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# The Effect of Gender Diversity on Firm Risk and Firm Performance across Industries: Evidence from U.S.

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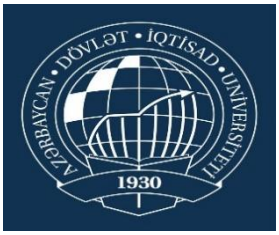


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**Abstract**

This examination explores the impact of board sexual orientation decent variety on firm hazard and firm execution utilizing an example of 1517 U.S. firms recorded under S&P 1500 for the period going from 2007 through 2013.Total hazard, methodical hazard and peculiar hazard are utilized as three intermediaries to quantify firm hazard, while ROA and Tobin's Q are utilized as two intermediaries to gauge firm execution. The experimental outcomes donot bolster the view that board sexual orientation decent variety impacts firm hazard or firm execution. Moreover,the exact outcomes feature that the impact of board sexual orientation assorted variety on firm hazard and firm execution, as estimated by Tobin's Q, is fundamentally unique crosswise over businesses. The outcomes demonstrate no help for the possibility that there is an example in the impact of board sex assorted variety on firm hazard or firm execution between ventures where female chiefs are more common or not. Promote investigation with the immediate examination between the hardware business and the purchaser products industry demonstrates that, the beneficial outcome of board sexual orientation assorted variety on Tobin's Q is particularly critical in the industrieswith moderately couple of ladies.

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## 1.Introduction

The impact of the corporate board arrangement on firm results has been a center issue in the corporate administration writing. An enterprise's board goes about as the crucial inside screen system to regulate top administration (Hermalin and Weisbach,2003). As a standout amongst the most imperative components of the board piece, sexual orientation decent variety has pulled in extensive consideration in late years,particularly for its effect on firm results. Ladies involve couple of corporate board situates the world over. In the U.S., ladies represented just 16.9% of Fortune 500 corporate board individuals in 2014, which is a minor 3.3% expansion amid the most recent decade (Fairchild, 2014). The rates are even lower in Asian nations, with organizations in China and Japan having 8% and 2% separately in 2013 (Devillard et al., 2013). This circumstance may change on the grounds that an expanding number of nations set up willful targets or even incite lawful prerequisites looking to urge organizations to build female portrayal on sheets. Davies (2011) suggests that FTSE 100 corporate sheets should set an objective for at least 25% female portrayal by 2015. The EU has proposed an objective for 40% female meeting room portrayal of recorded corporates by 2020. Norway has set enactment expecting organizations to have their block made of no less than 40% ladies (Rose, 2007). Following Norway's authoritative activities, Spain passed a lawful sexual orientation quantity necessity (Adams and Ferreira, 2009). France and Italy have additionally set out upon comparative activities (Doward, 2014). Because of the weight of these objectives, the most recent figures from these nations demonstrate a recognizable increment in the extent of female chiefs. By 2015, ladies involved 23.5% of FTSE 100 board situates in the UK, which nearly accomplishes the objective, and shows critical advance from 12.5% of every 2011 (Hope, 2015). The level of female executives in Norway, France and Italy is accounted for to be 34%, 27% and 15% individually in 2013, contrasted and 35%, 20% and 5% separately in 2011 (Devillard, et

al., 2013). These lawful activities are primarily in light of the perspective that female meeting room portrayal could enhance firm execution in different ways.

One primary contention is that female chiefs have distinctive foundations and administration styles from their male partners, which could convey a more extensive viewpoint to the basic leadership process, thusly prompting better basic leadership (Davies, 2011). Another primary contention is that, as female executives don't have a place. Brammer et al. (2007) think about corporate sheets in the UK and discover prove that the most noteworthy rates of female chiefs are in the areas that essentially serve last clients, for example, retailing, managing an account, buyer merchandise and media, while businesses that are secluded from definite clients are viewed as male spaces and have fundamentally less ladies on sheets, for example, assets, designing and development. Broadbridge (2010) additionally discover female portrayal on sheets will probably be found in the retailing part than numerous different divisions in the UK corprations. Comparable proof has been found in U.S. organizations. By looking at S&P 1500 organizations, Adams and Ferreira (2009) find that the extent of female executives changes altogether crosswise over enterprises, and ladies in the meeting room are more dominating in the ventures that arrangement with buyer products than gadgets, vitality or foundation. By instinct, female executives may have any kind of effect in the businesses where the level of female meeting room portrayal is higher. On the other hand, it is additionally conceivable that in the enterprises with low level female meeting room portrayal, imaginative thoughts raised by female executives might probably get other board individuals' eyes and have more noteworthy effect on the basic leadership process. Thusly, one could expect that female chiefs may have distinctive impact on firm results crosswise over businesses. Along these lines, the third and fourth theories of this investigation are displayed as takes after:

Hypothesis 3: The impact of board sexual orientation assorted variety on firm aggregate hazard, deliberate hazard and particular hazard is distinctive crosswise over businesses. Speculation 4: The impact of board sexual orientation assorted variety on firm execution (ROA and Tobin's Q) is distinctive crosswise over businesses. 3. Observational section

3.1 Data The example for the board information investigation is drawn from Standard and Poor's (S&P) 500, S&P MidCaps and S&P SmallCap firms amid the seven-year time frame from 2007 to 2013. Chief level information and CEO-level information are acquired from the RiskMetrics and Execucomp database individually and after that united into firm-level factors, which is gotten from Compustat. Standard modern order (SIC) code is gotten from Compustat and the day by day stock returns used to figure firm aggregate hazard, precise hazard and particular hazard are acquired from the Center at Research in Security Costs (CRSP) database. The first example comprises of 11179 firm-year perceptions on 1661 firms. After I clean the information, the last example contains 8224 firm-year perceptions on 1517 organizations. Keeping in mind the end goal to lessen the impact of outrageous anomalies, the information of firm qualities and CEO chance taking motivators are winsorized at 1% level.

