_IND	-0.003	-0.004	-0.008	-0.008	-0.01	-0.01
	(-0.128)	(-0.176)	(-0.307)	(-0.307)	(-0.381)	(-0.421)
DUALITY	0.022	0.02	0.019	0.019	0.023	0.018
	(1.18)	(1.049)	(0.991)	(0.991)	(1.184)	(0.914)
BOD_MEET	-0.01	-0.01	-0.005	-0.005	-0.003	-0.002
	(-0.477)	(-0.483)	(-0.246)	(-0.246)	(-0.146)	(-0.073)
AC_MEET	-0.037	-0.038	-0.04	-0.04	-0.033	-0.037
	(-1.77)	(-1.833)	(-1.845)	(-1.845)	(-1.519)	(-1.734)
ROA	-0.035	-0.034	-0.035	-0.035	-0.034	-0.034
	(-1.458)	(-1.435)	(-1.472)	(-1.472)	(-1.427)	(-1.417)
PB	**0.064****	**0.065****	**0.066****	**0.066****	**0.066****	**0.065****
	(3.059)	(3.104)	(3.162)	(3.162)	(3.129)	(3.086)
LEV	-0.029	-0.028	-0.03	-0.03	-0.03	-0.029
	(-1.439)	(-1.43)	(-1.516)	(-1.516)	(-1.52)	(-1.477)
LOSS	**0.077****	**0.076****	**0.073****	**0.073****	**0.073****	**0.072****
	(3.423)	(3.394)	(3.24)	(3.24)	(3.231)	(3.186)
LN_SIZE	-0.032	-0.034	-0.031	-0.031	-0.032	-0.036
	(-1.464)	(-1.552)	(-1.415)	(-1.415)	(-1.488)	(-1.662)
INV_PRT	**-0.041***	**-0.04***	-0.035	-0.035	-0.036	-0.035
	(-2.056)	(-2.001)	(-1.531)	(-1.531)	(-1.613)	(-1.631)
QUOTA	**-0.05***	**-0.047***	**-0.048***	**-0.048***	**-0.048***	**-0.045***
	(-2.503)	(-2.294)	(-2.338)	(-2.338)	(-2.353)	(-2.175)
PROF_Centered			**-0.169****			
			(-2.971)			
GEND_D *PROF			**0.157****			
			(2.881)			
UNIF_Centered				**0.169****		
				(2.971)		
GEND_D *UNIF				**-0.157****		
				(-2.881)		
SEC_Centered					**0.137****	
					(2.945)	
GEND_D *SEC					**-0.124****	
					(-2.773)	
CONS_Centered						**0.154****
						(3.514)
GEND_D *CONS						**-0.123****
						(-2.88)
R Square	0.03	0.03	0.033	0.033	0.033	0.034
Adjusted R Square	0.026	0.026	0.028	0.028	0.028	0.029
R Square Change	0.03	0	0.003	0.003	0.003	0.004

** p < 0.01 * p < 0.05

Appendix E: Gender Dummy and AQ_Innate

Table4.21. Appx. E. The Relationship Between Gender Dummy and Innate Accruals for Different Cultural Dimensions

