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COLLEGE OF BUSINESS AND ECONOMICS

BOARD DIVERSITY AND FIRM PERFORMANCE: EMPIRICAL EVIDENCE FROM

THE UNITED KINGDOM

BY

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ABSTRACT

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Title: Board Diversity and Firm Performance: Empirical Evidence from the United Kingdom

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This study examines the relationship between board diversity and firms' performance in the UK by examining cross-sectional data for 2013–2016 from the Financial Times Stock Exchange (FTSE) 350 companies. Board diversity was measured by gender diversity, background and skills, and board tenure. Performance was measured by Return on Assets (ROA) and Tobin's Q using two regression models.

The study revealed mixed results. Performance, as measured by both proxies, had a positive association with gender diversity, a negative association with background and skills, and mixed results with board tenure. Tobin's Q revealed a non-significant relationship with board tenure diversity, whereas ROA had a positive association. Regarding the control variables, board size and number of meetings had positive association with performance, whereas firm size and level of leverage had negative association with performance. The presence of a corporate governance committee and a nomination committee had positive association with Tobin's Q model but not with ROA, while executive members' gender diversity had a positive association with the ROA but not with Tobin's Q.

This study provides useful insights into the importance of board diversity and its implications for firm performance, which can help develop future regulations and policies, such as having a quota of women on the board.

DEDICATION

*To
My father,
My family,
My wife, and
everyone else who shaped
my path to success.*

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It would not have been possible to finish my Master's thesis without the guidance of my supervisor, who was not only my professor, but also a friend and a brother.

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CHAPTER 1: INTRODUCTION

1.1 Background

Many of the current existing academic literature on board diversity argues that the low levels of board diversity within different contexts across different company sectors is a significant concern with respect to ethical and economical perspectives (Grosvold, Brammer, & Rayton, 2007). An important element of the literature has argued that it is highly unethical for certain groups of people to be denied access to social power on the basis of their gender, religion, race, background, or any other individual traits that are totally unrelated to their abilities (Garratt, 1997; Keasey, Thompson, & Wright, 1997; Carver 2002). In fact, the literature argues that the society in general and companies in particular would benefit by better reflecting their shareholders and customers through increasing their board's gender diversity. In other words, companies should perceive board diversity as an opportunity for growth rather than a means to an end (Grosvold et al., 2007). Besides, if any segment of society's talent is systematically excluded from boards of directors for reasons that are unrelated to their abilities or talents, the company's board is therefore sub-optimal (Burke, 1997; Cassell, 2000; Carver, 2002). Furthermore, if the necessary talents, abilities, and competencies are not evenly distributed across demographic groups, companies are, in fact, missing out on some of the main resources by limiting their selections to men (or a particular race, religion or background) (Bryan, 1995; Burke, 2000; Westphal & Milton, 2000).

From a firms' perspective, an economic incentive for a more diversified boardroom is that diversity should reflect its stakeholders' constituencies better. From one perspective,

customers will feel that their demands and requirements are better handled by somebody with whom they can identify, whether they are related by gender or ethnicity (Bilimoria & Wheeler, 2000). From another perspective, employees will also be motivated if they see a better reflection of themselves in the board of directors (Powell, 1999). In fact, firms that are dedicated to incorporating these issues may reap economic benefits and achieve better relationships with their pressure groups and investors (Kuczynski, 1999; Carver, 2002; Carter, Simkins, & Simpson, 2003).

At the tactical level, boardroom diversity has been viewed from two different angles. One side considers the increase in performance (Mattis, 2000; Selby, 2000; van der Walt & Ingley, 2003); the other side considers diversity increases conflict, which delays the decision-making process but hampers group-think (Hambrick, Cho, & Chen, 1996; Knight et al., 1999; Erhardt, Werbel, & Shrader, 2003).

Slow decision-making processes have, to some extent, been attributed to female board members. This is because women's decisions are felt to be marginal to the board's decision-making process. This, in turn, is translated into women feeling unable to voice their valuable contributions, which they were originally elected to do. Within a more diverse range of opinions and thoughts within the boardroom, consensus may be even harder to achieve, which causes delays in decision-making and devolves personal responsibility (Hambrick et al., 1996; Knight et al., 1999; Erhardt et al., 2003).

It is evident that boardroom performance will be affected by the experiences, competencies, skills, and views of its members (Nicholson & Kiel, 2004). Therefore, the wider the pool of talents from which board members are selected, the more capable the board should be. It has been argued that board diversity adds more to the company than it

takes away, and it increases rather than decreases the board's decision-making ability and the company's performance as a whole (Nicholson & Kiel, 2004). Therefore, one of the motivations of this study is to investigate this relationship. The study also aims to help policy-makers in future developments regarding board diversity within the corporate governance code in the UK.

1.2 Research Problem and Question

There is no widespread consensus on whether a company should diversify its board of directors, or whether board diversity positively or negatively affects firms' performance. This study also raises the question of which factors should a company consider in order to benefit from board diversity, if it exists in the first place (Martin et al., 2008). The sought-after influence of diversity on performance is important, as it is one of the factors that affect a company's continuity and going concerns. As a result, this study should help in answering the following research question of "What is the effect of board diversity in terms of gender, background and skills, and board tenure on the overall performance of a firm?"

1.3 Research Aim and Objectives

The research aims to investigate the effect of board diversity on firm performance. In order to achieve this aim, the study has to achieve the following objectives.

- I. Investigate the effect of board gender diversity on firm performance;
- II. Investigate the effect of board tenure on firm performance;
- III. Investigate the effect of background diversity on firm performance.

To the best of the researcher's knowledge, no previous studies have examined all of these relationships, except Martin et al. (2008), who studied board gender diversity as

one dimension of board diversity. Therefore, this study attempts to address this gap in the literature.

1.4 Research Contribution

Board diversity issues are closely related to a company's performance and its implications. Therefore, studying board diversity will add to the literature by explaining the presence of the interrelationship between diversity and performance from four different dimensions across a wide time interval from 2013 to 2016. In fact, this study could be used as a base for other future research that addresses similar topics even outside the UK, especially for countries that share similar economic characteristics to the UK. In addition, the importance of gender diversity, in particular, is highly relevant because of the pressure groups that have been asking for equality in rights between men and women since 1999 (Carter et al., 2003; Carver, 2002; Kuczynski, 1999). Therefore, studying gender diversity would definitely attract such stakeholders.

In addition, this study links boardroom diversity to performance by using the resource dependency theory. This will broaden our understanding of the multiple aspects of board diversity, instead of only focusing on gender diversity, and relate them to firm performance. The study provides useful insights for decision-makers in the business about who to hire in the boardroom and from which gender, background, age, race, and origin. More importantly, this study examines the effect of a new variable to the literature, namely the gender diversity of the executive members. To the best of our knowledge, this variable has not been considered before in any previous study. Therefore, it is expected that by the end of this study, more insights into board structure and, in particular, the demographic

characteristics represented by gender, will be better understood, along with its implications for firm performance.

1.5 Thesis Structure

The rest of the study consists of six chapters. Chapter 2 contains the literature review, which presents previous studies that examined the relationship between board diversity and firm performance. Chapter 3 discusses the theoretical framework and explains the pathway that has been selected to hypothesize the relationships investigated in this study. Chapter 4 is the methodology chapter, which discusses the rationalization of the study and its context, followed by the variable measurements and the data collection process. Chapter 5 contains the data analysis and a discussion, in which the descriptive statistics, Pearson's correlations, and linear regression analysis are explained. Finally, in the final chapter, the study summarizes, concludes and discusses the practical implications for regulations and policy-making, as well as directions for future studies.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The boardroom members are the stewards of the internal corporate governance hierarchy and thus it is considered as the highest authoritative body in any firm (Lorsch, 1995). The concept of having a board of directors has emerged since the separation of ownership and control, and it is now universally accepted that every organization, regardless of its size or vocation, ought to be run under the direction and control of a board of directors (Lorsch, 1995). The roles of the boardroom include but are not limited to: dealing with crises; communicating with shareholders, capital allocation, and decisions; acting as an intermediary between managers and agents; and selecting, compensating, assessing, and replacing the chief executive officer (CEO). Therefore, the importance of having a sound board of directors is driven by the fact that the boardroom shapes corporate leadership and sets the tone and the culture at the top level of management, which influences corporate financial performance.

The importance of the boardroom (board of directors) and its influence on a firm's performance is reflected in the diversity in the gender, background and skills, and board tenure of the members at the boardroom level, which, in turn, provides many different resources that are critically important for a company's success. Therefore, it could be concluded that the importance of the boardroom is highly correlated with a firm's performance and that therefore, the board's effectiveness and efficiency are crucial aspects that should be highlighted in order for the boardroom to successfully do what it has to do.

In the next section of this study, the definition, history, and advantages of board diversity will be elaborated.

2.2 Definition of Board Diversity

Before discussing the rest of the study, it is important to define what is meant by diversity. The Association of Chartered Certified Accountants (2018) has defined diversity in their curriculum as “aiming to cultivate a broad spectrum of demographic attributes and characteristics in the boardroom”. The Association of Chartered Certified Accountants mentioned a few examples that included board gender diversity as one of the hot topics that is being investigated nowadays. However, the Association of Chartered Certified Accountants also provided an opportunity to incorporate more examples of board diversity. Harrison & Klein (2007) defined diversity as a unit-level construct that refers to “the distribution of differences among the members of a unit with respect to a common attribute, X”. As an example, a board of directors (the unit X) may be more or less diverse in terms of nationality, functional expertise, gender, or education level. This definition introduces different dimensions of diversity that could be studied and their relationship to performance; the variables addressed in this study are no exception (gender, background and skills, and tenure).

When considering diversity, one should consider the work of Basaglio (2012), who made an important distinction between representation and skills. This is because the majority of the arguments for diversity consider benefits that are solely based on the merits of representation, for example, minority representation. However, in fact, diversity needs to be reviewed on the basis of skills. Individuals who travel along different career paths, coming from different backgrounds and gaining unique life experiences gain skills that

have to be represented in the boardroom in the current competitive environment. It is important to shed light on the fact that boardroom members are deemed to be the leaders who cause either success or failure for the companies they work for. This is because they are the ones who create the strategy, vision, and mission of a firm.

2.3 Board Diversity History in the UK

Board diversity is a key driver of board effectiveness. Headworth, Nelson, and Wilkins (2016) argue that when the board is composed of people from different backgrounds with a varying range of skills and experiences, this introduces diversity from a background and skills perspective, which, in turn, helps in promoting the long-term success of an organization in the highly competitive marketplace. Diversity in the workforce is primarily focused on the idea of including more women in organizational boards (Sajjad & Rashid, 2015). Initially, most companies did not have women in their workforce, let alone their boards, and this was dictated by the view that women could not perform at the same level as men. Over the years, this expanded to include other aspects of diversity that are bound to exist within the workforce (Baker & Anderson, 2010). Diversity in board composition is a factor that could be argued to date back to the implementation of the Employment Rights Act of 1996. The law outlawed hiring practices that discriminated board members on the basis of their nationality, religion, race, or gender (Baker & Anderson, 2010). This was later followed by the Equality Act of 2010. The economic global crisis in 2007 led to increasingly varied challenges being faced by boards in most organizations today, and this increased the focus on board diversity and the role that it could play in improving board performance. Over the years, UK boards have consistently been moving towards what could be regarded as best practices in relation to board diversity.

Diversity of boards, in this particular respect, is used to refer to the dissimilarities in board attributes. Much research has been conducted over the years trying to determine the relationship between board diversity and firm effectiveness (Campbell & Mínguez-vera, 2008; Rhode & Packel, 2014; Foster, 2008; Wellalage & Locke, 2013). Most of the findings from the research seem to point to the fact that most of the firms with a high level of board diversity seem to perform better than organizations that have low levels of diversity among their board members (Mishra & Jhunjhunwala, 2013).

Board diversity is desirable in organizations for two key reasons. First, diversity is generally desired by customers and other key stakeholders who are crucial for the success of the firms. As such, ensuring a high level of diversity within the firm could lead to crucial benefits for the success of the firm (Hafsi & Turgut, 2013). Second, board diversity helps in the generation of new and different ideas within the organization, which, in the long run, is a key determinant of an organization's performance (Orbach, 2017).

Board diversity is a high priority for institutional investors in the UK. However, there have been concerns that this message may not be getting to the boardroom because of the differing opinions among the directors on exactly what diversity within the workplace entails (Hafsi & Turgut, 2013). Over the years, the UK government has been keen on seeing more diverse boards. In February 2011, Lord Davies of Abersoch set a target for board gender diversity for FTSE 100 companies, and part of the new regulations included how each of the companies must ensure 25% female representation in their boards by the year 2015. As per GrantThornton (2016), the target for most of the companies is to ensure that by 2020, each of the companies must have at least 33% female representation. The other aspect of diversity is cultural and ethnic inclusion in the boards. The rules in the

UK stipulate that all of the boards of FTSE 100 companies should have at least one person of color to ensure improved diversity in their management team by the year 2021 and for FTSE3 350 by the year 2024 (GrantThornton, 2016).

In the next sections in this chapter, the study will discuss two main themes. The first one explores the main advantages and definitions of board diversity in general. The second theme addresses the separate dimensions of board diversity, namely board gender diversity, board background and skills, and board tenure.