3.2 Measurements of factors Three intermediaries for firm hazard and two measures for firm execution as needy factors are built. Female meeting room portrayal is the principle free factor of this investigation. Control factors that may influence firm hazard and execution are chosen in light of earlier writing with a specific end goal to limit the likelihood that the experimental outcomes are driven by time-variation excluded variable inclination (Sila, et al., 2014).

3.2.1 Measurements of ward factors Firm hazard estimations Three measures of firm hazard are received in the investigation: add up to chance (add up to), precise hazard

(sys) and quirky hazard (idio). Stock return instability is broadly utilized as an intermediary for add up to hazard in different researchers (e.g. Coles et al., 2006; Armstrong and Vashishtha, 2012). Following existing looks into (e.g. Sila et al, 2014), I ascertain add up to chance as annualized standard deviation of day by day stock return throughout the most recent year. Quirky hazard is identified with firm-particular approaches, which can be enhanced in a few ways, while deliberate hazard is related with the money related market, which can't be expanded. The investigation utilize the all around perceived customary single-factor capital resource evaluating model (CAPM) to figure firm peculiar hazard and precise hazard. The market demonstrate is appeared beneath: This examination utilizes day by day stock return information to figure methodical hazard and quirky hazard for each firm for every year. Precise hazard (sys) is the coefficient of the share trading system portfolio from a market-demonstrate relapse. CRSP NYSE/AMEX/Nasdaq/Arca similarly weighted record is picked as an intermediary for money markets portfolio. All profits utilized for these figurings prohibit profits. Firm execution estimations The investigation utilizes a market-based measure, Tobin's Q and a bookkeeping based measure, return on resources (roa) to catch firm execution from alternate points of view. Tobin's Q is characterized as the market estimation of value and the book estimation of obligation partitioned by the book estimation of advantages. roa is estimated as net pay separated by the book estimation of benefits (Shrader, et al., 1997).

3.2.2 firm execution as estimated by Tobin's Q is distinctive crosswise over enterprises. Albeit no confirmation is found to help that the impact of female chiefs on firm results has an undeniable example between enterprises where ladies executives are more pervasive or not, it appears that the constructive outcome of sexual orientation assorted variety on Tobin's Q is particularly more grounded in the ventures with generally couple of ladies, which is steady with Jurkus et al. (2007).

Whatever is left of the paper is sorted out as takes after. Area 2 surveys the earlier significant written works and proposes the theories. Area 3 portrays the information and technique, gives rundown measurements and connection lattice, talks about the experimental outcomes and checks the strength of the outcomes. Area 4 finishes up the investigation and talks about conceivable impediments with recommendations for future research.

## 2. Literature review and hypothesis development

### 2.1 Measurements of firm outcomes

#### 2.1.1 Measurements of firm risk

Scholars contemplating firm hazard utilize different hazard estimations, including bookkeeping based hazard estimations (otherwise called adjusted sheet estimations) and market-based hazard estimations. Bookkeeping based hazard measures, for example, innovative work venture, obligation to resources proportion and the standard deviation of profit for resources, can be ascertained by asset reports and salary proclamations, and have been utilized as a part of numerous examinations (e.g. Nakano and Nguyen, 2012; Minton et al., 2011; Deutsch et al., 2011; Coles et al., 2006). Market-based hazard estimations are by and large the fluctuation and standard deviation of the stock returns (e.g. Cheng, 2008; Pathan, 2009).

#### 2.1.2 Measurements of firm performance

The estimations utilized as a part of the exact investigates to survey the budgetary execution can be ordered into showcase based measures and bookkeeping based measures. Market-based measures, which are forward-looking measures including market estimation of value to book estimation of value (e.g. Zeitun and Tian, 2007), cost per offer to the profit per share (e.g. Abdel Shahid, 2003), Tobin's Q, and so on. It uncovers the market desires of an association's future profit and, in this way,

reflectscomparative favorable circumstances or development open doors for the firm (Rose, 2007). In particular, Tobin's Q is generally utilized as a market-based measure to assess the firm an incentive in various examinations (e.g. Wernerfelt and Montgomery, 1988; Bharadwaj et al., 1999; Anderson and Reeb, 2003; Hermalin and Weisbach, 1991; Colesa, et al., 2008; Yermack, 1996). Bookkeeping based measures, saw as back-looking measures that mirror a perspective of past execution, comprise of profit for value (ROE), return on resources (ROA), return on deals (ROS), rate of profitability (ROI) and so on. These bookkeeping measures originate from money related proportions ascertained in view of the monetary articulations and have been utilized by numerous researchers (e.g. Peng, 2004; Hart and Ahuja, 1996; Vafeas, 1999; Brick and Chidambaranb, 2010; Li et al., 2008).