Variables	Controls	Gender Dummy	PD	IND	MAS	UA
GENDER_DUMY		**0.054****	**0.067****	**0.07****	**0.06****	**0.063****
		(3.417)	(4.203)	(4.33)	(3.701)	(3.865)
BOD_SIZE	**0.116****	**0.101****	**0.084****	**0.08****	**0.098****	**0.097****
	(7.66)	(6.43)	(5.276)	(4.973)	(6.133)	(6.133)
BOD_IND	**0.106****	**0.089****	0.029	0.016	**0.1****	**0.09****
	(5.52)	(4.468)	(1.259)	(0.656)	(4.84)	(4.534)
AC_IND	**-0.047***	**-0.043***	-0.035	**-0.044***	**-0.044***	**-0.039***
	(-2.448)	(-2.267)	(-1.82)	(-2.317)	(-2.281)	(-2.041)
DUALITY	0.02	0.027	0.025	0.016	0.021	0.015
	(1.397)	(1.839)	(1.741)	(1.128)	(1.401)	(1.016)
BOD_MEET	-0.028	-0.027	**-0.039***	-0.031	-0.028	-0.038*
	(-1.697)	(-1.678)	(-2.401)	(-1.93)	(-1.731)	(-2.277)
AC_MEET	0.026	0.03	0.023	0.011	0.017	0.013
	(1.632)	(1.888)	(1.428)	(0.633)	(1.013)	(0.788)
ROA	**0.153****	**0.151****	**0.147****	**0.147****	**0.152****	**0.151****
	(8.278)	(8.205)	(7.977)	(8.025)	(8.214)	(8.186)
PB	**-0.154****	**-0.157****	**-0.157****	**-0.158****	**-0.157****	**-0.154****
	(-9.596)	(-9.785)	(-9.78)	(-9.901)	(-9.738)	(-9.588)
LEV	**0.073****	**0.072****	**0.07****	**0.068****	**0.072****	**0.072****
	(4.767)	(4.741)	(4.647)	(4.494)	(4.745)	(4.755)
LOSS	**-0.364****	**-0.363****	**-0.358****	**-0.359****	**-0.361****	**-0.362****
	(-21.099)	(-21.023)	(-20.867)	(-20.959)	(-20.952)	(-21.001)
LN_SIZE	**0.302****	**0.308****	**0.324****	**0.341****	**0.316****	**0.305****
	(18.131)	(18.423)	(18.266)	(17.009)	(18.201)	(17.993)
INV_PRT	0.021	0.018	0	0.002	0.022	0.015
	(1.368)	()1.174	(-0.011)	(0.131)	(1.421)	(0.928)
QUOTA	-0.028	**-0.037***	-0.002	-0.03	**-0.037***	**-0.045****
	(-1.78)	(-2.38)	(-0.118)	(-1.921)	(-2.337)	(-2.848)
PD_Centered			0.022			
			(0.622)			
GEND_D*PD			**-0.126****			
			(-3.869)			
IND_Centered				0.014		
				(0.416)		
GEND_D *IND				**0.11****		
				(4.039)		
MAS_Centered					0.049	
					(1.725)	
GEND_D *MAS					-0.02	
					(-0.786)	
UA_Centered						0.039
						(1.465)
GEND_D *UA						0.025
						(1.122)
R Square	0.426	0.428	0.434	0.435	0.429	0.43
Adjusted R Square	0.423	0.425	0.431	0.432	0.426	0.427
R Square Change	0.426	0.002	0.006	0.007	0.001	0.002

** p < 0.01 * p < 0.05

Table 4.22 Appx. E. The Relationship Between Gender Dummy and Innate Accruals for Different Accounting Values

Variables	Controls	GENDER Dummy	PROF	UNIF	SEC	CONS
GENDER_DUMY		**0.054****	**0.044****	**0.044****	**0.048****	**0.047****
		(3.417)	(2.649)	(2.649)	(2.975)	(2.963)
BOD_SIZE	**0.116****	**0.101****	**0.1****	**0.1****	**0.1****	**0.099****
	(7.66)	(6.43)	(6.362)	(6.362)	(6.293)	(6.211)
BOD_IND	**0.106****	**0.089****	**0.097****	**0.097****	**0.107****	**0.106****
	(5.52)	(4.468)	(4.837)	(4.837)	(5.179)	(4.998)
AC_IND	**-0.047***	**-0.043***	-0.034	-0.034	-0.035	**-0.039***
	(-2.448)	(-2.267)	(-1.755)	(-1.755)	(-1.821)	(-2.029)
DUALITY	0.02	0.027	**0.035***	**0.035***	**0.032***	**0.03***
	(1.397)	(1.839)	(2.389)	(2.389)	(2.148)	(2.071)
BOD_MEET	-0.028	-0.027	**-0.038***	**-0.038***	**-0.039***	**-0.034***
	(-1.697)	(-1.678)	(-2.29)	(-2.29)	(-2.316)	(-2.046)
AC_MEET	0.026	0.03	**0.043***	**0.043***	**0.037***	**0.034***
	(1.632)	(1.888)	(2.578)	(2.578)	(2.216)	(2.052)
ROA	**0.153****	**0.151****	**0.15****	**0.15****	**0.15****	**0.151****
	(8.278)	(8.205)	(8.122)	(8.122)	(8.149)	(8.184)
PB	**-0.154****	**-0.157****	**-0.155****	**-0.155****	**-0.155****	**-0.156****
	(-9.596)	(-9.785)	(-9.638)	(-9.638)	(-9.631)	(-9.703)
LEV	**0.073****	**0.072****	**0.072****	**0.072****	**0.072****	**0.072****
	(4.767)	(4.741)	(4.704)	(4.704)	(4.74)	(4.742)
LOSS	**-0.364****	**-0.363****	**-0.36****	**-0.36****	**-0.359****	**-0.36****
	(-21.099)	(-21.023)	(-20.832)	(-20.832)	(-20.807)	(-20.842)
LN_SIZE	**0.302****	**0.308****	**0.309****	**0.309****	**0.307****	**0.309****
	(18.131)	(18.423)	(18.445)	(18.445)	(18.41)	(18.485)
INV_PRT	0.021	0.018	-0.006	-0.006	-0.002	0.009
	(1.368)	()1.174	(-0.355)	(-0.355)	(-0.105)	(0.561)
QUOTA	-0.028	**-0.037***	**-0.039***	**-0.039***	**-0.039***	**-0.041***
	(-1.78)	(-2.38)	(-2.49)	(-2.49)	(-2.505)	(-2.561)
PROF_Centered			0.076			
			(1.744)			
GEND_D *PROF			-0.024			
			(-0.584)			
UNIF_Centered				-0.076		
				(-1.744)		
GEND_D *UNIF				0.024		
				(0.584)		
SEC_Centered					**-0.084***	
					(-2.353)	
GEND_D *SEC					0.034	
					(0.99)	
CONS_Centered						**-0.077***
						(-2.29)
GEND_D *CONS						0.044
						(1.338)
R Square	0.426	0.428	0.429	0.429	0.43	0.429
Adjusted R Square	0.423	0.425	0.426	0.426	0.427	0.426
R Square Change	0.426	0.002	0.002	0.002	0.002	0.001