2.4 Advantages of Board Diversity

On one hand, some have questioned the effective impact of diversity on the overall performance of companies. The advantages and disadvantages of diversity in general have been addressed in the literature. According to Hafsi and Turgut (2013), the effect of board diversity on corporate social performance is significant. The study of Hafsi and Turgut (2013) formulated three different hypotheses for testing the relationship of corporate social responsibility (CSR) with board diversity. Their dimensions were: board size, leadership duality, gender, age, experience, ethnicity, number of outside board members, and the ownership of outside board members in relation to other boards. The study's conclusion was not comprehensive and cannot be generalized. This is because the testing was done on only one set of data representing the year 2005 with a random sample of 100 companies listed in the Standard & Poor's (S&P) 500 index. Their random selection did not represent the actual population, as the time interval selected and the number of companies were small to be used for generalization to the wider population. A similar study conducted in Australia examined the relationship between board diversity and CSR reporting by Rao

and Tilt (2016) among the top 150 listed companies over a 3-year period. The results were similar to those of Hafsi and Turgut (2013), indicating that gender, tenure, and multiple directorships have significant potential for influencing CSR reporting.

As a result of this discussion, it can be concluded that board diversity has a positive influence on CSR. In other words, the more diversified the boardroom, the higher the CSR. This represents one of the advantages of having a diversified board of directors.

If we consider social performance as one of the advantages, the results of the study of Siciliano (1996), which was conducted on YMCA organizations for the year 1989 using resource dependency theory, suggests that gender diversity was positively linked with a firm's level of social performance but negatively linked with the level of funds raised. In fact, this result was supported by Carter et al. (2003) in their research testing the relationship between board diversity and company value for Fortune 1000 companies. In fact, Carter et al. (2003) found a significant positive link between a company's value and female representation on the board.

Another advantage was highlighted by Ooi, Hooy, and Mat Som (2017), who identified board diversity and its relationship to human capital and social capital during crisis periods and its effect on financial performance. Although they found no significant improvement in firm performance, diversity significantly mitigated the negative impact of a crisis affecting firm performance. The advantage lies in the ability of a diverse board to mitigate the impact of crisis, and the study shows that board diversity in external network ties is effective for handling gradual crises. The dimensions of diversity that were found to be significant were: educational background, work experience, and external networks. Their over results were inconclusive, as their conclusions indicated that board diversity

only affects performance as measured by stock prices and not accounting performance (measured by profits). These results might raise a different question about whether stock price is a reliable measurement of a firm's performance.

An additional advantage that was elaborated by Li et al. (2018) is that board diversity, in fact, has a significantly positive effect on employer–employee relationships (EERs). Li et al. (2018) also claimed that a positive impact on EER may be useful for increasing a firm's performance. As a result, the impact of board diversity on a firm's financial performance could be indirect. Although Li et al (2018) did not explicitly test the proposed indirect relationship, the advantage here is mainly attributed to the board diversity and its impact on EERs. This present study did not find a continuation of Li et al.'s (2018) study to determine the exact impact of EER on firm performance.

Furthermore, a study by Buse, and Bernstien and Bilmoria (2016) tested board diversity and its influence on the board's performance. The study found that the presence of female members in the boardroom directly affects the policies and practices of the board, which consequently affect the board's performance. Similarly, Pechersky (2016) found that board diversity in general and board gender diversity in particular make contributions towards a firm's performance in social and healthcare industries.

Ferreira (2010) has also highlighted another benefit of board diversity in general where it increases creativity when having people from different background with different life experiences who are likely to approach similar or even different problems in more creative ways. Ferreira has also stated that the more the diversified the boardroom was the lesser the boardroom suffers from group thinking problems.

This study believes that the advantages of board diversity have more than one dimension to be addressed and not only those mentioned above. For example, a study conducted in Vietnam by Hoang, Abeysekera and Ma (2017) found a significant relationship between board diversity and its impact on earnings quality. Therefore, it can be argued that board diversity does not only tie in with performance but, in fact, it can affect multiple factors that could be studied. Hence, it can be seen that diversity in general has advantages that have been made theoretically and empirically evident over the years. The literature indicates that board diversity has numerous advantages, and this helped to drive and shape the current study.

The next section in the literature review is divided into two main themes, where each part discusses the three attributes of board diversity in either of developed or developing countries.

2.5 Developed Countries

2.5.1 Gender Diversity

The board gender diversity dimension was not addressed widely in the UK, since female representation at the boardroom level has been considerably low until recent years. Martin et al. (2008) is an example of the studies written on this topic in this context, but it is not the only one to consider. FTSE 100 companies between 2000 and 2005 had only 10.5% female directors on their boards of directors (Singh & Vinnicombe, 2005). Although the number of female directors has doubled across 2000 to 2005, the percentage is still considered to be low (Brammer, Millington, & Pavelin, 2007). According to Brammer et al. (2007), female representation was significant in those types of companies that deal

directly with the customers at the lower level of management of the company, with less presence of the senior level management, such as the boardroom directors.

Martin et al. (2008) examined board gender diversity differently, with his study mainly exploring the trend of hiring female directors in the boardroom and the percentage of women occupying vacancies. His findings were that male directors are still dominating boardrooms except for small and service companies, where female directors are present in greater numbers. This was highlighted earlier by Martin et al. (2008), who reported a lack of disaggregated data and information in the UK reporting corporate board diversity. The main findings of Martin et al.'s (2008) study concerned female representation, where they expected that gender balance in the board of directors could be achieved by the year 2225 at the earliest if progress kept improving at the same rate.

In order to better understand the real impact of board gender diversity on firm performance, we will examine this relationship in details by reviewing prior literature that addressed this topic.

Board gender diversity has been widely studied regarding its relationship with firm performance worldwide. Previous literature has provided divergent results when it comes to the influence of board gender diversity and its relationship with firm performance. The first reason is the inconsistency in the proxies used for measuring performance. The second reason is the context itself and, finally, the time interval and the different combinations of independent variables considered in the study have led to the inconclusive results. Here, we will consider three main themes, starting with the positive influence of gender diversity in the boardroom on firm performance (measured by net income, Tobin's Q, Return on

sales (ROS), return on equity (ROE), and return on assets (ROA)), followed by negative associations, and, lastly non-significant relationships.

Smith, Smith, and Verner (2006) studied boardroom gender diversification in the context of 2500 Danish firms across the years from 1993 to 2001 by using a cross-sectional methodology. They examined relationship of gender diversity with firm performance and found a positive significant interrelationship between these variables. Smith et al. (2006) measured firm performance by using net income.

In the context of the Far East, including Hong Kong, South Korea, and Singapore, Low, Roberts, and Whiting (2015) studied gender diversity relationship with performance and found that there is a positive relationship between board gender diversity and firm performance as measured by return on equity (ROE). However, they mentioned that, this positive relationship is only applicable when there is little female economic participation and empowerment. In other words, the relationship is positive when the female representation is minimal compared with the percentage of male board members.

With respect to gender diversity and its relationship with Tobin's Q, a study (Gordini & Rancati, 2017) that was conducted in the Italian context revealed that the percentage of women in the boardroom has a positive and significant effect on Tobin's Q; however, it has an insignificant effect on financial performance (e.g. net income and profits). The inconsistency in the results for net income, profits, and Tobin's Q is explained by the nature of measuring the Tobin's Q variable, which considers the ratio of current value to the book value of the entity at the same point in time.

In contrast to Gordini and Rancati (2017) study, Vob (2015) revealed that the relationship between board gender diversity and a firm's performance in general was not

significant in the context of Norway, where Tobin's Q in particular was found to have a negative association with firm performance. This is, into some extent, different from what other literature found during the same time interval. A possible reason is that the context addressed was different.

Finally, a study that was conducted by Terjesen, Couto, and Francisco (2016) studied the same relationship between board gender diversity and the performance of 3876 companies in 47 countries. The sample included all types of companies in terms of their size, value, geographical location, ownership structure, and nature. The study revealed that there is a positive relationship between board gender diversity and the board's effectiveness, which could directly enhance the firm's performance. Although there was no direct relationship between performance and gender diversity in Terjesen et al.'s (2016) study, they highlighted the indirect relationship between them implicitly. Similarly, Rose (2007) studied the context of Germany and did not find any linkage between female representation and the firm's performance. However, Rose's (2007) study period covered 1998 to 2001 and it excluded financial institutions, and no linkage was discovered.

In conclusion, board gender diversity and its impact on firm performance has been marginally addressed in the UK context. Martin et al.'s (2008) study, which is considered the closest study to this present study, covered the time interval of 2000–2005, which is now considered to be outdated. In the dynamic environment that firms are operating in, a study with a data from even only a few years ago is deemed to be outdated. In addition, the study only considered FTSE 100 companies, which does not represent the whole population. The main reason for the assumption that FSTE 100 companies are not representative is that Financial Times website published an article showing the variations

in the FTSE 100 index from 2000 to 2005, questioning whether measuring performance in this period is recommended, especially given the dramatic fluctuations taking place at the same time in the market (Evans, 2015). Although previous literature has studied the link between firm performance and gender diversity, the data were not up to date and did not cover the same context (the UK). Siciliano's (1996) study, which addressed YMCA organizations, is somewhat old, as it covers the year 1996 and did not focus on one particular country. This was also the case for Carter et al. (2003), who addressed Fortune 1000 companies in the United States in 2003. This literature review has highlighted the wide gap of studies in the UK. Rose (2007) studied his context; however, her methodology for collecting data is still questionable. Rose (2007) managed to obtain the data for data analysis manually, which is sometimes inaccurate, leading to incorrect analysis, interpretations, and conclusions accordingly. Kiliç and Kuzey's (2016) study addressed the period of 2008 to 2012 in Turkey and looked at the companies listed on Borsa Istanbul. The study only focused on board gender diversity, ignoring other significant factors affecting firm performance from the board diversity perspective. This study follows the same methodology of adopting the resource dependency theory that was used by Kiliç and Kuzey in Turkey (details of the methodology will be presented in the next chapter).

Therefore, it can be said that board gender diversity has been studied in different context regarding its relationship with other factors not limited to firm's performance. This highlights the importance of gender diversity in the literature and in this study in particular.

2.5.2 Background and Skills Diversity

The educational background and skills of the management has remained a puzzle as to whether it affects a firm's performance or not. This factor has been the least examined

or studied by researchers according to Protasovs (2015). Notwithstanding, many authors have agreed upon the effect of diversity in background and skills on firm performance. According to Murray (1989), it has a non-significant relationship with the firm's performance in the short-term; however, the need to have a particular background is strong for a firm in that particular industry. A brief example considered a board full of engineers for a company operating in the oil and gas industry. Ensuring this type of background experience in the board would lead to better a company performance overall. In contrast to Murray (1989), a study by Argenti (1976) found that a board of directors without adequate diversity in educational background could lead to the collapse of a firm. The author relied on an example in 1970s when Rolls-Royce went through a downturn because its board was dominated by engineers with little knowledge and minimal experience of the financial implications of the company's research and development. Hence, this makes educational background and skills diversity a crucial aspect for a board of directors, particularly for large organizations in our modern business world. In addition, Bantel (1993) found more benefits of having a more educationally diversified board, which helps firms to make better decisions in the long run. The results of Bantel (1993) were based on the banking sector and the financial industry as a whole. Similarly, having more a educationally diverse board helps the company to make faster and more in-depth assessments of decisions as well as addressing the potential information asymmetry issues between the senior management and the board of directors (Mahadeo, Soobaroyen, & Hanuman, 2012). Mahadeo et al. (2012) also found a significant effect of diversified board background regarding its impact on firm performance. Therefore, it can be seen that these factors are significantly relevant in measuring board diversity and affect firm performance.

The structure of the board of directors plays an important role in how the board monitors the managers and controls the company on behalf of the shareholders. The structure comprises CEO duality, the existence of board committees, and the presence of non-executive representation on the board (Chuanrommanee & Swierczek, 2007). However, the way in which the diversity of the board was defined in this study was based on educational background and skills, gender, and board tenure, which are considered to be the main governance issues in the modern business world (Carter et al., 2003). Gender, background and skills, and tenure aspects of diversity are taken into account because many institutions, including the National Association of Corporate Directors' Blue Ribbon Commission and the Interfaith Center on Corporate Responsibility, suggest not only considering the abovementioned diversity criteria, but also constantly monitoring and reporting on the diversity within major organizations (Carter et al., 2003). In this regard, education is used because of its crucial role in influencing firm performance when it comes to hiring a board for a specific industry (Argenti, 1976; Murray, 1989). Simons and Pelled (1999) found that educational and cognitive level diversity within the board of directors led to a positive impact on the firm's performance, thus hypothesizing that diversity in the board has a positive effect on organizational financial performance through the potential increase in the firm's performance and improved decision-making. In addition, Erhardt et al. (2003) found that having diversified board leads to an increase in the firm's financial performance as well. Therefore, proving the existence of a relationship between board diversity, as represented by the three aspects described above, and firm financial performance indicates the usefulness of investigating this topic in the context of the UK.