ROA indicates how much income a firm can create from the capital resources venture (Epps and Cereola, 2008). As a budgetary proportion, ROA makes it conceivable to make examinations between companies with various firm sizes, and the information can be effectively procured as it is freely announced in the monetary reports (McKee et al., 1989). ROA mirrors an association's gainfulness and is by and large seen as the most valuable measure to inspect firm execution (e.g. Long and Ravenscraft, 1984; Fooladi, 2012).

## 2.2 Board characteristics and impact on firm outcomes

### 2.2.1 Board characteristics and impact on firm risk

Existing writing demonstrates that board attributes can influence firm hazard taking conduct. Various researchers have endeavored to investigate the connection between board qualities and firm hazard. Nakano and Nguyen (2012) find that organizations with bigger board sizes tend to take less outrageous choices and make less unsafe ventures, and therefore show bring down execution unpredictability and lower chapter 11 chance.

Cheng (2008) additionally finds exact proof supporting that board estimate has a negative association with the fluctuation of stock returns. Block and Chidambaran (2008) find that without outer control, companies with more grounded board freedom and observing have bring down firm hazard. Pathan (2009) finds that saves money with more grounded sheets where sheets reflecting a greater amount of bank investors premium, are more hazard taking, particularly when sheets are little and less prohibitive. Minton et al. (2011) find that the budgetary skill of sheets has positive relationship with levels of hazard taking in the run-up to the emergency. Hurricane and Kesner (1994) find that organizations which roll out more improvements in their sheets have a higher insolvency chance. Deutsch et al. (2011) discover bolster for the contention that granting the outside chiefs with investment opportunities expands an association's hazard taking conduct.

### 2.2.2 Board characteristics and impact on firm performance

Various researchers have shown the impact of board qualities, for example, board freedom, board measure, board decent variety, owership structure, on firm money related performance.A considerable lot of studies put accentuation on the impact of board autonomy on firm execution. The frequently utilized pointer of board autonomy in the writing is the extent of autonomous chiefs. Autonomous executives have better motivating forces to screen and direct best administration (Bermig and Frick, 2010) and in this manner assist successfully manage the office issues, which can bring about better basic leadership (Fama and Jensen, 1983). In this way, the hypothetical connection between board autonomy and firm execution is ventured to be certain. Be that as it may, exact investigations report blended discoveries. Various examinations exploring organizations from different nations demonstrate a positive connection between board autonomy and firm execution. Peng (2004) finds that organizations with more untouchable executives have better firm execution estimated by deals development,

while the effect of outcast chiefs isn't noteworthy when corporate execution is estimated by return on value, in view of 405 openly recorded firms in China. Dehaene et al. (2001) examine the board organization of chose partnerships from Belgium and find that the extent of outside chiefs positively affects firm execution. Be that as it may, a few researchers find observational proof that does not bolster this positive affiliation. Colesa et al. (2008) find that the extent of insider executives with firm particular information is higher in serious innovative work firms and the level of insider chiefs is decidedly related with Tobin's Q in R&D-concentrated firms. Agrawal and Knoeber (1996) contemplate an example of huge U.S. firms and report an essentially negative connection between board freedom and Tobin's Q. Vafeas and Theodorou (1998) locate no huge connection between the level of free chiefs and a few corporate execution measures, utilizing an example of 250 traded on an open market firms in the UK. Different researchers center around the connection between a few other board attributes and firm money related execution. Past writing recommends that board estimate has a negative association with firm execution (Hermalin and Weisbach, 2003). Yermack (1996) finds that organizations with little sheets have better firm execution as estimated by Tobin's Q. Eisenberg et al. (1998) find that a littler board estimate expands firm execution, as estimated by return on resources in little companies. Vafeas (1999) finds that executive gathering recurrence really has a negative association with firm esteem. Kim (2005) finds that an excess of board organizing sidy affects firm execution and a direct level of board organizing thickness goodly affects firm esteem. Bricka and Chidambaranb (2010) find that organizations with more board movement have better firm execution. Fooladi (2012) gives experimental proof gathered from Malaysian organizations to help that CEO duality is contrarily related with firm execution, as estimated by return on value and profit for resources. McConnell and Servaes (1990) locate a noteworthy curvilinear relationship between Tobin's Q and the extent of basic stock offers held by corporate insiders. To be particular, Tobin's Q first ascents until the

point when insider possession comes to around 40% to half and afterward falls. The examines specified above regard the executives as a homogenous gathering and don't consider chiefs' close to home qualities like sexual orientation, which could influence firm hazard and execution.