** p < 0.01 * p < 0.05

Appendix F: Gender percentage and modified Jones model

Table 4.23 Appx. F. The Relationship Between Gender Percentage and the Modified Jones Model for Different Cultural Dimensions

	Controls	GENDER percentage	PD	IND	MAS	UA
GENDER_PCT		**-0.069****	**-0.067****	**-0.066****	**-0.064****	**-0.07****
		(-3.71)	(-3.602)	(-3.58)	(-3.289)	(-3.769)
BOD_SIZE	-0.015	-0.002	0.004	0.01	-0.003	0
	(-0.84)	(-0.101)	(0.23)	(0.526)	(-0.163)	(0.022)
BOD_IND	**-0.136****	**-0.107****	**-0.065***	**-0.058***	**-0.105****	**-0.109****
	(-5.925)	(-4.428)	(-2.366)	(-2.03)	(-4.182)	(-4.462)
AC_IND	0.016	0.005	0.001	0.007	0.002	0.004
	(0.688)	(0.233)	(0.049)	(0.313)	(0.08)	(0.159)
DUALITY	0.02	0.016	0.03	0.022	0.015	0.023
	(1.143)	(0.947)	(1.736)	(1.256)	(0.856)	(1.287)
BOD_MEET	0.025	0.031	0.036	0.03	0.033	0.037
	(1.299)	(1.605)	(1.827)	(1.518)	(1.672)	(1.878)
AC_MEET	**-0.04***	**-0.047***	-0.027	-0.025	-0.049*	-0.039
	(-2.077)	(-2.457)	(-1.38)	(-1.251)	(-2.369)	(-1.895)
ROA	**0.267****	**0.272****	**0.273****	**0.273****	**0.273****	**0.272****
	(12.069)	(12.305)	(12.357)	(12.381)	(12.319)	(12.294)
PB	-0.02	-0.019	-0.021	-0.02	-0.019	-0.021
	(-1.022)	(-0.985)	(-1.081)	(-1.03)	(-0.998)	(-1.1)
LEV	**0.075****	**0.077****	**0.078****	**0.081****	**0.077****	**0.077****
	(4.097)	(4.235)	(4.313)	(4.458)	(4.213)	(4.23)
LOSS	**-0.185****	**-0.187****	**-0.187****	**-0.187****	**-0.187****	**-0.188****
	(-8.946)	(-9.07)	(-9.091)	(-9.059)	(-9.057)	(-9.1)
LN_SIZE	**-0.055****	**-0.064****	**-0.099****	**-0.117****	**-0.064****	**-0.064****
	(-2.771)	(-3.213)	(-4.631)	(-4.87)	(-3.111)	(-3.083)
INV_PRT	-0.02	-0.015	0.006	-0.005	-0.012	-0.015
	(-1.066)	(-0.819)	(0.302)	(-0.292)	(-0.652)	(-0.776)
QUOTA	**0.067****	**0.078****	**0.053****	**0.079****	**0.078****	**0.085****
	(3.63)	(4.151)	(2.641)	(4.223)	(4.146)	(4.2)
PD_Centered			**0.095****			
			(3.874)			
GEND_P*PD			**-0.05****			
			(-2.925)			
IND_Centered				**-0.094****		
				(-3.318)		
GEND_P*IND				**0.04***		
				(2.316)		
MAS_Centered					0.01	
					(0.489)	
GEND_P*MAS					0.01	
					(0.543)	
UA_Centered						-0.035
						(-1.652)
GEND_P*UA						-0.014
						(-0.682)
R Square	0.176	0.18	0.185	0.184	0.18	0.181
Adjusted R Square	0.173	0.176	0.181	0.18	0.176	0.176
R Square Change	0.176	0.004	0.006	0.004	0	0.001