2.5.3 Board Tenure Diversity

The tenure of decision-makers (represented by the board of directors) has received significant attention in literature as far as strategic change is concerned (Tarus, & Aime, 2014). This literature review also found previous studies that linked board tenure to the strategic change and future continuity of companies, but not with financial performance, except for Huang and Hillary (2018). Most of these studies have only focused on the CEO or the top management as a whole and its impact on a company's managerial and strategic change (Tihanyi et al., 2000; Herrmann and Datta, 2005). Huang & Hillary (2018) studied the relationship between board tenure and accounting performance. Their study used cross-sectional methodology to explore S&P 1500 firms in the US for the period from 1998 to 2010. The study found an optimum average number of years (9 years in particular) for the tenure of boardroom members in order to realize tenure benefits with respect to profits.

Another study conducted by Bantel and Jackson (1989) who have highlighted the importance of having long tenure that results in a better group thinking, aversion to risk and adherence to status. Kagzi and Guha (2018) have also mentioned that long board tenure develops a common language that in return facilitates the smooth transmission of work-related communication. The latter makes a long-term organizational tenure more efficient.

Nevertheless, no other scholarly studies approached the same context to the best of our knowledge. As a result, studying board tenure and its relationship with firm performance will also contribute to the literature in this respect.

In a nutshell, and after reviewing the literature on board diversity across different contexts, including the UK, it came to our notice that there is a lack of studies into the three dimensions of diversity (gender, tenure, and background and skills) and this is a common

across different countries including the UK, Australia, and Turkey. There is no wide consensus on the benefits of board diversity; the majority of the literature addresses diversity and its effect of several factors with no guarantee that board diversity will lead to positive consequences. Even so, this review has highlighted some of the benefits of board diversity, based on previous literature. However, it is still debatable whether the boardroom should be diversified in the first place. This is why this present study is not only addressing the effect of board diversity on firm performance but also whether boardroom diversity is influential in the first place and whether its effect is positive or negative, as will be discussed in the coming chapters. Table 2.1 presents a summary of the key studies that have been used to direct and shape the current research.

2.6 Developing Countries

This part of the study will be considering the three attributes of board diversity in the context of the developing countries that include; Turkey, Malaysia, Lebanon, Egypt, Indonesia and India. However, due to the limited number of studies, this section will be categorized based country wise with the different studies approached the same context.

To start with, there has been different studies conducted in the context of Turkey that shed lights on the importance of board diversity from more than one attribute. For example, Kiliç and Kuzey (2016) studied gender diversity at the boardroom level by using instrumental variable regression analysis, and their results showed a significant positive relationship between the occupancy of female board members as a percentage of the total members of the board and firm performance as measured by ROA, return on equity, and return on sales. Similarly Ararat et al (2015) found a positive relationship between board

diversity as one indicator that includes board gender diversity with the firm's performance on BIST-100 index in 2006.

On the contrary, Solakoglu et al (2016) who studied listed firms in BIST100 index of bursa Istanbul from 2002 to 2006, found the opposite where there has been a weak evidence that gender diversity impacts the performance of the firms. His study used one market-based performance indicator and two accounting-based indicators.

In the context of Egypt, there has been two studies approaching board diversity from one perspective which is the board gender diversity. Ararat et al (2015) has approached the context of top 50 most active companies listed in the Egyptian exchange from the year of 2005 to 2014. His results found that there has been positive relationship between the board gender diversity in the boardroom with firm's performance. He has used multiple proxies for measuring the performance of the firms that include; return on assets, return on invested capital, return on equity and finally market to book value. Although his study is considered now as outdated since its context was only approaching data until 2014, however, it is still a base to conclude on the trend of gender diversification on the financial performance of Egyptian listed companies. Another study conducted by Abdelzaher and Abdelzaher (2019) approaching the same context of Egypt on a sample basis of 114 Egyptian listed firms in the year of 2014 and revealed a positive association between board gender diversity on firm's performance measured by return on equity and Tobin's Q.

Abdelzaher's study is no exception of considering his study as outdated since it considered the context in the time period of 2014 only. In addition, it only considers one attribute of board diversity which is represented by gender boardroom diversity.

Focusing on the Asian continent and in particular Indonesia as a developing country, there has been multiple studies discussing gender boardroom diversification and its impact of the performance of the firms. Triana and Asri (2017) approached the context of public listed companies on the Indonesian Stock Exchange (IDX) from 2011 until 2015 using multiple regression models and revealed the positive association between gender diversity and firm's performance. Although the study covered a more recent context compared to the Egyptian context, however, it only considered two control variables represented by leverage, and firm's size. The latter lack might cause a lower adjusted R-square variable which may lead to the inability to concluded on the multiple regression model that the authors have adopted.

Contradicting to the previous study conducted by Triana and Asri (2017), Darmadi (2013) who studied 92.4 percent of the public firms listed on the Indonesian Stock Exchange (IDX) found a negative association between the boardroom gender diversification and firm's performance measured by ROA and Tobin's Q. The differences in the results might be attributed to the difference of the time period studied, as Darmadi has only considered the year of 2007, while Triana and Asri considered a more recent period of 2011 to 2015.

In the Lebanese context, there has been one study conducted by Jamali et al (2007) who approached the banking sector that comprises of 12 different banks. His study was mainly focusing on having board gender diversity and its relationship with the effectiveness of the board. His study revealed that the presence of female in the boardroom enhances board's performance which may indirectly be affecting positively the performance of these banks. Jamali study was inconclusive since it covered more than one

attribute of the board that includes gender diversity percentage, female qualifications and number of years of experience in a particular field. The study's control variables were mainly attributed to female boardroom members' characteristics' rather than considering other board diversity attributes. This is because his study is solely considering gender diversification and ignoring other attributes of boardroom diversification.

Malaysia on the other side has studied gender diversity across different periods. To start with, Jubilee et al (2018) who studied gender diversity in the banking sector from the year of 2007 to 2016 found the presence of positive association between gender diversity and firm's performance. His study approached ten banking institution listed on Bursa Malaysia. His theoretical design was panel data analysis where he has also used Tobin's Q as performance proxy.

Another study on the Malaysian context studying the background attribute of board diversity from the year of 2010 to 2014 on the 350 non-financial listed companies in Malaysian Stock Exchange found a positive association between the latter and the firm's performance. The author relied on two different proxies for measuring performance that include ROE and ROA. Although this study considered a wide range of time period, however, it lacks a market-based indicator for measuring the performance of the firm as it only considers the accounting aspect of it.

At this stage of the study, it can be concluded that there is a huge gap either in the developed or developing countries that approached the three main attributes of boardroom diversity that is being studied in this study. In addition, the literature is into some extent considered as outdated since the latest study was conducted in 2019 but approached the context of Egypt up until 2014 only. Even though there are studies that approached contexts

until 2016, however, it still lacks the integration of board diversity attributes with firm's performance, as it only considers one factor of the latter.

To the best knowledge of the author, there are no studies conducted that approached the executive member gender diversity before, and therefore it is considered as one of the main contributions in this study.

Table 2.1*Key Studies Covering the Effects of Board Diversity on Firm Performance*

Authors and year	Study context	Objective or scope	Methodology	Results
Siciliano (1996)	YMCA organizations	The relationship of board member diversity to organizational performance	Panel data analysis	Gender diversity is positively linked with a firm's level of social performance but negatively linked with the level of funds raised
Carter et al. (2003)	Fortune 1000 Companies	Relationship between board diversity and the company's value	Cross-sectional methodology	A positive linkage between a company's value and female representation on the board
Smith, et al. (2006)	2500 Danish firms	Do women in top management affect firm performance?	Panel data analysis	The results show that the proportion of women in top management jobs tends to have positive effects on firm performance, even after controlling for numerous characteristics of the firm and the direction of causality. The results show that the positive effects of women in top management strongly depend on the qualifications of female top managers
Brammer et al. (2007)	543 UK Publicly Listed Companies	The ethnic and gender diversity of the corporate board of UK companies, placing particular emphasis on links to board size and industry characteristics	Cross-sectional time series methodology	Female representation was significant in the types of company that deal directly with the customers in the lower level of management
Rose (2007)	Germany	Female representation and firm performance	Cross-sectional time series methodology	No relationship
Martin et al. (2008)	450,000 UK companies	The first overview of the incidence of female directors in UK companies, and exploring the trend of hiring female directors in the boardroom and its percentage of occupying vacancies	Cross-sectional time series methodology	Reported disaggregated data and information. Board gender diversity will be achieved by 2225 at the earliest if the increase in the number of female directors keeps growing at the same rate. In addition, male directors are still dominating boardrooms, except for small and service companies, where female directors are present
Hafsi and Turgut (2013)	S&P 500 firms	The presence of effect of board diversity on corporate social responsibility (CSR)	Cross-sectional time series methodology	Significant effect of board diversity on CSR
Buse et al. (2016)	1456 boards	The influence of board diversity, board diversity policies and practices, and board inclusion behaviors on nonprofit governance practices	Panel data analysis	The presence of women in the boardroom directly affects the policies and practices of the board, which consequently affects the board's performance
Low et al. (2015)	Hong Kong, South Korea, Malaysia and Singapore	Board gender diversity and firm performance	Cross-sectional time series methodology	Increasing the number of female directors on the board has a positive effect on firm performance, as measured by return on equity
Protasovs (2015)	Southeast Asia	Examining the relationship between demographic and cognitive diversity factors within the board of directors and firm financial performance.	Panel data analysis	The study failed to find a significant relationship between the studied variables
Vob (2015)	Norway	The impact of gender-diverse boards on firm financial performance in Norway	Cross-sectional time series methodology	The analysis reveals no significant evidence that firm financial performance is positively impacted by gender-diverse boards of directors. For Tobin's Q, there is a negative relationship between the gender diversity of boards of directors and firm financial performance
Kiliç and Kuzey (2016)	Turkey	Relationship between board gender diversity and A company's performance	Instrumental variable regression analysis	Significant positive relationship between occupancy of female board members and firm performance
Rao and Tilt (2016)	Australia	Examining the relationship between board diversity and CSR reporting	Longitudinal analysis	Gender, tenure, and multiple directorship have significant potential to influence CSR
Gordini and Rancati (2017)	Norway and Italy	Relationship between board gender diversity and firm financial performance in Italy, where the recently enforced Law 120/2011 prescribes gender quotas for boards of directors.	Panel data analysis	Gender diversity, as measured by the percentage of women on a board and by the Blau and the Shannon indices, has a positive and significant effect on Tobin's Q, whereas the presence of one or more women on the board <i>per se</i> has an insignificant effect on a firm's financial performance.
Huang et al. (2018)	Vietnam	Testing the relationship between board diversity and earning quality	Panel data analysis	Significant relationship between board diversity and its impact on earnings quality
Ooi et al. (2017)	Publicly listed tourism firms in four Asian markets	Board diversity and its relationship in human capital and social capital in crisis periods and the effect on financial performance	Cross-sectional time series methodology	No significant improvement in the firm's performance; however, it mitigates the negative impact of a crisis affecting the firm's performance
Li et al (2018)	1000 publicly listed US firms	The relationship between demographic diversity on boards and employer-employee relationships (EERs)	Hierarchical regression analyses	Ethnic diversity and gender diversity have positive effects on EER. Contextual factors such as a firm's financial situation should moderate the relationship between demographic diversity on boards and EERs

CHAPTER 3: THEORETICAL FRAMEWORK

A theoretical framework helps to explain, predict, and understand a particular phenomenon and, in some circumstances, challenge existing knowledge within the limits of critical bounding assumptions. The board diversity topic has been approached in the literature via different theoretical frameworks that include gender role theory, agency theory, and resource dependency theory. In this part of the study, all three theories will be approached and we will identify why resource dependency was chosen over the others.

3.1 Gender Role Theory

Gender role theory has been considered to be one of the oldest theories used to define the relationship between board diversity and firm performance. For example, Eagly (1987) proposed the gender role theory, which identified that the gender of an individual is enough to determine one's behavior, and its effectiveness with respect to influence. This theory assumes that the behavior of males and females can be assessed in terms of divergence from expectations of the appropriate gender-expected behavior. In other words, there can be variance between the behavior expected of a particular gender and real behavior. A more recent study was also conducted by Eagly et al. (1995) mentioned that individuals who use day-to-day tactics that are aligned with the accepted gender behavior are perceived to have higher value by others. These tactics include communication with suppliers, customers, investors, and other board members. As humans, we expect women to express more feminine traits such as sympathy and gentleness (Eagly, 1987). On the other hand, men are supposed to be more assertive and aggressive. Women are believed to manage difficult situations more wisely than men because of their flexibility (Rosener,

1995). Since boards of directors need to use communication techniques that can influence other parties, having the gender diversity in the boardroom (with both males and females) would lead to better communication and the influence of the different tactics of both genders would help the company to survive (Forbes and Milliken, 1999). Forbes and Milliken (1999) identify the importance and reasons for gender role methodology being adopted by the literature; however, these studies considered the gender aspect and ignored the other aspects of diversity that could be considered. This highlights the main weakness that can result from ignoring this theory when conducting research, as a study may not be able to incorporate all the possible dependent variables.

Furthermore, earlier studies that addressed board diversity in general and board gender diversity in particular were descriptive and did not develop any theoretical framework (Terjesen et al., 2009). This has engendered a gap in which there are a lack of theories or frameworks that is suitable for this present study.