### 2.3 Theoretical foundations of gender diversity and firm outcomes relationship

#### 2.3.1 Theoretical foundations of gender diversity and firm risk relationship

Agency hypothesis demonstrates that administrators have a tendency to stay away from chance because of individual worries about human capital returns, which can't be expanded (e.g. Holmström, 1999; Fama, 1980). A few corporate administration systems are proposed to urge administrators to go out on a limb, among which, top managerial staff is accepted to have substantial effect on chance. Specifically, because of particular qualities of ladies, sex assorted variety may influence firm hazard. Past writing in the field of brain science and financial aspects demonstrate that ladies have a tendency to be more hazard loath than men. Men have been observed to be more hazard taking than ladies in the test ponders. For example, in tests that include settling on a decision between lotteries with known probabilities and cash results, ladies show a more noteworthy inclination to settle on less unsafe decisions than men (e.g. Dohmen et al., 2005; Powell and Ansic, 1997). Additionally, ladies are observed to be more traditionalist in speculation basic leadership (e.g. Finucane et al., 2000; Bernasek and Shwiff, 2001). Be that as it may, the examinations of sexual orientation hazard inclinations said above depend on the ladies of the all inclusive community. Concentrates in light of a subsample comprising of experts and administrators demonstrate littler sex contrasts in hazard craving, and regularly no distinction appeared. For inst in fund performance and risk. It may become easier and more efficient for female directors to deal with corporate affairs if they exhibit partly “male” characteristics, which is different from women in the general population. Adams and

Funk (2012) propose that females carry on uniquely in contrast to their male partners yet in ways that are not the same as sex contrasts in the all inclusive community, and they locate that female chiefs are much more hazard taking than male executives. All things considered, giving that sexual orientation distinction exists in chance craving, there is plausibility that the extent of ladies in the meeting room has impact on firm hazard. The blend of various sexual orientations in the meeting room may likewise have impact on decisions(Hoogendoorn et al., 2013).

From one perspective, sexual orientation decent variety may give more elective arrangements and prompt better basic leadership, which may possibly bring down firm hazard given a similar level of return; then again, sex assorted variety may bring about more clashes and make it longer for chiefs to achieve an understanding, which conceivably builds firm hazard.

### 2.3.2 Theoretical foundations of gender diversity and firm performance relationship

Research demonstrates that board assorted variety could enhance firm an incentive in a few perspectives, and sex decent variety, as one component of board decent variety, is constantly answered to goodly affect firm execution by online networking. For example, Women Matter reports distributed by Mckinsey bolster the view that solid female portrayal at board level could improve board adequacy and positively affect the firm execution (Devillard et al., 2013). Contentions for grasping more ladies on sheets can be arranged into moral impacts and financial impacts. The previous contends that it is moral for ladies to be picked without the sex partiality. In this way, it is considered to mirror the corporate social obligation and has great social impact as far as advancing a more fair social condition.

From the financial point of view, there is a lot of confirmation from business cases demonstrating that sexual orientation differing firms have better productivity looked at than single-sex oversaw firms (e.g Litz and Folker, 2002). Financial advantages of sexual orientation different sheets are proposed fundamentally in light of the suggestions depicting the impacts of work environment assorted variety. To begin with, the cutting edge commercial center is more differing than any other time in recent memory, and sexual orientation assorted variety coordinates the decent variety of the corporation'scustomers and providers, and it advances a superior comprehension of the market (Carter, et al., 2003).

Second, sexual orientation decent variety upgrades development and innovativeness on the grounds that these qualities have a tendency to change with sex (Robinson and Dechant, 1997). Third, sex decent variety is contended to give more successful critical thinking since more elective arrangements are proposed amid dialog by a more differing board (Rose, 2007). With this more extensive vision, the board has a superior comprehension of the company's situation in the present business condition and can thusly settle on better choices. Furthermore, the nature of the board individuals could be enhanced in the event that they are chosen without the bias of sexual orientation distinction (Campbell and Mínguez-Vera, 2008).

At long last, financial specialists respond decidedly to the arrangement of female chiefs, particularly when the selected ladies executives are free executives (Kang et al., 2010). A more grounded female meeting room portrayal may enhance an association's intensity in the market when female executives are fit the bill to be chosen for the situation as board individuals (Smith et al., 2006). In spite of these points of interest, it is additionally contended that more prominent sexual orientation decent variety could obliterate firm esteem. In heterogeneous groups, individuals have a tendency to convey

less much of the time since they are more averse to have similar thoughts (Earley and Mosakowski, 2000), are ordinarily less helpful and have more passionate clashes (Henri and John, 1986). In this unique situation, it requires longer and more exertion for sexual orientation differing sheets to achieve choices, in this way decreasing board adequacy and execution (Erhardt et al., 2003). This can cause issues, particularly in the exceptionally aggressive working condition when the adjustments in the market require a brisk response from the board (Williams and O'Reilly, 1998). Another detriment proposed by Cox and Blake (1991) is that the cost of the associations is expanded because of ladies' moderately higher turnover and non-appearance. Organization hypothesis can likewise clarify the connection between board sex assorted variety and firm execution. Organization hypothesis assumes that the interests of principles are not aligned with the interests of agents (Hill and Jones, 1992). As a result, conflicts may arise between shareholders and managers. Abidin et al. (2009) imply that because managers are hired by shareholders to operate corporations on a daily basis, managers have a competitive advantage of information within the company over that of the stakeholders, and information asymmetry exits. Managers have the incentive and the opportunity to maximise personal wealth instead of maximising firm wealth, and thus welfare of the principals is reduced. According to agency theory, establishing appropriate incentives for the agents and monitoring opportunistic behaviour costs can help align the interests of principals and agents (Hill and Jones, 1992). A corporate board of directors plays an important role in monitoring and controlling managers and it is argued that board independence helps to control the opportunistic action of managers and protect the shareholders' interests (Fama and Jensen, 1983). Since more prominent board assorted variety may expand board autonomy, as recommended by organization hypothesis, a more differing board may involve a more viable sheets observing capacity (Carter et al., 2007). Sex different sheets may help with checking since more assorted

sheets can decrease the act of acquiring administration and the likelihood of monetary explanation extortion (e.g. Peasnell et al., 2005; Beasley, 1996).