** p < 0.01 * p < 0.05

Table 4.24 Appx. F. The Relationship Between Gender Percentage and the Modified Jones Model for Different Accounting Values

	Controls	GENDER percentage	PROF	UNIF	SEC	CONS
GENDER_PCT		**-0.069****	**-0.064****	**-0.064****	**-0.067****	**-0.07****
		(-3.71)	(-3.363)	(-3.363)	(-3.608)	(-3.779)
BOD_SIZE	-0.015	-0.002	-0.005	-0.005	-0.005	-0.007
	(-0.84)	(-0.101)	(-0.279)	(-0.279)	(-0.285)	(-0.381)
BOD_IND	**-0.136****	**-0.107****	**-0.104****	**-0.104****	**-0.102****	**-0.099****
	(-5.925)	(-4.428)	(-4.234)	(-4.234)	(-4.016)	(-3.855)
AC_IND	0.016	0.005	0.001	0.001	0.005	0.007
	(0.688)	(0.233)	(0.039)	(0.039)	(0.214)	(0.32)
DUALITY	0.02	0.016	0.012	0.012	0.01	0.013
	(1.143)	(0.947)	(0.659)	(0.659)	(0.576)	(0.764)
BOD_MEET	0.025	0.031	0.038	0.038	0.035	0.032
	(1.299)	(1.605)	(1.874)	(1.874)	(1.737)	(1.637)
AC_MEET	**-0.04***	**-0.047***	**-0.052****	**-0.052****	**-0.055****	**-0.052****
	(-2.077)	(-2.457)	(-2.602)	(-2.602)	(-2.791)	(-2.65)
ROA	**0.267****	**0.272****	**0.275****	**0.275****	**0.274****	**0.274****
	(12.069)	(12.305)	(12.404)	(12.404)	(12.395)	(12.393)
PB	-0.02	-0.019	-0.021	-0.021	-0.021	-0.02
	(-1.022)	(-0.985)	(-1.109)	(-1.109)	(-1.093)	(-1.065)
LEV	**0.075****	**0.077****	**0.078****	**0.078****	**0.079****	**0.079****
	(4.097)	(4.235)	(4.294)	(4.294)	(4.334)	(4.334)
LOSS	**-0.185****	**-0.187****	**-0.186****	**-0.186****	**-0.186****	**-0.184****
	(-8.946)	(-9.07)	(-9.018)	(-9.018)	(-8.98)	(-8.929)
LN_SIZE	**-0.055****	**-0.064****	**-0.066****	**-0.066****	**-0.067****	**-0.065****
	(-2.771)	(-3.213)	(-3.279)	(-3.279)	(-3.334)	(-3.268)
INV_PRT	-0.02	-0.015	-0.006	-0.006	-0.008	-0.01
	(-1.066)	(-0.819)	(-0.289)	(-0.289)	(-0.416)	(-0.485)
QUOTA	**0.067****	**0.078****	**0.075****	**0.075****	**0.077****	**0.074****
	(3.63)	(4.151)	(4.017)	(4.017)	(4.11)	(3.922)
PROF_Centered			0.001			
			(0.061)			
GEND_P*PROF			**-0.042****			
			(-2.26)			
UNIF_Centered				-0.001		
				(-0.061)		
GEND_P*UNIF				**0.042***		
				(2.26)		
SEC_Centered					-0.006	
					(-0.255)	
GEND_P*SEC					**0.047****	
					(2.665)	
CONS_Centered						-0.016
						(-0.73)
GEND_P*CONS						**0.051****
						(2.924)
R Square	0.176	0.18	0.181	0.181	0.182	0.182
Adjusted R Square	0.173	0.176	0.177	0.177	0.177	0.178
R Square Change	0.176	0.004	0.001	0.001	0.002	0.002