3.2 Agency Theory

The ultimate role of the boardroom members in the agency framework is strictly connected with resolving the agency problems between the two parties: the managers (agents) and the shareholders (owners) by controlling the remuneration and whether the current agents create value added for the owners (Carter et al., 2003). The agency theory, by definition, is highly correlated to the firm's financial performance. This relates to the board's role in monitoring the potential costs that are associated with the management pursuing their own interests at the cost of the shareholders' interests (Hillman & Dalziel, 2003). The monitoring role's importance lies in the fact that the boardroom members are able to reduce the agency costs that are connected with the separation of ownership and

control (Hillman & Dalziel, 2003), hence leading to a significant increase in the firm's financial performance because of the expenses of the agency costs being avoided. The agency costs avoided were thoroughly explained by Berle & Means (1932) in their description of the principle of segregating ownership and control. Hence, providing the managers with good opportunities to pursue their own interests comes at the cost of revenue and profit maximization for the entity. On the basis of the results of Hillman & Dalziel (2003) and Berle & Means (1932), it is hypothesized that the boardroom is able to monitor the costs of the company, including the agency costs. This may lead to a significant increase in the firm's financial performance. In addition, Erhardt et al., (2003) and Simons & Pelled (1999) found that boardroom diversity leads to an improved decision-making process and overall organizational performance. In other words, a board that is able to make better decisions and operate at a high supervisory level is assumed to monitor and control the state of the company better. This agrees with the stated hypothesis that boardroom diversity leads to an increase in firm financial performance.

To date, agency theory studies have not incorporated board gender diversity, board background and skills, and board tenure in one theory. It has been used earlier to determine the effect of demographic diversity of the boardroom members on a firm's performance as per Protasovs (2015). However, demographic diversity fails to address board tenure diversity, which is one of the main components of this study.

If we consider similar studies, the majority either adopted gender role theory or used agency theory like Protasovs (2015), or they used resource dependency theory, which is used in this study. Adopting a theoretical framework is important for defining the methodology used to approach the dependent variables and their relationships with the

independent ones. As a result, this study adopted the resource dependency theory proposed by Pfeffer and Salancik (1978), though it was not developed for this purpose. Resource dependency theory has, in the past, provided useful perspectives when studying the relationship between board diversity and firm financial performance (Vob, 2015), which led to the adoption of this theory. The following section of this study explains the main reasons for adopting this framework in detail, along with its definition.

3.3 Resource Dependence Theory

The general rule is as follows: firms around the world operate within an open system where they need each other to exchange and/or acquire other resources to survive. This creates a dependency between firms and third parties (Pfeffer & Salancik, 1978; de Cabo, Gimeno, & Nieto, 2012), where both parties are better off in the end. There are four primary benefits of having external linkages as a provision of resources identified by Pfeffer and Salancik (1978). These are: (1) information and expertise, (2) creation of channels of communication with important constituents of the firm, (3) providing commitments for support from important organizations or groups, and (4) the creation of legitimacy for the firm in the external environment (Pfeffer & Salancik, 1978).

The theory that is used in this study proposes that directors (board members) link their own organizations with other external firms to address certain environmental dependencies (Pfeffer & Salancik, 1978; Hillman & Cannella, 2007). Linking this theory to the context of this study, board diversity opens up different ways and channels of communication, networks and links among corporations (Hillman, Cannella, & Paetzold, 2000; Liu, Wei, & Xie, 2013). This increases the probability of access to different sources of finance (Reguera-Alvarado, de Fuentes, & Laffarga, 2015) and improves linkages and

relationships with customers and competitors (Reguera-Alvarado et al., 2015). Some companies appoint female directors as board members in order to maintain good interactions and relationships with their existing and potential clients or customers (Liu et al., 2013). Thus connections to the external resources that could be provided by having female board members might have the potential to increase critical resourcing, which consequently enhances firm performance (Reguera-Alvarado et al., 2015).

Similarly, having board members with different backgrounds and tenure periods will also open up opportunities for additional sources of funds, better communications skills and better external opportunities overall, which contributes to the continuity of the company. Again relying on the possibility of having more access to different resources, including diverse board members in terms of their gender, and skills and background improves a firm's legitimacy by signaling that the company promotes the cause of gender equality (Isidro & Sobral, 2014). By having female directors on the board, positive signals are sent to different stakeholder groups, including customers, investors, suppliers, communities, and, more importantly, pressure groups. Consequently, the firm's image and reputation in the market will be improved. (Huse & Solberg, 2006; Lückerrath-Rovers, 2013).

This theory has been adopted by different scholars when studying the relationship between the board diversity and firm performance (e.g. Vob, 2015). This is because resource dependence theory explores how organizational behavior is affected by external resources. Since firms are dealing with external parties like customers, investors, suppliers, and the community, they are affected by them. As the board of directors drives the entity's wheels, the board should be able to deal adequately with those external parties to achieve

success. From this perspective, the resource dependence theory has been used extensively in previous studies in this area, because it studies the relationship between board diversity and how this affects the relationship with external parties, which could be translated into financial performance in terms of net income, net income ratios, and increased company wealth and value (Martin et al., 2008). In the next section, the study will focus on the theoretical framework and its development.

3.4 Theoretical Framework

The theoretical framework that has been formulated in this study is composed of three parts (Fig. 3.1). The right-hand side of Fig. 3.1 shows the control variables with arrows pointing towards the firm performance measurements. The arrows indicate the direction of the influence. Similarly, the left-hand side shows the board diversity factors, which are the main independent variables in this study. The arrow is pointing towards firm performance, as the scope of the study is to investigate the independent variables' influence over a company's performance.

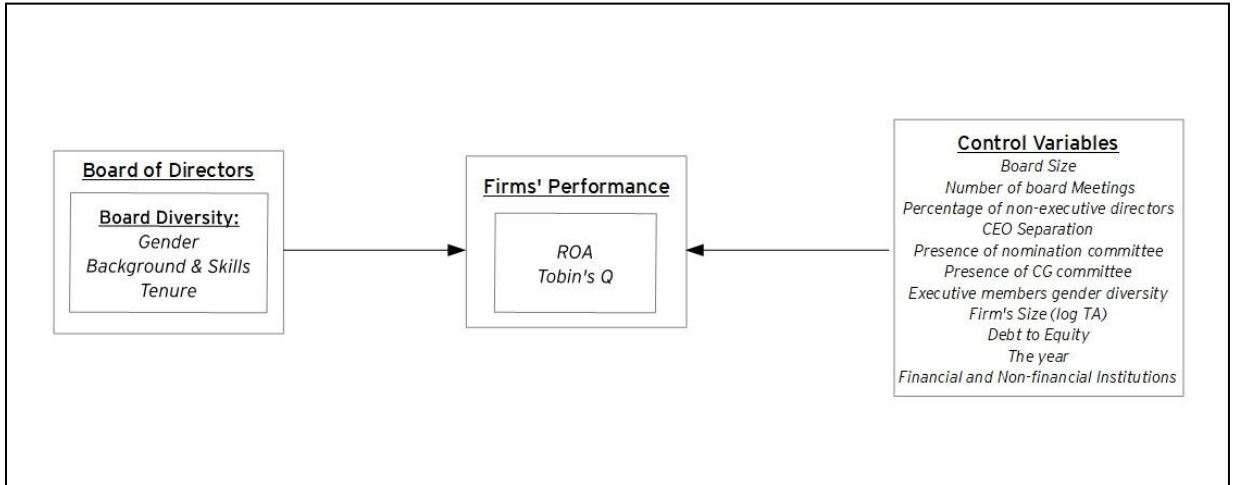


Figure 3.1. Relationship between Dependent and Independent Variables.

3.5 Development of Hypotheses

As has been discussed earlier, resource dependence theory was chosen to illustrate the relationship between board diversity and firm performance. Looking at one aspect of diversity, different studies have revealed that bringing female directors into the boardroom will further diversify a firm's networks (Ibarra, 1992, 1993). Although the presence of women in the board of directors is seldom found, there is evidence that women's understanding is usually better than men's in some industries (Ibarra, 1992, 1993). Consequently, this leads to increased firm performance, earnings, and success (Arfken, Bellar, & Helms, 2004).

Similarly, women are considered to be more conservative and more risk-averse than men in personal financial decision-making (Croson & Gneezy, 2009; Watson & Mcnaughton, 2007). This aspect, along with careful thinking in the boardroom, would lead to a more stable financial performance. As an example, Palvia, Vähämaa, and Vähämaa (2015) found that banks with female directors in the boardroom were less likely to fail,

especially during periods of financial crisis, compared with banks that were run by male directors only. This main reason behind their conclusion was that they found banks with female directors had more equity capital and lower default risk, which qualifies these banks as safer and less risky than those with higher risks of the inability of debtors to repay their financial obligations. As far as executive members gender diversity is concerned, it has not been studied in the prior literature which in fact demonstrate the importance of this study in contributing to deliver a new variable that is not yet studied. The rationale of executive members gender diversity is still into some extent similar to the rationale of board gender diversification as a whole where the presence of female diversification within the boundaries of executive members is also influencing the performance of the board. Therefore, it can be hypothesized that

H1: Board gender diversity has a positive association with firm financial performance

H2: Executive members gender diversity has a positive association with firm financial performance

It was discovered by Hillman, Cannella, and Harris (2002) and Singh, Terjesen, and Vinnicombe (2008) that female board members are more likely to have non-business backgrounds, which provide the firm with a portfolio of different experiences that can enhance the firm's overall innovation and creativity with respect to problem-solving. Considering the latter results, diversity from the dimension of background and skills will also add additional value to the board as a whole, especially in terms of having a variety of backgrounds to deal with external parties professionally. In general, the knowledge and skills of the boardroom members strongly influences the effectiveness of their executive

roles of monitoring and resource provision (Hillman & Dalziel, 2003). Members of the board of directors usually bring unique human capital to the company. This is because they have different levels of education and experiences, which in turn, diversifies the boardroom (Kesner, 1988). As a result, the process of decision-making and the decisions made by the board members will be enhanced because of the distinctive new perspectives and knowledge (Fagan and Gonzáles Menéndez, 2012). In conclusion, background and skills diversity will certainly create great advantages for the company and ultimately its profitability and performance. Therefore, it can be hypothesized that:

H3: Background and skills diversity in the board has a positive association with firm financial performance.

As far as board tenure is concerned, which has been widely neglected in the majority of previous studies, it is hypothesized that the longer the board tenure is, the more the board members understand the business and the company's specific operations, which results in a more consistent way of monitoring and managing the business. A longer tenure as a board member is sufficient to enable managers to improve a company's earnings and profits (Huang & Hilary, 2018; Li et al., 2017). Although a contradictory point of view states that increased familiarity between the board and management can compromise the board's independence, it is important to note that the scope of the study does not incorporate independence and its relationship with a company's performance. Therefore, we hypothesized a positive relationship between board tenure diversity and overall firm performance.

H4: Board tenure diversity has a positive association with firm financial performance.

In conclusion, this study has developed four main hypotheses in order to test the influence impact of board diversity on firm performance. In the following chapter, the study will discuss the approach used in collecting the data, the sample chosen, and the measurement of the dependent, independent, and control variables.

CHAPTER 4: METHODOLOGY

4.1 Introduction

This chapter addresses multiple key points. First, it addresses the methodology that has been adopted, then it describes the research design (i.e. method, aim, boundary, setting, timing, outcome, or goal). Finally, the chapter describes how the sample was chosen and the basis for this.

Research methodology is a term that describes the methods the study will use in attempts to answer a specific research question. As per Creswell (1996, p. 41), the strategies of inquiry are of different kinds: “types of qualitative, quantitative, and mixed methods design that provide a specific direction, for a research, for procedures in a research design”. As far as this study is concerned, the research design and method of inquiry will be carried out on a time spectrum, where a cross-sectional research design will be used. The inquiry methodology will be on a quantitative basis, in which the study will deal with numbers and figures that are measured in a systematic way of investigating phenomena and their relationships (Leedy, 1993).

4.2 Research Design

Cross-sectional research designs have been used because of their functionality when they are used for dealing with information about different individuals or groups at the same point in time or during the same period of time (Levin, 2006). This definition exactly matches with the approach used in this study, where each company represents an “individual”, and the time frame is from 2013 to 2016 for all companies.

There are many advantages and limitations associated with a cross-sectional design. To start with the advantages, cross-sectional designs are known for their ease of use compared with other designs, as they takes up little time to conduct a survey the selected sample (Levin, 2006). This applies to this present study, since it relies on secondary data only. Similarly, a cross-sectional design helps in estimating the prevalence of an outcome of interest, since the sample is usually taken from the whole population (i.e. not a particular segment or sector). Additionally, it provides future research directions based on its outcomes (Levin, 2006). On the other hand, a cross-sectional design faces an obstacle when it comes to inferring causality, where it is difficult to assess the actual influence of one independent variable on one particular dependent variable, which could be obscured by the presence of another factor that relates to both measures. Furthermore, this research design only captures the data at one certain point in time, which, in this research, is the year-end. Thus it will be difficult to assess a firm's characteristics or its performance over the entire year from one single point of time.

Following the selection of cross-sectional design and the data collection process, the analysis should provide evidence to either accept or reject the study hypotheses. Researchers using this methodology usually start by identifying one or more variables that are intended to be tested in their research work and proceed with data collection accordingly. This is followed by statistical analysis that can include but are not limited to descriptive statistics, linear regression analysis, and multi-collinearity.