Notwithstanding, female board individuals can be minimized by male chiefs, which may not really bring about more powerful board observing (e.g. Campbell and Mínguez-Vera, 2008; Carter et al., 2003). Adams and Ferreira (2009) contend that sex decent variety can expand firm execution when firms have weakgovernance and may diminish firm execution when firms as of now have solid administration. Despite the fact that the nearness of ladies on sheets may bring about a superior board execution and in this manner firm results at last, it may not prevail with regards to offsetting the negative impacts like more clashes and slower basic leadership. In this way, the connection between female meeting room portrayal and firm esteem remains wrangled about.

### 2.4 Empirical studies on gender diversity and firm outcomes

An expanding number of studies have endeavored to make sense of the impact of sex decent variety on firm results. While the majority of the experimental examinations have received U.S. organizations as their example, a developing number of researchers are concentrating on non-U.S. nations, for example, Spain, to top off the holes in the current writing. The most intriguing subjects are about the impact of female executives on firm hazard and execution. In any case, there are as yet different researchers, who have concentrated on other firm results including social execution (Siciliano, 1996), corporate notoriety (Bear et al., 2010) and stock cost education (Gul et al., 2011).

#### 2.4.1 Empirical studies on gender diversity and firm risk relationship

A set number of researchers have given an account of the connection between the nearness of ladies on sheets and firm hazard. Wilson and Altanlar (2011) report a negative connection between the level of ladies on sheets and bankruptcy hazard. Levi et

al. (2014) find that organizations with ladies on sheets have a tendency to have a lower probability to get associated with mergers and acquisitions and pay bring down procurement premiums. Beck et al. (2013) find that advances took care of by female officiers are more averse to have issues than credits checked their male partners. In any case, the impact of female executives in the meeting room on hazard taking conduct isn't really negative. Berger et al. (2014) report a positive connection between the level of female executives and portfolio chance in the German managing an account part. Sila et al. (2014) discover no confirmation supporting that female portrayal on sheets has impacts on value chance. In rundown, the current writing talked about above backings the hazard disinclined normal for ladies, and the lion's share of observational research proposes a negative connection between the nearness of ladies on sheets and firm hazard. It can be normal that female meeting room portrayal is contrarily connected with firm aggregate hazard, precise hazard and peculiar hazard. Thus, the principal theory of this examination is displayed as takes after:

***Hypothesis 1: Firms with a higher extent of female chiefs are related with less firm aggregate hazard, precise hazard and eccentric hazard.***

### 2.4.2 Empirical studies on gender diversity and firm performance relationship

Existing writing about the effect of board sex assorted variety on firm execution has not achieved an assention. The exact confirmation reports positive, negative and no connection between board sex decent variety and firm esteem. Most experimental examinations have been founded on the enterprises in U.S. Some experimental investigations offer help for the recommendation that board sexual orientation assorted variety is emphatically identified with firm execution. Carter et al. (2003) discover a factually critical positive connection between the level of female executives in the meeting room and Tobin's Q, for the example of Fortune 1000 firms. Adler (2001) locate a huge positive relationship between the quantity of female executives and profit

for resources, return on value and profit for deals by analyzing Fortune 500 firms. Erhardtet al. (2003) explore 127 substantial U.S. organizations and find that sex assorted variety has a positive relationship with return on resources and quantifiable profit. Carter et al. (2007) likewise locate this positive relationship by examining the example of firms recorded on the Fortune 500, and stressed that the beneficial outcome of sex decent variety on corporate budgetary execution is for the most part through the review capacity of the board. Interestingly, a few researchers report no impact of board sex decent variety on firm execution by examining U.S. companies. Carter et al. (2010) don't locate a noteworthy connection between sexual orientation decent variety in the meeting room and firm execution as estimated by return on resources and Tobin's Q. Shrader et al. (1997) discover no connection between the nearness of ladies on sheets and firm execution, evaluated by two bookkeeping measures (ROA and ROE) for an example comprising 200 U.S. firms. Kochan et al. (2003) neglect to discover positive or negative direct impacts of board sex assorted variety on firm execution. Farrell and Hersch (2005) demonstrate that the share trading system responds inconsequential to the declaration of including another female chiefs and exhibit the likelihood that expanding the nearness of ladies in the meeting room in the U.S. is more in light of meeting the more prominent decent variety objective, instead of in view of execution. Moreover, a couple of researchers in U.S. report prove that is supportive of the conclusion that more noteworthy sexual orientation assorted variety is related with bring down firm execution. For instance, Adams and Ferreira (2009) locate a normal negative impact of the sexual orientation decent variety in the meeting room on firm execution (Tobin's Q and ROA) with an example of Standard and Poor's (S&P) 1500. All specified observational investigations depend on the information of U.S. firms and as the issue of board sexual orientation assorted variety has pulled in developing exploration intrigue, an expanding number of studies are endeavoring to broaden the current writing. Smith et al. (2006) do an investigation on the connection between female executives and firm execution