** p < 0.01 * p < 0.05

Appendix G: Endogeneity test - Gender Quota controlled

Table 4.26. Appx. G. The Relationship Between Gender Percentage and Earnings Quality Measures for Countries for Different Quota Requirements

	AQ_DD	AQ_Dis	AQ_Innate	AQ_MJones
GENDER_PCT	**0.167***	**0.186***	0.061	-0.079
	(2.393)	(2.558)	(0.957)	(-1.122)
LN_BOD_SIZE	0.054	0.015	0.077	0.057
	(1.003)	(0.267)	(1.583)	(1.058)
BOD_IND	-0.011	-0.036	0.026	-0.025
	(-0.193)	(-0.608)	(0.514)	(-0.437)
AC_IND	0.023	0.027	0.008	0.054
	(0.439)	(0.481)	(0.157)	(1)
DUALITY	0	-0.043	0.055	0.042
	(0.009)	(-0.912)	(1.357)	(0.923)
LN_BOD_MEET	-0.044	-0.013	-0.062	0.059
	(-0.82)	(-0.232)	(-1.274)	(1.091)
LN_AC_MEET	0.048	-0.008	**0.097***	-0.03
	(0.922)	(-0.146)	(2.03)	(-0.57)
ROA	-0.012	-0.007	-0.012	**0.301****
	(-0.194)	(-0.106)	(-0.226)	(5.032)
PB	-0.045	0.075	**-0.176****	-0.055
	(-0.897)	(1.455)	(-3.903)	(-1.111)
Finl_LEV	0.008	-0.001	0.016	**0.155****
	(0.169)	(-0.025)	(0.37)	(3.259)
LOSS	**-0.165****	0.093	**-0.414****	**-0.187****
	(-3.311)	(1.793)	(-9.153)	(-3.744)
LN_SIZE	0.046	-0.002	0.085	**-0.165****
	(0.826)	(-0.032)	(1.674)	(-2.942)
INV_PRT	**-0.465****	**-0.361***	**-0.371****	-0.071
	(-3.329)	(-2.472)	(-2.924)	(-0.507)
DE (30%)	-0.208	-0.156	-0.174	-0.118
	(-1.663)	(-1.19)	(-1.527)	(-0.934)
BE, IT (33%)	-0.171	-0.131	-0.139	-0.139
	(-1.639)	(-1.199)	(-1.467)	(-1.321)
FR, NO (40%)	-0.08	-0.086	-0.033	-0.168
	(-0.818)	(-0.843)	(-0.374)	(-1.706)
R Square	0.175	0.1	0.319	0.168
Adjusted R Square	0.147	0.07	0.296	0.14

** p < 0.01 * p < 0.05

Appendix H: Uniformity Versus Flexibility Interactions

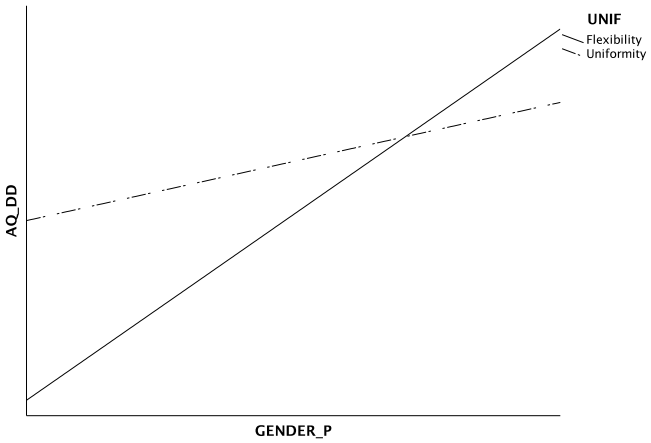

Figure 5.13. The effect of gender percentage on accrual estimation error in uniform versus flexible societies.