This study has been conducted in the context of the UK using the companies in the FTSE 350 for the period from 2013 to 2016. The model that has been developed for this study is composed of one dependent variable (firm performance as measured by ROA and

Tobin's Q) and multiple independent variables (female board representation (in %), board tenure, and board background and skills diversity (in %)).

4.3 Research Context

The context of the UK was chosen because of a lack of previous studies, not only those focusing on board diversity compared with other developed countries, but also a lack of studies pertaining to general corporate governance practices. Although the researcher found only a few studies investigating a similar topic by Martin et al., (2008) and Scott and Roper (2016), these studies did not study the exact same relationships of firm performance as measured by two different proxies (ROA and Tobin's Q) or did not even cover enough to draw conclusions on this topic compared with other studies conducted in North America, Central Europe, and Australia.

This lack acted as a motive for conducting this study, as the UK has been always a leading country for developing corporate governance codes addressing board diversification. In fact, UK boards over the years have been working to achieve what corporate governance experts would regard as best practices, as stipulated by the UK Corporate Governance Code (Financial Reporting Council, 2012). First of all, in relation to gender diversity and the inclusion of women in the board of directors, the UK Corporate Governance Code stipulates that the boardroom should be gender-diversified to include women in their composition (Financial Reporting Council, 2012). The other key aspect of board diversity is in relation to non-executive directors. The U.K Corporate Governance Code stipulates that except for smaller companies, each board is expected to ensure that at least more than half of the board are non-executive directors (NEDs), excluding the chairperson. This is the only way to guarantee that the executive does not have full power

when it comes to the decision-making process in the organization (Mishra & Jhunjunwala, 2013).

To further ensure better board diversity, it is imperative for the board to ensure a certain degree of balance in terms of skills and experience among the board members, and also diversity in their independence and knowledge of the company (Financial Reporting Council, 2012). This would go a long way towards ensuring that the different board members can effectively achieve their many duties in the organization (Foster, 2008). The main effect of this is that in the long run, the focus will primarily be on the management in the organization, and little regard will be given to the other board members who are not part of the management in the organization and who will have minimal say in the running of the firm (Joecks, Pull, & Vetter, 2013). It would also be important to ensure that achieving diversity of perspective is a key objective in the appointment of board members. In their study, Joecks et al. (2013) argue that diversity in perspective will go a long way in improving the overall level of effectiveness of the company in the achievement of its objectives. Similarly, firms must ensure that they remain open to helping the personnel understand the steps that they are taking in ensuring diversity within the board and openly discuss any challenges or issues that they may be facing in the achievement of this objective.

Therefore, it can be concluded that the UK has been always keen on diversifying the boardroom to ensure a balanced board of directors, which helps in achieving firms' aims and objectives and, at the same time, acting independently to comply with the trust delegated by its shareholders.

From another perspective, as per Smith (2018) in the World Economics Forum, the UK is one of the leading countries in the world and the London Stock Exchange is one of the most attractive and efficient stock markets. Therefore, investors, creditors, and stakeholders in general are interested to understand further how the performance of companies in the UK are affected by different factors, apart from well-known ones, such as business nature, managers' attitudes, and economic factors. Countries which are geographically located near each other usually share similar characteristics; for example, the European countries share similar characteristics with the UK that include: business nature, firm structure, firm composition, and corporate governance codes and regulations, and entities in these countries are likely to find the outcomes of a study in the UK context to be relevant. As a result, this study contributes to the literature by developing a better understanding of the effect of board gender diversity on firms' financial performance in the UK and this can be further extended to other countries in Europe and other developed countries that have similar characteristics. Furthermore, since this study addresses board diversity and its implications for performance, and since companies' performance is tied up with the economic situation of every country, this study will be of interest to different parties in the UK and Europe.

FTSE 350 companies were chose as the study population as these are the major 350 companies among different industries and segments listed on the the London Stock Exchange; therefore, the study's conclusions could be useful when interpreting the results across the different business segments in the UK.

4.4 Sample

The time interval of the study is the period from 2013 to 2016 from which represents a consecutive period of four years. Our sample comprises FTSE 350 companies, giving a set of 1304 individual results. All companies were included, whether they were financial or non-financial. However, 96 companies were excluded because of a lack of available data. The main reason for incorporating different types of companies is that the board diversity dimensions studied in this study are applicable to all types of companies and their operations.

The FTSE 350 companies are segmented into a total of 11 categories based on the Global Industry Classification Standard (GICS) code as follows.

Table 4.1

FTSE 350 Companies in the Study Population by Industry Sector

No.	Category	Number of entities
1	Financial	72
2	Materials	30
3	Healthcare	17
4	Consumer Discretionary	50
5	Utilities	13
6	Energy	15
7	Consumer Staples	19
8	Industrials	47
9	Communication Services	19
10	Real estate	25
11	Information Technology	19
	Total	326

4.5 Data Collection

Data for all dependent, independent, and control variables were primarily collected from Thomson Reuters. Moreover, the researcher also sought for other sources for

collecting data, such as governmental resources (reports about governance and quotas, percentage of women on boards, etc.) that measured the percentage of women on boards of directors, or that provided data about board structure and detailed information about board tenure. Not all datasets were found in Thomson Reuters, although the majority was available, but older data from 2013 were difficult to extract. This is why the researcher used the annual reports of the companies in the study to extract the corporate governance data accordingly. The author only managed to manually obtain variables that are not used or involved in any computation used in other variables.

Data analysis was conducted by using IBM SPSS-25 software. Phase I of the analysis involved simple statistical analysis including the descriptive statistics and Pearson's correlations. This was followed by Phase II, which undertook a linear regression analysis, using the same software.

4.6 The Study Model

The multi-regression analysis model shown below (Eqn. 1) identifies the relationships and the coefficients of each variable affecting firm's performance as follows:

$$PERF = \beta_0 + \beta_1 FBM + \beta_2 EMGD + \beta_3 BSD + \beta_4 BT + \beta_5 BOD + \beta_6 MTGS + \beta_7 NED + \beta_8 DCC + \beta_9 NC + \beta_{10} GC + \beta_{11} FSIZE + \beta_{12} LEV + \beta_{13} YER \text{ (Eqn. 1)}$$

Where:

β_0 is the intercept; β_1 , β_2 , and β are the regression model coefficients for the board diversity variables; and β_n are the coefficients for the control variables. Table 4.2 outlines the different variables in the model, along with their definitions and symbols.

Table 4.2

Variables Used in the Regression Model

Variables	Symbols	Measurements	Nature of Variables	Source
Firm Financial performance	PERF	ROA = net income / total assets Tobin's Q = market value + debt / total assets + debt	Dependent variable	Terjesen et al, 2016 Lenard, Yu, York, & Wu, 2014
Percentage of female directors	FBM	% of the total number of BOD members	Independent variable	
Background and skills diversity (%)	BSD	% of the board by diversity in backgrounds and skills	Independent variable	Protasovs, 2015; Murray 1989; Argenti 1976 Tihanyi et al., 2000; Herrmann and Datta, 2005
Average board Tenure	BT	Average number of years each board member has been on the board.	Independent variable	Huang & Hilary, 2018
Board size	BOD	Number of board members	Control variable	Carter et al., 2003
Number of meetings	MTGS	Number of annual board meetings	Control variable	Florackis and Ozkan, 2009
Non-executive directors	NED	% of non-executive directors / board size	Control variable	Nguyen & Phan 2016
Duality of CEO and chairperson	DCC	Dummy variable, taking 1 when a committee is present and 0 otherwise	Control variable	Di Pietra, Grambovas, Raonic, & Riccaboni, 2008
Presence of a nomination committee	NC	Dummy variable, taking 1 when a committee is present and 0 otherwise	Control variable	Ruigrok, Peck, Tacheva, Greve, & Hu, 2006
Presence of corporate governance committee	CG	Dummy variable, taking 1 when a committee is present and 0 otherwise	Control variable	Nguyen & Phan, 2016
Executive members' gender diversity	EMGD	% of gender diversity among executive members	Control variable	This study
Firm size	FSIZE	Log (total assets)	Control variable	Terjesen et al, 2016
Leverage	LEV	Total debt / total equity	Control variable	Vintilă & Nenu, 2015
Year	YER	Dummy variable	Control variable	Shehata et al., 2017

4.7 Measurements

In this section, presents the different variables that are used in this study, starting with the dependent variables, which are ROA and Tobin's Q. The main four independent variables are: board tenure, gender diversity, executive members gender diversity, and background and skills diversity. Finally, the control variables that have been used in the model, which are held constant during our analysis so that we can better test the relationship between the dependent and independent variables clearly, are board size, number of board meetings, percentage of non-executive directors, CEO duality, presence of a nomination committee, presence of a corporate governance committee, executive members' gender diversity, firm size, leverage, year, and industry type.

4.7.1 Dependent Variable

The dependent variable considered in this study is the firms' performance, which is measured by two proxies: Tobin's Q (which is the market valuation indicator) and ROA, which is an accounting indicator. The data for these two variables was collected through the Thomson Reuters database as previously mentioned. This database is a well-known source of corporate governance data that has been extensively used in the literature database because of its credibility and reliability (Agrawal & Knoeber, 1996; Amman, Oesch, & Schmid, 2011; Anderson & Reeb, 2003; Barnhart & Rosenstein, 1988; Carter et al., 2003; Combs et al., 2005; Florackis, Kostakis, & Ozkan, 2009; Ikaheimo, Kjellman, Holmberg, & Sari Jussila, 2004; Lefort & Urzúa, 2008; Maury, 2006; Kim & Lim, 2010 and others).

The first dependent variable, Tobin's Q, has been calculated as:

Tobin's Q = (total market value of equity + total liabilities)/(total equity + total liabilities) (Eqn 2)

This formula provides a clear indication of a firm's expected performance as mentioned by Terjesen et al. (2016). If the outcome of the formula – the Tobin's Q value – is greater than one, this means that shareholders strongly believe that the firm is worth more than its current book value. On the other hand, if the Tobin's Q value is lower than one, this means that the market is expecting the company to decrease or that the shares will lose value in the near future (Terjesen et al., 2016). Tobin's Q ratio has been used in a wide range of studies in the literature to examine financial performance. It has also been extensively used in the literature to assess future investment opportunities (Tobin & Brainard, 1968, 1977; Tobin 1969, 1978). This is why the researcher will use Tobin's Q as one of the performance indicators for the sample of FTSE 350 companies.

The author will also use ROA for more inclusive analysis in determining the impact of board diversity on the financial performance of FTSE 350 firms. ROA, as a ratio, is computed as the net income divided by the value of the firm's total assets. The ROA results should provide us with an indication of how well the company is able to manage and use its resources in generating income. Previous studies such as Lenard, Yu, York, and Wu (2014), and Adler (2001) have used ROA to measure firm's performance.

4.7.2 Independent Variables

There are four independent variables in this study. The first is the percentage of female directors that are represented in the boardroom of the FTSE 350 companies. The second independent variable is the executive member gender diversity, which is represented by the percentage of female members' representation among executive

members only. The third independent variable is the board's background and skills diversity, which will be measured as the percentage of board members who have either an industry-specific background or a strong financial background. Finally, the last variable will be board tenure diversity; this variable is measured by calculating the average number of years each board member has been on the board.

To shed lights on the executive members' gender diversity variable, to the best knowledge of the author, has not been studied before in any context related to board diversity or performance. However, we are incorporating it here, since we hypothesized that the higher the board diversity the higher the performance. Since executive members are a part of the boardroom; therefore, this variable has a direct relationship with board diversity and performance.

4.7.3 Control Variables

The importance of control variables for identifying the relationship between dependent and independent variables by isolating the effect of the controlled proxies is why they are used in the majority of regression analyses. This is why previous studies used a selection of control variables to examine the effect of the main variable (i.e. board diversity) on the firm performance. This study is not an exception, as it considers the effect of corporate governance factors on firm's performance. The control variables in this study come at two levels to include controls for the board itself and a second level for the firm as a whole. The board-level control variables are: board size, number of board meetings, percentage of NEDs, CEO duality, the presence of nomination and corporate governance committees, and executive members' gender diversity. On the other hand, firm-level control variables include firm size, level of leverage, and year. It worth noting that the

presence of audit committee has been ignored since this study is approaching the context of the UK, and based on the UK corporate governance code, it is mandatory for listed companies to have an audit committee, therefore, this variable will not be affecting the results (Financial Reporting Council, 2012). Dividends control variables has also been excluded since dividends is considered as a one way of measuring performance of companies, therefore, including it in the regression model as a control variable may lead to a bias in the regression results.

Starting with the board level factors, this study controls for the number of board meetings, the duality of the CEO and chairperson, and the board size (e.g., Di Pietra, Grambovas, Raonic, & Riccaboni, 2008; Finkelstein & D'aveni, 1994; Florackis & Ozkan, 2009). Previous studies indicate that when there is duality between the CEO and the chairperson, the CEO will have more power, which will cause independent directors to be less effective in monitoring executives. This would consequently affect a firm's performance negatively (Yermack, 1996; Carter et al., 2003; Coles, Daniel, & Naveen, 2008; Duchin, Matsusaka, & Ozbas, 2010; Bhagat & Bolton 2008).