utilizing an example comprising of the 2500 biggest Danish firms in the vicinity of 1993 and 2001. They presume that the impact of female board individuals on firm money related execution is certain if female chiefs are chosen by staff, while other female executives really affect firm monetary execution. In an example of non-budgetary Spanish firms, Campbell and Mínguez-Vera (2008) find that the level of ladies on sheets is decidedly related with firm money related execution, estimated by Tobin's Q. Some observational investigations look at partnerships from Norway, Denmark, Sweden and Spain and report that the nearness of ladies on sheets has no noteworthy relationship with firm execution. Randøy, et al. (2006) complete an examination of the 500 biggest organizations in Denmark, Norway and Sweden and locate no noteworthy relationship between sexual orientation assorted variety and firm execution, estimated by securities exchange execution and profit for resources. Rose (2007) examines recorded firms in Denmark and locate no huge connection between the nearness of ladies on sheets and firm execution, as estimated by Tobin's Q. Rietz and Henrekson (2000) lead a test on a substantial example of Swedish enterprises in all areas of the economy and no huge connection is found between the portrayal of female executives and firm execution. Gallego et al. (2010) ponder Spanish organizations and locate no huge connection between sex decent variety and Tobin's Q, return on resources, return on value or profit for deals. In addition, a negative connection between sex assorted variety and corporate execution is accounted for in Bøhren and Strøm (2005), who lead an investigation utilizing an example of all Norwegian non-money related recorded firms, and find that sexual orientation decent variety can cause a decrease in board adequacy, demonstrating a negative impact of sex assorted variety on firm esteem estimated by Tobin's Q. To condense, the current writing recommends that a more prominent sexual orientation decent variety can bring about a more successful board checking component and a more extensive assortment of points of view in discovering arrangements in basic leadership procedures, and in this way can ultimatly prompt better firm execution. Be that as it

may, these advantages of board sexual orientation assorted variety may not exceed its disadvantages, which base on perhaps slower basic leadership and potential clashes emerging from the communication between various sexes. Additionally, most experimental investigations report a unimportant connection between sexual orientation assorted variety and firm execution. Accordingly, the second formal theory to be tended to in this examination is as per the following: Hypothesis 2: Board sex assorted variety has no impact on firm execution (ROA and Tobin's Q).

### 2.5 Evidence on sexual orientation decent variety and firm results crosswise over businesses

The current experimental writing that explores female portrayal in the meeting room of U.S. enterprises crosswise over ventures is greatly meager, and an investigation that looks at the impact of ladies on sheets on firm hazard or firm execution between two areas for the U.S. board information is more probable not accessible in the writing. Berger et al. (2014) look at 826 private, open and helpful banks in the German managing an account segment in the vicinity of 1994 and 2010. They utilize chance weighted resources partitioned by add up to resources (RWA/TA) as the intermediary of portfolio chance, which is broadly utilized as a part of the experimental writing related with keeping money and find that an expansion in the extent of female bank chiefs is related with expanded portfolio chance. The main advantage of sexual orientation assorted variety on sheets specified above is that it compares with the decent variety of potential supp**, *** denote statistical % respectively: the coefficients on the proportion of women for different industries are the same.

Table 8 presents the OLS of complex specifications with interaction terms and industry dummies to test whether the effect of female boardroom representation on firm is different across industries. An F-test is computed to compare the regression coefficients these industries (Bruin, 2006). The null hypothesis of the F-test is that the coefficients

industries are the same. All p-values are smaller than 0.01, indicatingThis means that the regression coefficients on gender diversity do indeed statistically significantly differ across industries. Additionally, the coefficients are economically significantly different across industries. of total risk as an example. in mining and construction (SIC=1) is almost 30 times the coefficient in wholesale and retail (SIC=5), which are 0.513 (-1.505+2.018) and 0.018 (-1.505+1.523) respectively. A 10% increase in the female boardroom representation leads to 0.0513 unit increase in the mining and construction industry. It has economic impact considering the mean of total risk is 0.4. However, gender diversity in the wholesale and retail industry does not have much economic impact. As a consequence, both show that the relationships between female boardroom representation and all three are significantly different across industries. The results provide evidence in support of  Hypothesis  is different across industries. The coefficients industries can be either positive or negative. No evidence is found to support the idea of finding a pattern between prevalent  . Take of total risk as an prevalent (SIC=4 and 5), the coefficients are 0.125 (-1.505+ 1.63) and 0.018 respectively, the coefficients on gender diversity are -1.505, 0.513 and 0.112 (-1.505+ 1.617) respectively. Additionally, I take the presence of female employees in the whole industries into consideration. Based on intuitionmake a difference in the industries where more women are employed in the whole company. Although, in industries with fewer women, it may be harder for female directors to voice their opinions, it is also possible that their views are more likely to be considered valuable due to their minority, so they could have more impact, women have a high level of representation in the financial services industry (SIC=6) and other services industry (SIC=8), while women are underrepresented  (SIC=0), the mining and construction industry (SIC=1), the rubber, leather, stone, metal and electronic =3) and the transportation and communications industry (SIC=4). Also, take of total risk as an example. In the industries where women are more prevalent (SIC=6 and 8), the coefficients on gender

diversity are -0.623 (-1.505+0.882) and 0.09 (-1.505+ 1.595) respectively. In the industries where women are underrepresented the coefficients are -1.505, 0.513, 0.112 and 0.125 respectively. Thereforepattern between industries in which women are more or less prevalent.