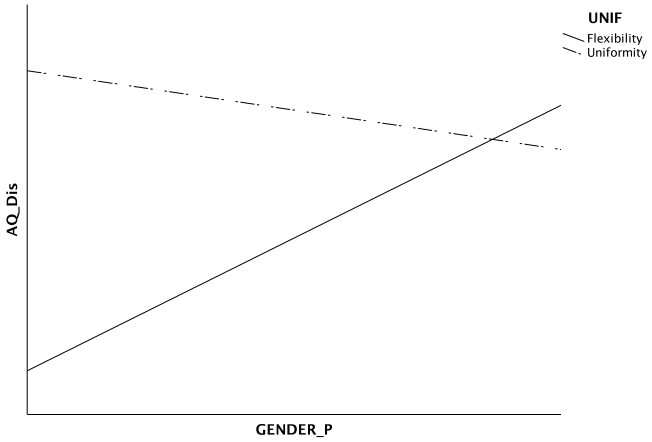

Figure 5.14. The effect of gender percentage on discretionary accrual quality in uniform versus flexible societies.

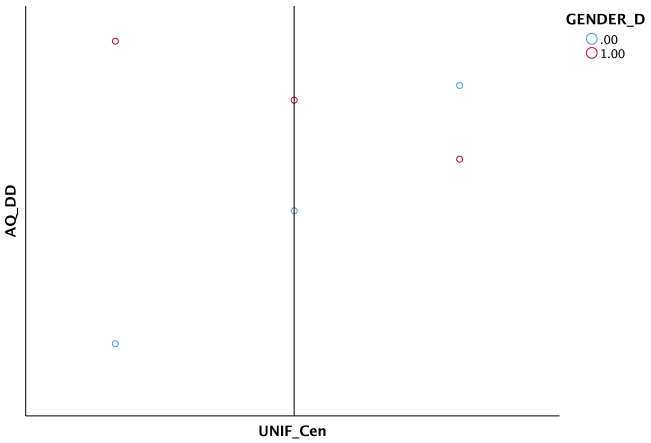

Figure 5.15. The effect of gender dummy on accruals estimation error in uniform versus flexible societies.

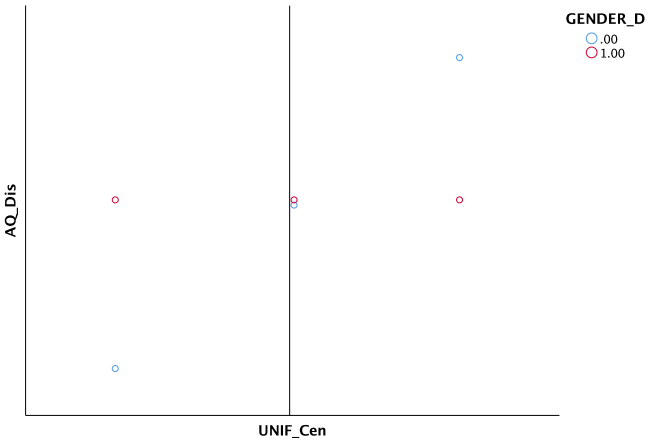

Figure 5.16. The effect of gender dummy on discretionary accruals in uniform versus flexible societies.

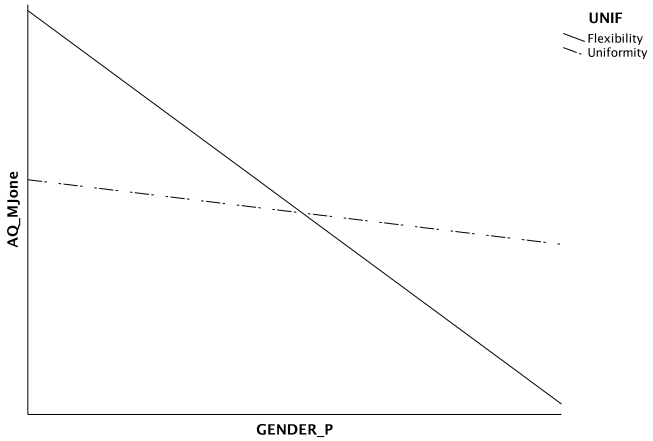

Figure 5.17. The effect of gender percentage on modified Jones model in uniform versus flexible societies.