Ocak and Özden (2017) studied the number of board meetings in the context of Turkey and concluded that the proportions of independent members and women on board are positively related to the number of board meetings. Similarly, board size is supposed to have a positive relationship with organizational performance. As per Ali (2016), the larger the board, the more directors are involved in the monitoring role of the boardroom, which consequently affects organizational performance. Ali (2016) also pointed out that having a larger boardroom will add a value to a firm by providing access to a wide range

of expertise to help in performing various complicated roles, resulting in a greater efficiency and improved performance.

With respect to the presence of nomination committee, a study on 210 Swiss public companies conducted by Ruigrok, Peck, Tacheva, Greve and Hu (2006) explored the relationship between the presence of a nomination committee and its effect on board diversity. The study followed a longitudinal methodology to incorporate data from 2001 to 2003 and the results were as follows. They found that presence of a nomination committee in a company would increase the number of independent and foreign directors, regardless of their gender. In addition, having a nomination committee will also affect firm's board diversity in terms of nationalities and not educational background. This has an indirect relationship with the firm's performance. Since this present study's hypotheses cover board diversity and performance, this variable that was found to be significant in the literature was included as a control variable.

Corporate governance, in general, is a tool use for controlling the company, as previously mentioned. The corporate governance committee in particular is a way to maintain this control and transparency. To the best of the author's knowledge, no previous studies have incorporated the presence of a corporate governance committee when measuring performance in the context of diversity. However, it is included here because of its effect on financial performance in general, as shown by Farahat (2014).

The literature has discussed NEDs in the context of two main theories when determining firm performance. To start with the first one, agency theory predicts that the separation of control and ownership leads to self-interests decisions by managers (Jensen & Meckling, 1976). In fact, it appears to be practical to include a large number of NEDs in

the boardroom (Jensen & Meckling, 1976; John & Senbet, 1998; Chen & Huang, 2014). NEDs are expected to perform independently in their roles of monitoring, supervising, and controlling the managerial activities to resolve problems caused by the self-interested behavior of other managers. As a result, it is expected that the presence of NEDs may help performance to improve (Jensen & Meckling, 1976).

Whereas agency theory discusses the monitoring and controlling roles of NEDs to solve agency problems, the resource dependency theory focuses on using the resources contributed to the board by NEDs. In fact, the boardroom is utilizing the NEDs to gain resources from the outside environment via NED mediation (Pfeffer, 1972). As far as this approach is concerned, the NEDs are expected to help firms in their strategic decision-making process (Westphal, Gulati, & Shortell, 1997). In addition, NEDs also help firms to acquire the necessary information and help smooth approaches to a wider network of sources of finance in the markets (Peng, 2004).

Similarly, the study has also incorporated control variables relating to the firm itself that include: level of leverage (total debt to total equity ratio) and firm size, expressed by the value of total assets (log) as per Terjesen et al. (2016). The main reason for considering the leverage variable is because it affects performance either positively or negatively, depending on the combination of circumstances, including the company's situation. Leverage by its nature is an obligation against the companies because it increases pressure to ensure consistent profitability (Sarkar & Sarkar, 2008). As a result, companies are expected not to invest in risky projects to avoid the possibility of suffering a loss (Ferri & Jones, 1979). Such decisions are, in fact, aligned with shareholders' interests from one side and also increase the company's performance from the other side. On the other hand,

Nguyen & Phan (2016), who studied the relationship between financial leverage and performance in the context of Vietnam, found an inverse relationship because of the country's weak corporate governance (i.e. the absence of an outside board of directors, the absence of information disclosure, and the presence of asymmetric information) and ineffective law enforcement. These factors led to the failure by the board of directors to control and align the interests of shareholders and managers. This allowed company managers to freely invest in risky projects and unprofitable projects, which resulted in a decrease in the firm's performance.

Concerning the total value of a firm's assets, this has been used as a way to measure firm size as per Ararat, Helaly, and Shehata (2017). Coles et al. (2008) argued that the larger the organization, the higher the number of entrenched senior managers at the boardroom level who have higher authority in nominating boardroom members. As a result, they will be in control either to increase or decrease board diversification for their own compensation, overlooking the company's interests.

Finally, a dummy variable was created to represent the year effect. This study created four variables, each representing one particular year: YER1, YER2, YER3, and YER4 for 2013, 2014, 2015 and 2016 respectively. For example, for the year 2013, X1 variable had an observation of 1 for all companies in the year 2013 but for other years, all companies had observations of 0. This methodology is helpful for determining the presence of any effect of the year on the results. Besides, it also helps in determining the presence of any improvements in a firm's performance over time as a result of board diversity.

CHAPTER 5: DATA ANALYSIS AND RESULTS

5.1 Introduction

The data analysis and results chapter is divided into two main parts. The first one covers the descriptive statistics along with the Pearson's correlations, whereas the second part presents the regression analysis. Hence, the goal of this chapter is for the reader to understand how the four hypotheses are driven and interpreted through the various statistical analyses.

Descriptive statistics provide an overall understanding of the sample and its distribution by giving preliminary information that is helpful for proceeding with the regression analysis. In addition, Pearson's correlations have been used to identify the strength and the direction of the correlation between independent and control variables.

The second part of the chapter (the regression analysis) is divided into two models that consider two different proxies for measuring firm performances: Tobin's Q and ROA. The regression analyses will help us to examine the effect the independent and control variables on the dependent variable.

One of the regression outputs, Variance inflation factors (VIF), will help the study to identify multi-collinearity issues through an examination of the VIF values for the independent variables and cross-checking these with the Pearson's correlations. The absence of multicollinearity problems usually leads to better interpretation of the results when identifying the relationships between the dependent variable (firm performance) and the independent variables (board diversity factors). However, the presence of multi-collinearity would result in misleading results, which would make it difficult for the study

to assess the influence of the independent variables on the dependent ones (Katrutsa & Strijov, 2017). The software that was used to conduct the two analyses (i.e. descriptive and regression) was SPSS version 25.

5.2 Descriptive Statistics

Table 5.1 provides insights into the data, their distribution and normality. To start with the data skewness and normality, all continuous variables were tested for normality. From the skewness results in Table 5.1, it can be concluded that all the continuous variables are normally distributed. This is evident from the kurtosis and skewness statistics values, which are below ± 3 . The importance of having normally distributed data is that they help in predicting and forecasting data, as well as identifying the presence of data trends. Additionally, normality is one of the requirements to run the linear regression model. Since the regression model provides an equation describing the relationship between two or more variables, it provides a technique to predict the value of the dependent variable, given a value for the independent variable. Therefore, having non-normally distributed data will not result in a valid regression model (Shanmugam & Chattamvelli, 2015). Table 5.2 provides an explanation of the variables in Table 5.1.

Table 5.1

Descriptive Statistics of the Study Variables

Independent Variables	Mini	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
FBM	0.0000	57.1429	20.6076	10.2701	0.2580	0.0710	0.2400	0.1430
EMGD	0.0000	100.00	13.5960	14.5317	1.2800	0.0740	2.7520	0.1470
BSD	9.7500	100.00	59.5516	18.4854	-0.0310	0.0720	-0.2290	0.1430
BT	1.4600	13.0100	5.7714	2.3046	0.0000	0.0730	-0.0870	0.1460
Control Variables								
BOD	3.0000	21.000	9.1341	2.5163	0.7730	0.0710	1.4240	0.1430
MTGS	1.0000	16.690	8.1844	2.6886	0.0000	0.0700	-0.0820	0.1400
NED	10.000	100.00	72.6900	13.6390	0.0860	0.0760	0.4280	0.1520
DCC	0.0600	0.5700	0.1013	0.1451	2.9340	0.0710	6.6190	0.1430
NC	0.0000	1.0000	0.9745	0.0500	-6.4970	0.0710	40.2760	0.1430
CG	0.0000	1.0000	0.1519	0.3591	1.9420	0.0710	1.7760	0.1430
FSIZE	4.9956	12.2523	9.0520	1.0244	0.0310	0.0680	1.4990	0.1350
LEV	0.5100	8.0800	0.9694	2.1766	0.1920	0.0690	-0.4150	0.1370
YER 1	0.0000	1.0000	0.2500	0.4330	1.1560	0.0680	-0.6650	0.1350
YER 2	0.0000	1.0000	0.2500	0.4330	1.1560	0.0680	-0.6650	0.1350
YER 3	0.0000	1.0000	0.2500	0.4330	1.1560	0.0680	-0.6650	0.1350
YER 4	0.0000	1.0000	0.2500	0.4330	1.1560	0.0680	-0.6650	0.1350

Table 5.2*Definition of the Independent and Control Variables*

Independent variables	Symbols
Percentage of female directors	FBM
Executive members' gender diversity	EMGD
Background and skills diversity	BSD
Average board tenure	BT
Control variables	
Board size	BOD
Number of meetings	MTGS
Non-executive directors	NED
Duality of CEO and chairperson	DCC
Presence of a nomination Committee	NC
Presence of a corporate governance committee	CG
Firm size	FSIZE
Leverage	LEV
Year	YER

However, some control variables, including CEO duality and the presence of a nomination committee have kurtosis statistics above the value of 3. This is because they are dummy variables and are not expected to be normally distributed for a number of reasons. In fact, the presence of a nomination committee is an ordinal variable that has observations of either 0 or 1, where 1 represents the presence of a committee. The presence of a nomination committee is critical and majority of the FTSE 350 companies are keen to have one. As per Grant Thornton's (2016) corporate governance review, the FTSE 350 list had only 14 companies with no nomination committee (as of December 2015). Furthermore, the UK corporate governance code published in April 2016 emphasized the

roles and importance of the nomination committee. Therefore, it is strongly expected that majority of companies will have this committee on the board.

Similarly, the duality of the CEO and the chairperson role has been addressed in the UK corporate governance code, where the code provision stated that the roles of chairperson and the CEO should be exercised by two different individuals. In our study, the CEO duality variable was ordinal as well, where an observation of 0 indicates separation. Therefore, the kurtosis results were expected. In fact, it is not practical to call this skewness because of the corporate governance codes in the UK.

The descriptive statistics provided important findings regarding the mean. To start with the main independent variables, Table 5.1 shows that the average board tenure was 5.7 years which is lower than the results in Huang and Hilary's (2018) study, which found it to be 8.7 years among S&P 1500 firms from 1998 to 2010. Huang and Hilary (2018) found that the optimum number of years for realizing the benefits of board tenure in improving firm performance is approximately 9. The percentage of board background and skills diversity was 59%. Finally, the average proportion of female board members was equal to only 21%. This result is better than that found for the Netherlands and Denmark, where Marinova, Plantenga, and Remery (2016) found that the average percentage of women in the boardroom was 5.4% only. Similarly, Sabatier (2015), who studied female representation at the board level in the context of French Cotation Assistée en Continu (CAC40) companies, found an average of 15%. In the context of Egypt female representation on the board was 9.22% (Ararat et al., 2017). Similarly, executive members gender diversity has revealed a maximum of 100% which means that there are companies who have all its executive members are females only, however, the average for the same

diversity of 13.5% across the pooled sample. In fact, this gives an indication that the majority of the results revealed from board gender member diversity are mainly attributed to the executive members only.

As far as the control variables are concerned, it was found that the average number of board meetings during a year is eight. This represents a meeting every 45 days. Since the boards are conducting frequent meetings during the year, it is expected that the boards' decision-making process will be enhanced along with the strategic decisions relating to monitoring and managing the company's resources, which will be reflected in the company's earnings and profits.

This study found that the average boardroom size was nine members, which reflects an increase in the average board size from 2009 to 2016 (seen members in 2009, as per Guest (2009)). The change seen between 2009 and 2016 represents a 28% increase in boardroom members in the UK. This increase could be caused by an increase in the complexity of operations in the dynamic business environment in the UK.

The average leverage of FTSE 350 companies in the sample revealed a ratio of 96%. A similar study conducted in Egypt revealed a leverage percentage of 57.25% (Ararat et al., 2017). Ventilã and Nenu (2015) found a similar average leverage to Egypt for 150 Romanian companies, namely a leverage ratio of 66%. However, because of the differences in the economic circumstances and the nature of business in these two countries, these differences in the ratios in the UK and both Egypt and Romania is expected.

In addition, on average, the percentage of NEDs was 72.7%. NEDs are always an area of debate as to whether they increase or decrease the company's growth (Hutchinson, 2001). In fact, the results revealed in the descriptive statistics for the NEDs are consistent

with prior literature, where a study undertaken in the Netherlands and Denmark revealed 65.7% and 42.4% respectively. In Vietnam, it was found to be 58.25% (Nguyen and Phan 2016).