### 3.2.3 Measurements of control variables

**Board characteristics**

Recommended in the earlier writing (e.g. Hermalin and Weisbach, 2003; Peng, 2004; Cheng, 2008; Brick and Chidambaran, 2008), board qualities, for example, board size and board freedom have impact on firm execution and firm hazard. In this manner, they are controlled in both firm execution and hazard models. Following existing writing (e.g. Adams and Ferreira, 2009; Sila et al., 2014), board size and board autonomy are estimated as the quantity of executives on board (bsize) and number of free chiefs isolated by number of executives (bindep). As characterized by RiskMetrics, autonomous chiefs can't be administrators and can't have some other association to the organization.

Firm Characteristics

Gainfulness is considered as an intermediary for financial additions of an organization, which has impact on firm income, and subsequently has effect on firm hazard. Cao et al. (2008) propose that development openings have affect on firm hazard and firms with high market-to-book proportion will probably acknowledge more dangerous activities, prompting higher firm hazard. Accordingly, gainfulness and development openings are controlled in the firm hazard models. Gainfulness is estimated by the arrival on resources (roa) and is ascertained as said previously. Development openings are estimated by showcase to-book proportion (mtb), characterized as the market estimation

of value and the book estimation of obligation isolated by the book estimation of advantages.

Past inquires about show that firm size, innovative work cost, capital use and capital structure have affect on both firm hazard and execution and in this manner they are incorporated into the both hazard and execution models.

Researchers recommend that organizations with little size have a tendency to be risker contrasted with enormous firms (e.g. Dark colored and Kapadia, 2007). In addition, firm size might be dealt with as a pointer of firm broadening from a methodology viewpoint, and it has generally been observed to be adversely related with firm execution (Rumelt, 1982). Firm size (estimate) is proxied as logarithm of the book estimation of firm aggregate resources.

Research and development force can be seen as development opportunity and is recommended to be emphatically related with firm execution (Agrawal and Knoeber, 1996). Furthermore, higher R&D force is contended to be related with higher firm hazard (e.g. Luo and Bhattacharya, 2009; Coles et al., 2006). Research and development force is characterized as innovative work cost (rd) isolated by add up to deals.

Capital use, going about as a pointer of firm speculation approach, is contended to have a positive association with firm execution (e.g. Dushnitsky and Lenox, 2006; McConnell and Muscarella,1985) and a negative association with firm hazard (Coles et al., 2006). Capital use (capex) utilized as a part of the examination is scaled by add up to deals.

Various investigations recommend that firm capital structure influences firm execution however the exact outcomes are blended (Modigliani and Miller, 1963; Majumdar and

Chhibber, 1999). In addition, it is for the most part seen that an abnormal state of budgetary use is related with high firm hazard. Firm capital structure is estimated by book use (lev), which is add up to liabilities partitioned by the book estimation of value.

Chief qualities

Length of residency (ceotenure) is utilized to control for CEO hazard avoidance in the hazard models. Presidents who have long residency are more dug in and have a tendency to be hazard unwilling (Berger et al., 1997).

Industry attributes

Carter et al. (2003) express that distinctions in firm hazard and esteem might be identified with industry-particular elements. Consequently, as proposed in the earlier examinations (e.g. Adams and Ferreira, 2009; Sila et al., 2014), one-digit SIC fakers are incorporated into OLS relapse particulars to control industry impact.

Collaboration terms between industry fakers and the extent of female chiefs are incorporated into the models to inspect whether the impact of female executives on firm hazard and execution is distinctive crosswise over industry parts.

Table 1 gives a definition and portrayal of reliant and autonomous factors utilized as a part of the examination. Review that all profits used to figure firm aggregate, orderly and quirky hazard do exclude profits.

Table 1: Definitions and descriptions of all variables

| Variable name | Abbreviation | Definition and description |
|---|---|---|
| **Board Characteristics (Source: RiskMetrics)** | | |
| Proportion of Women | female | Number of female directors/ number of directors |
| Board Size | bsize | Number of directors on board |
| Board Independence | bindep | Number of independent directors/ number of directors<br>As defined by RiskMetrics, independent directors cannot be executives and cannot have any other affiliation to the company. |
| **Firm Characteristics (Source: Compustat)** | | |
| Profitability | roa | net income/ book value of assets |
| Growth Opportunity | mtb | Market-to-book ratio=<br>(Market value of equity+ book value of debt)/ book value of assets |
| Firm Size | size | Logarithm of the book value of firm total assets |
| R&D Intensity | rd | Research and development expense/ total sales |
| Capital Expenditure | capex | Capital expenditure/ total sales |
| Capital Structure | lev | Total liabilities/ book value of equity |
| Industry Dummy | industry_k | Dummy variable representing for the industry characteristics of a firm according to the Standard industrial classification (SIC) code |
| **CEO Risk-taking Incentive (Execucomp of WRDS database)** | | |
| CEO Tenure | ceotenure | Length of tenure |
| **Firm Risk Measures (Source: CRSP)** | | |
| Total Risk | total | Standard deviation of daily stock returns over the last year |
| Systematic Risk | sys | Coefficient of the stock market portfolio from a market-model regression CRSP NYSE/AMEX/Nasdaq/ Area equally weighted index is the proxy for the stock market portfolio. |
| Idiosyncratic Risk | idio | Standard deviation of the residuals from market-model regression |
| **Firm Performance Measures (Source: Compustat)** | | |
| Return on Assets | roa | net income/ book value of assets |
| Tobin's Q | Tobin's Q | Market-to-book ratio= (Market value of equity+ book value of debt)/ book value of assets |

## 3.3 Methodology

The dataset utilized as a part of this examination covers a 7-year time frame from 2007 to 2013. In this manner, the examination utilizes the board information common slightest squares (OLS) relapse strategy. The board variable is the firm and the time variable is the financial year from 2007 to 2013.