5.3 Pearson Correlation Analysis

Table 5.3
Pearson's Correlations among the Variables

	ROA	Tobin's Q	FBM	EMGD	BSD	BT	BOD	MTGS	NED	DCC	NC	CG	FSIZE	LEV	YER 1	YER 2	YER 3	YER 4
ROA	1																	
Tobin's Q	-	1																
FBM	0.0996* **	0.0705***	1															
EMGD	0.1395* **	0.1281***	0.3213***	1														
BSD	- 0.0153* *	0.0098*	-0.0627***	0.0120**	1													
BT	- 0.0728* *	0.0168**	-0.2023***	-0.0885***	-0.0627***	1												
BOD	- 0.0963* **	-0.0470**	0.1272***	0.074**	-0.1230***	-0.1064***	1											
MTGS	- 0.0582* **	0.0097*	-0.0333**	0.037**	0.0728***	-0.1834***	0.044* *	1										
NED	0.0038*	0.0256*	0.0003*	-0.019**	0.0076*	0.0087*	0.030* *	-0.120***	1									
DCC	0.0054*	0.0068*	-0.1556***	-0.053***	0.1479***	0.2994***	0.078* **	0.017**	0.141* **	1								
NC	- 0.0070*	0.0375**	0.1091***	0.062**	0.0090*	-0.2432***	0.111* **	0.155***	-0.188* **	0.036* *	1							
CG	- 0.0828* **	-0.0583***	0.0819***	0.130***	0.0105**	-0.0468**	0.314* **	0.077***	0.109* **	0.046* *	0.064 **	1						
FSIZE	- 0.278** *	-0.2643***	0.2024***	0.007*	-0.0765*	-0.1525***	0.376* **	0.097***	0.051* **	0.059* *	0.005 ***	0.239 ***	1					
LEV	- 0.1154* **	-0.0633***	0.0314**	0.097***	-0.0239**	-0.0277**	0.351* **	0.162***	0.080* **	0.051* **	0.085 ***	0.084 ***	0.191** *	1				
YER 1	-0.001*	-0.001*	0.0012*	0.040*	0.0006*	-0.002*	0.085* *	-0.028**	0.062* **	-	0.036 **	0.024 **	0.012**	0.002*	1			
YER 2	-0.003*	-0.003*	0.0076*	0.003*	0.0004*	-0.0001*	0.048* *	-0.045**	0.010* *	0.016* *	0.023 **	0.024 **	-0.004*	0.016**	-0.333***	1		
YER 3	0.0002*	0.0002*	0.0056*	-0.032**	0.0004*	0.0035*	0.033* *	0.020**	0.024* *	0.012* *	0.003 **	0.003 **	0.001*	0.003*	0.333** *	0.333** *	1	
YER 4	0.0003*	0.0003*	0.0031*	-0.013**	0.0003*	0.0023*	0.113* **	0.059***	0.050* *	0.016* *	0.062 ***	0.050 **	-0.008*	-	0.333** *	0.333** *	0.333** *	1

* Correlation at 0.01
** Correlation at 0.05
*** Correlation at 0.1

Table 5.3 did not reveal very high correlations among the dependent, independent, and control variables. Evans (1996) classified the absolute correlation coefficients into five categories as follows: 0.00–0.19, very weak; 0.2–0.39, weak; 0.4–0.59, moderate; 0.6–0.79, strong; 0.8–1.0, very strong. Table 5.3 indicates that all of the correlation coefficients fall into the very weak and weak categories and therefore, there is a weak linear relationship between the dependent, independent and control variables.

5.4 Regression Analysis

The regression analysis follows from the descriptive and correlation analyses in the previous section. The regression analysis will be done for the two models to investigate both of the dependent variables alone, followed by a comparison between the results. The first output covers Tobin's Q and the second one covers ROA. The regression analysis will also include collinearity statistics to cross-check for the presence of collinearity issues by interpreting the VIF values.

Table 5.4

Regression Analysis for the Tobin's Q and ROA Models

Variables	Tobin's Q			Return on Assets		
	Beta	Sig.	VIF	Beta	Sig.	VIF
Board gender diversity	0.2040	0.0000 ***	1.2700	0.2080	0.0000 ***	1.2700
Executive members' gender diversity	-0.0170	0.5200 0.0010	1.1320	0.0540	0.0710 *	1.1320
Board background and skills	-0.0910	***	1.1720	-0.0820	***	1.1710
Board tenure	0.0260	0.3410 0.0000	1.1660	0.1040	0.0010 ***	1.1660
Board size	0.1930	***	1.8010	0.0860	**	1.8020
Number of board meetings	0.1590	0.0000 ***	1.5100	0.1180	0.0010 ***	1.5130
Non-executive directors	-0.0390	0.1610	1.2650	-0.0010	0.9720	1.2630
CEO duality	0.0060	0.8180 0.0090	1.1210	0.0370	0.2160	1.1220
Nomination committee	0.0680	***	1.0850	-0.0100	0.7430	1.0850
Corporate governance Committee	0.0520	0.0700 **	1.3230	-0.0120	0.7150	1.3300
Firm size	-0.8270	0.0000 ***	2.7530	-0.5060	0.0000 ***	2.7720
Leverage	-0.1270	0.0000 ***	1.3000	-0.2690	0.0000 ***	1.3020
Year 1	-0.0140	0.6540	1.5000	-0.0050	0.8770	1.4940
Year 3	0.0120	0.6920	1.4690	0.0420	0.2130	1.4620
Year 4	0.0470	0.1260	1.4860	0.0500	0.1470	1.4820
Constant		0.0000			0.0000	
R^2	0.492			0.355		
Adjusted R^2	0.483			0.343		

*** Significance level at 1%

** Significance level at 5%

* Significance level at 10%

The regression analysis will start with the interpretation of VIF values and the overall statistical significance of the Tobin's Q and ROA regression models. It will start with a small overview of the independent and control variables' level of significance, followed by a detailed interpretation.

The regression analyses in Table 5.4 revealed the absence of multi-collinearity issues within the independent and control variables as measured by the VIF values. This is agreement with the Pearson correlation results presented earlier, as all the VIF values had a maximum of 2.772 and minimum of 1.085. Hair, Ringle and Sarstedt. (2011) indicated that if the VIF values lie above 5, regression becomes problematic.

Tobin's Q and ROA regression models results have revealed mixed results compared with prior literature. Starting at the hypothesis level, it can be noted that Tobin's Q model has an adjusted R^2 value (coefficient of determination) of 48.3%. This means that the variations in companies' performance are 48.3% justified and properly explained by the influential independent variables considered in our model. Nevertheless, 51.7% of the variations are not explained by the model. However, the ROA regression model revealed an adjusted R^2 value of 34.3%. Similar results were obtained by other scholars, including Shehata et al. (2017), who studied board gender diversity and its effect on firm performance in the context of the UK and revealed an R^2 of 50.7%. Therefore, it can be said that the coefficient of determination resulting from the Tobin's Q and ROA models' analyses are similar to those in the literature in terms of their value and interpretation.

The R^2 results mean that the results provided by the regression models hypothesized are not randomized and represent the variations in the dependent variable arising from the independent ones. Therefore, predictions and estimations about the changes in the dependent variables by using these models are possible. The same result for the level of significance was found by the majority of other studies (e.g. Doldor, 2012; Martin et al., 2008; Hafsi & Turgut, 2013; Rao & Tilt, 2016; Ooi et al., 2017; Li et al., 2018; Pechersky, 2016; Huang & Hilary, 2018; Siciliano, 1996).

For the independent and control variables, mixed results have been reported in the literature that contradict with each other when considering performance as measured by Tobin's Q and ROA. Considering Tobin's Q and the significance of each of the independent and control variables, it can be seen that two independent and six control variables are deemed to be significant, with either positive or negative associations with firm performance. Factors significant at the 1% level include the following factors: board background and skills, board gender diversity, board size, number of board meetings, firm size, the presence of a nomination committee, and the level of leverage. At the 5% level of significance, the presence of a corporate governance committee was the only factor identified. None of the variables was significant at 10%.

ROA, on the other hand, revealed four independent variables and four control variables with either statistically significant positive or negative associations with firm performance. These are: board tenure, board gender diversity, executive members gender diversity, and board background and skills diversity. Control variables found to be significant were the number of board meetings, firm size, and level of leverage, which were significant at 1%, and board size being significant at 5%.

5.4.1 Independent Variables

Board gender diversity, as the first independent variable, had a statistically significant relationship at the 1% level with firm performance and a coefficient of 0.2040 and 0.2080 for Tobin's Q and ROA respectively. These results indicate a significant positive association between boardroom gender diversity and firm financial performance. In other words, the higher the percentage of female representation on the board of directors, the higher the firm's earnings and profits. Siciliano (1996), Martin et al. (2008), Kiliç and

Kuzey (2016), Gordini and Rancati (2017), Low et al. (2015), and Terjesen et al., (2016) also found the same relationship, where board gender diversity was found to be positively significant (at 1%) with social performance on the one hand and positively linked with company value on the other (Carter et al., 2003). Conversely, Rose (2007) found a non-significant relationship between the two variables. The latter conclusion was also reported by Smith et al. (2006) and Vob (2015), who concluded that board gender diversity had no effect on firm financial performance in their contexts. As per Joecks et al. (2013) board gender diversity is important and influential in specific industries only, such as financials, telecommunications, pharmaceuticals, consumer goods, and healthcare. Although they have not tested this relationship empirically, it is most likely that the inconsistency between the literature results is a consequence of the different natures of the companies in the sample.

This study introduced the executive member gender diversity factor, which has not been studied before, to explore whether gender diversity within a certain group of board members will affect firm performance. Although the findings were not consistent between the ROA and Tobin's Q, however, it is still important to shed light on this variable as it may still be beneficial for future research. ROA performance proxy has revealed that Executive members gender diversity is significantly affecting firm's performance at 10%. This relationship between the latter variable has been indicated as a positive association where the coefficient of determination had a value of 0.054. In other words, the higher the diversity in the executive board members in terms of their gender, the higher the expected performance on the company. The interpretation for this relationship is into some extent similar to the general gender board diversity, where females are deemed as more

professional and has a unique approach for monitoring the company. As a result, it is expected that their approach is contributing to the firm's wealth increase and performance consequently. On the contrary, Tobin's Q as the market-based performance proxy has not revealed any association between the latter and Executive member gender diversity, a possible reason might be way of measuring the performance indicator itself, since the market based performance indicators are being affected by multiple factors and not the earning solely. Hence, Hypothesis II which assumes the presence of positive association between executive members gender diversity on firm's performance will be partially accepted since it is accepted by one performance proxy (ROA) and rejected by (Tobin's Q).

The third independent variable, which is board background and skills, was found to have a significant relationship with firm performance at the 1% level of significance in both regression models. It is important to understand the magnitude of diversity's impact on firm's performance and whether was it positive or negative. Board background and skills diversity had a coefficient estimate of -0.091 and -0.082 for the Tobin's Q and ROA results respectively, which means that the more diversified the boardroom was in terms of background and skills, the lower the firm performance. However, this result contradicts Murray (1989), who found a non-significant relationship between firm performance and board background diversity. It also disagrees with other authors such as Argenti (1976), Bantel (1993), and Mahadeo et al. (2012), who found a positive relationship between board background and skills diversity and firm performance. In addition, Murray (1989) found a potential indirect effect on firm performance through improvements in the communication skills needed to enhance a company's growth and profits. The discrepancies between our

results and the literature could have arisen from many factors. For example, let us consider the time effect and the context itself. The abovementioned studies were conducted in the 20th century, except for Mahadeo et al. (2012). In addition, the context of the present study is totally different from that of these studies, which affects the regression results. This is particularly relevant, given the effect of national economy, which is not part of this study's scope. From another angle, background and skills diversity is considered to be a cultural diversity factor, which, in some circumstances, may lead to a negative influence on the board's performance and thus the firm's performance. In the case of cultural diversity (i.e. background diversity), different opinions and thoughts are shared by board members. Each of the members is likely to take a different approach to problem-solving and brings his/her unique cultural knowledge to the situation. This can create communication difficulties among them can lead to personality clashes. Personal opinions and point of views are most likely to be interpreted as personal attacks or even promotion of hidden agendas. These perceptions reduce the board's effectiveness, their commitment, and, most importantly, mutual trust. Therefore, board cultural diversity, represented by background and skills diversity in this study, might cause a lack of trust among board members with different backgrounds, where trust will be shared between members with the same background but not other members. Thus, it can be concluded that Hypothesis 3, which assumes a positive association between board background and skills and firm performance, is rejected.

Finally, is we examine average board tenure, Huang and Hilary (2018) studied its relationship with firm performance in the context of S&P 1500 companies and found an inverted U-shaped relationship. However, in the Tobin's Q regression model results in this study, it can be seen that the board tenure dependent variable is non-significant. A possible

justification for this result may be the fact that the boardroom does not need tenure diversity because experienced members with solid backgrounds are needed to drive the company to success. Huang and Hilary (2018) investigated this in detail, illustrating that diversity might not be the optimum decision to consider when nominating board of directors members. Experienced members with solid backgrounds are needed, with the optimum tenure length being 9 years; tenures below and above 9 years either affect performance and managerial decisions negatively or are neutral with no significant effect on performance (Huang & Hilary, 2018).

On the other hand, the ROA regression model results revealed a positive association between average board tenure and firm's performance at a significance level of 1% and a coefficient estimate of 0.104. This result contradicts the Tobin's Q results. A possible reason for this contradiction may be as follows. The performance measured by Tobin's Q is based on the market value of a company by determining its outstanding shares and the share price by year-end. On the other hand, ROA is based on net profit. The inconsistency in the regression analyses may be caused by the ability of the experienced managers to generate profits from using the assets wisely; however, these profits are not being reflected in share prices. In fact, profit is only one factor that determines share prices among a vast number of factors (Mehr-un-Nisa & Nishat, 2012). Interest rates, dividends paid, inflation rate, money supply, gross domestic product growth, and share turnover ratios are significant factors that may affect share prices, apart from the profits generated (Mehr-un-Nisa & Nishat, 2012).

Because of the inconsistency between the two regression model results, Hypothesis 4, which assumes a positive association between board tenure diversity and firm performance, is partially accepted.

It can be seen that the results of the regression analysis are in line with resource dependency theory. The different genders and the different backgrounds and skills along with the different tenures of board members are bringing more diversified personnel to the board, which helps to create wider connections from each of the board members in order to increase the company's performance. This answers the research question and addresses the research problem.

5.4.2 Control Variables

Although the control variables are not the main scope of our study, it was found that the majority of them significantly affected firm performance either positively or negatively. To start with the variables were significant in both the Tobin's Q and ROA models, it was evident that the number of board meetings and board size were positively significant at 1% and 5% respectively. However, firm size and level of leverage were negatively significant at 1%. In other words, the bigger the firm's size, and the higher the level of leverage in a firm, the lower the company's performance. These results were consistent with previous studies conducted by Ruigrok et al. (2006), Di Pietra et al. (2008), Finkelstein and D'aveni (1994), Florackis and Ozkan (2009), and Ocak & Özden (2017).

Other variables that were deemed to be non-significant included CEO duality, year, and the percentage of NEDs. The CEO duality result was inconsistent with those of several other studies (Di Pietra et al., 2008; Finkelstein & D'aveni, 1994; Florackis & Ozkan, 2009), whereas the NED results were inconsistent with Jensen and Meckling (1976). It is

also important to discuss the results for the year variable. Although year was not found to be a significant factor in either regression model, its level of significance has been improving from year to year, with significance values of 0.877, 0.213 and 0.147 (ROA) and 0.654, 0.692 and 0.126 (Tobin's Q) for 2013, 2015, and 2016.

On the other hand, the two variables that were inconsistent between Tobin's Q and ROA are the presence of a nomination committee, and the presence of a corporate governance committee. Although the presence of corporate governance and nomination committees affected firm performance in the Tobin's Q model (Ruigrok et al., 2006; Di Pietra et al., 2008; Finkelstein & D'aveni, 1994; Florackis & Ozkan, 2009; Ocak & Özden, 2017), they were deemed to be insignificant in the ROA model. The reason for this inconsistency might be the way of measuring performance. Since Tobin's Q formula is based on the market cap of each entity, it considers its reporting quality and stock prices; since stock prices are fluctuating based on the information and quality reporting of each entity, it is strongly influenced by the presence of both corporate governance and nomination committees. Therefore, we can conclude that the presence of corporate governance and nomination committees affect the entity's quality reporting and therefore the demand on the stocks, which leads to increased or decreased market value, and thus Tobin's Q.

5.5 Summary of Results

The results of the data were more or less as expected. Both regression analysis models revealed that there is a positive relationship between the percentage of female board representation and firm performance as measured via two proxies: ROA and Tobin's Q. What the results show was consistent with some previous literature but contradicted with

other studies. Therefore, based on this study's results, it can be concluded that the hypothesis of board gender diversity affecting firm performance is accepted.

With regard to board background and skills, the results were consistent in both regression analyses, where a negative association between board background and skills diversity and firm performance was found. In fact, this is not consistent in terms of the influence's direction with prior literature, such as the studies by Murray (1989), Argenti (1976), Bantel (1993), Mahadeo et al. (2012), Simons and Pelled (1999), and Erhardt et al., (2003). Thus it can be concluded that there is a negative relationship between board background and skills diversity, and firm performance. As a result, the second hypothesis in this study is rejected, not in terms of the significance level but in terms of the direction.

Finally, the third independent variable (board tenure diversity) does not appear to affect performance as measured by one performance measurement proxy (Tobin's Q) but does appear to have an effect on the other proxy (ROA). Therefore, this study will partially accept the third hypothesis.

5.6 Financial versus Non-Financial Firms

Further analysis was conducted to reflect the industry effect or if companies' performance is affected by the four main independent variables by the same direction and magnitude when we differ between financial and non-financial institutions. The importance of this investigation is to concisely determine to what extent board diversity is influencing firms' financial performance in different types of companies in the UK.

The regression model below (Eqn. 3) shows the same dependent, independent, and control variables as discussed before; however, it also includes the industry effect. The latter is a dummy variable, which represents the type of the firm (i.e. whether it was

financial or non-financial). If the company was financial, it was given an observation of 1 but 0 otherwise. This helps in the data analysis by identifying if board gender diversity, board tenure, and background and skills diversity impact financial performance in both industries either similarly or differently. This part of the study will introduce the industry variable and provides the regression model results and its interpretation:

$$PERF = \beta_0 + \beta_1 FBM + \beta_2 EMGD + \beta_3 BSD + \beta_4 BT + \beta_5 BOD + \beta_6 MTGS + \beta_7 NED + \beta_8 DCC + \beta_9 NC + \beta_{10} GC + \beta_{11} FSIZE + \beta_{12} LEV + \beta_{13} YER + \beta_{14} FIN \text{ (Eqn. 3),}$$

Table 5.5

Regression Results for the Model Including Industry Type

Variables	Tobin's Q			Return on assets		
	Beta	Sig.	VIF	Beta	Sig.	VIF
Board gender diversity	0.2040	0.0000 ***	1.2750	0.2040	0.0000 ***	1.2750
Executive members' gender diversity	-0.0170	0.5200	1.1320	0.0540	0.0700 *	1.1320
Board background and skills	-0.0900	0.0010 ***	1.1830	-0.0870	0.0040 ***	1.1820
Board tenure	0.0260	0.3410	1.1660	0.1050	0.0010 ***	1.1660
Board size	0.1930	0.0000 ***	1.8030	0.0880	0.0200 **	1.8040
Number of board meetings	0.1590	0.0000 ***	1.5120	0.1200	0.0010 ***	1.5150
Non-executive directors	-0.0390	0.1640	1.2750	-0.0060	0.8580	1.2730
CEO duality	0.0060	0.8190	1.1230	0.0390	0.1930	1.1230
Nomination committee	0.0680	0.0090 ***	1.0880	-0.0070	0.8140	1.0890
Corporate governance committee	0.0520	0.0700 **	1.3250	-0.0100	0.7570	1.3310
Firm size	-0.8260	0.0000 ***	2.7830	-0.5140	0.0000 ***	2.7980
Leverage	-0.1270	0.0000 ***	1.3090	-0.2640	0.0000 ***	1.3100
Year 1	-0.0140	0.6540	1.5000	-0.0040	0.9050	1.4950
Year 3	0.0120	0.6920	1.4690	0.0410	0.2220	1.4620
Year 4	0.0470	0.1260	1.4860	0.0500	0.1470	1.4820
Financial and non-Financial	-0.0010	0.9750	1.0460	0.0470	0.1030	1.0440
Constant		0.0000			0.0000	
R^2	0.492			0.357		
Adjusted R^2	0.482			0.344		

*** Significance level at 1%

** Significance level at 5%

* Significance level at 10%

Tobin's Q and ROA regression results show no significant differences in the impact of board diversity on both types of company. In addition, company type had an insignificant effect on firm performance when all four diversity factors (tenure, background and skills, gender, executive members gender) were considered.

This study's results are consistent with the prior study by Sabatier (2015), who studied board gender diversity in the context of French CAC40 listed companies and did not find diversity to impact performance differently between business segments. However, it also contradicts other studies such as Moulin and Point (2012) and Le Breton-Miller and Miller (2006) who studied the same context (French CAC40 listed companies) with the same diversity variables and revealed the opposite results. It is difficult to assess the effect of board diversity in certain groups of companies because of the major differences among each business segment. In fact, Tobin's Q and ROA are completely different ways of measuring performance; therefore, it is possible to report either similar or different results.

Future research should incorporate yearly analysis on both financial and non-financial sectors separately to determine the impact of diversity on firm's performance. This should refine the conclusions and solidify the interpretations presented here.

CHAPTER 6: CONCLUSION

This chapter provides a summary of the study including the conclusions, practical implications, contributions, limitations, and avenues for future research.

6.1 Summary

This study aimed to examine the relationship between diversity among boardroom members in terms of gender, executive members gender, background and skills, and tenure, and firm financial performance. Resource dependency theory was used to formulate the four main hypotheses of this study, where each of them suggested a positive association between a board diversity factor and firm financial performance. The empirical results showed that female representation at the boardroom level is positively associated with firm performance measured by ROA and Tobin's Q in the context of FTSE 350 companies in the UK. This result is in agreement with the prior literature, as discussed in Chapter 5. As a result, Hypothesis 1 is accepted. Similarly, executive members' gender diversity was found to positively affecting firm's performance when the performance proxy was measured by ROA but not Tobin's Q. As a result hypothesis II was partially accepted.

On the contrary, board diversity in terms of background and skills was found to be negatively associated with firm performance and thus the third hypothesis was rejected. Last but not least, the fourth hypothesis related to board tenure diversification has been partially accepted since it was significant when measuring the performance via ROA but not Tobin's Q.

All in all, board diversity is all about bringing boardroom members with different demographic attributes and characteristics and backgrounds to ensure a well-balanced

board of directors, which will improve resource utilization, improve the decision-making process, and bring about an overall improvement in a firm's financial earnings or performance.

6.2 Contributions and Implications

This study's findings can be useful for different parties. First of all, it is highly beneficial for companies in order to know how to benefit from boardroom diversity and its impact on their performance. In fact, diversity can be achieved from more than one dimension including these ones highlighted in this study and others that were not approached. The idea of diversifying the board is to guide companies on the optimum way of diversifying its boardroom from more than one perspective at a time which ideally shall reap economic benefits that include but not limited to improving in decision making, utilizing resources in a more efficient way, increase companies awareness of equality in rights, satisfy stakeholders' needs, and finally improve the company's overall performance.

Second, the findings are useful for governmental use since it addresses one of the critical topics in corporate governance. It may help in determining the percentage of female occupation of boardroom seats that, in the future, will help to set a female occupancy quota, whenever needed. Although there have been multiple reports that identifies the importance of having a certain quota for the presence of females in the boardroom, however, till date there has been no action with regard to FTSE350 though there has been for FTSE100. Having said so, this study is contributing by providing insights on the importance of having female being presented in the boardroom that is in a way or the other affecting companies' performance positively as statistically shown in this study.

Third, the results and findings of this study will equip stakeholders in general and shareholders in particular with needful information for assessing a company's performance and its response to board diversity. This is the case especially if there has been any governmental quota set with respect to any diversity dimension. In fact, since performance has been one of the deriving factors that affects investors' decision in investments, therefore, approaching performance with its relationship with board diversity will certainly provide insights and attract investors' interest of how companies will tend to perform if diversity has been achieved successfully.

The study has introduced the executive members' gender diversity independent variable. Although it has not been studied before, it was evident that it affects ROA positively from the year 2013 to 2016. This result is critically important especially for policy-makers when it comes to identifying characteristics and attributes for nominating boardroom members. This is the case especially that the UK Corporate Governance code has emphasized on the presence of executive members in the boardroom. It is highly believed that narrowing down the criteria of nominating boardroom members to the characteristics of each executive members is extremely important and significantly impacting firm's performance that reaps huge economic benefits on the long and short term.

The resource dependency theory facilitated the formation of the hypotheses to relate board diversity dimensions to firm performance. However, there were discrepancies between the results of the regression analyses in the model and the hypothesized relationship between board tenure diversity and performance. These discrepancies should

be further investigated in future research to develop a better understanding of this relationship from different theoretical perspectives and in different contexts.

6.3 Limitations and Future Research

Although this study has provided valuable contributions to the literature concerning boardroom diversity and performance. However, some limitations exist.

First of all, the sample chosen comprised of FTSE 350 companies from the year 2013 to 2016. Although it represents 13.5% of the companies listed on the London Stock Exchange, it is very minimal compared with the total number of companies in the UK either listed or not. This may limit the generalizability of the findings of this study.

The cross-sectional research design has inherent limitations when it comes to causality inference, as it investigates the significance of the relationships between or among variables at a particular point of time but does not help to determine the cause and effect. Although the study attempted to extend the analysis over a long period, the results should be interpreted with caution in the light of the limitations of its methodology.

The inclusion of the financial and non-financial companies in the regression model may result in inaccurate results because of the different nature of the financial sector's operations and the special regulations of this sector. These difference may make the computation and the interpretation of leverage for instance different from companies in the non-financial situation. Furthermore, this study did not address the endogeneity issue. Therefore, the results have to be interpreted with caution because no endogeneity test has been performed. In other words, the relationship between the dependent and the independent variables would work the other way around, where the dependent variable would influence the independent variables not vice versa.

Additionally, different theoretical perspectives have been used in the literature to study this topic, including gender role theory, agency theory, and resource dependency theory. Future studies can use these theories and adopt different methodologies and research designs to capture the relationship between diversity's impact on firm performance from different perspectives. Furthermore, future studies can also include further independent and control variables that will help in increasing the value of the coefficient of determination and hence, the validity of the model and our understanding of the effect of diversity on performance. Some examples of the important control variables may include the ownership structure, risk and liquidity. Finally, further studies can use different methodologies for categorizing the industry sectors, providing more insights into how different organizations in different sectors or industries react to diversity issues and how this relates to performance.

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