Existing writing (e.g. Sila et al., 2014) proposes that the firm endogeneously picks its board attributes as indicated by its data and working qualities. Discarded imperceptible firm qualities may influence both female chief arrangements and firm results. For example, if a corporate culture is available to new things, it will probably acknowledge

new venture with less ensured returns yet more hazard. In the meantime, it might think less about sexual orientation and grasp more female executives. In this circumstance, a positive connection between sexual orientation decent variety and firm hazard would be watched regardless of whether there is a non-causal connection between the two factors. Wooldridge (2009) recommends that settled impacts estimator can be utilized to manage precluded time-invariant unobservables, as corporate culture. In particular, the investigation utilizes firm settled impacts to represent imperceptible time-invariant firm qualities and year settled impacts to consider the adjustments in the condition that influence all organizations. Firm and year settled impacts give a proficient method for tending to in secret heterogeneity originating from the fleeting and cross-sectional parts of the pooled data(Dobbin and Jung, 2012). One suspicion of utilizing settled impacts estimation is that imperceptibly factors that impact firm result measures are steady over the day and age contemplated. To evade survivorship predisposition, the investigation does not require an adjusted board recommended by Sila et al. (2014). As the investigation utilizes the uneven boards, another presumption is required that missing eras are disconnected with the eccentric mistakes (Wooldridge, 2009).

Along these lines, two relapse composes are received in the examination, including standard slightest squares relapses and settled impacts relapses that think about imperceptibly heterogeneity. Bunch strong standard blunders by firms are connected to rectify for both heteroscedasticity and serial relationship.

### 3.3.1 Analysis approach

A stepwise technique is utilized so as to test the speculations. To start with, to test the Hypotheses 1 and 2, the less mind boggling relapse conditions without connection terms are developed to investigate the impact of sexual orientation assorted variety on firm results. Second, the communication terms female i,t × industry_k i,t are added into the

models to examine whether the connection between female meeting room portrayal and firm results is diverse crosswise over ventures to test Hypotheses 3 and 4.

For every estimation of firm result, pooled cross-sectional time-arrangement particulars reasonable for customary minimum squares and settled impacts relapse write are introduced as underneath.

Conventional slightest squares relapses:

$$risk_{i,t} = \beta_0 + \beta_1 female_{i,t} + \beta_2 bindep_{i,t} + \beta_3 bsize_{i,t} + \beta_4 mtb_{i,t} + \beta_5 roa_{i,t} + \beta_6 capex_{i,t} + \beta_7 size_{i,t} + \beta_8 rd_{i,t} + \beta_9 lev_{i,t} + \beta_{10} ceotenure_{i,t} + \beta_{11} \sum_{k=0}^{9} industry\_k_{i,t} + \beta_{12} \sum_{k=0}^{9} female_{i,t} \times industry\_k_{i,t} + \varepsilon \quad (1)$$

$$performance_{i,t} = \beta_0 + \beta_1 female_{i,t} + \beta_2 bindep_{i,t} + \beta_3 bsize_{i,t} + \beta_4 size_{i,t} + \beta_5 lev_{i,t} + \beta_6 capex_{i,t} + \beta_7 rd_{i,t} + \beta_8 \sum_{k=0}^{9} industry\_k_{i,t} + \beta_9 \sum_{k=0}^{9} female_{i,t} \times industry\_k_{i,t} + \varepsilon \quad (2)$$

Fixed effects regressions with year dummies:

$$risk_{i,t} = \beta_0 + \beta_1 female_{i,t} + \beta_2 bindep_{i,t} + \beta_3 bsize_{i,t} + \beta_4 mtb_{i,t} + \beta_5 roa_{i,t} + \beta_6 capex_{i,t} + \beta_7 size_{i,t} + \beta_8 rd_{i,t} + \beta_9 lev_{i,t} + \beta_{10} ceotenure_{i,t} + \beta_{11} \sum_{k=0}^{9} female_{i,t} \times industry\_k_{i,t} + a_i + \sum_{y=2007}^{2013} \omega_y \times Year_i^y + u_{i,t} \quad (3)$$

$$performance_{i,t} = \beta_0 + \beta_1 female_{i,t} + \beta_2 bindep_{i,t} + \beta_3 bsize_{i,t} + \beta_4 size_{i,t} + \beta_5 lev_{i,t} + \beta_6 capex_{i,t} + \beta_7 rd_{i,t} + \beta_8 \sum_{k=0}^{9} female_{i,t} \times industry\_k_{i,t} + a_i + \sum_{y=2007}^{2013} \omega_y \times Year_i^y + u_{i,t} \quad (4)$$

The subscript i denotes the individual firm (i=1, 2, 3 … 1517), while t is the time period (t=2007, 2008 …2013). The coefficients $\beta$ are the parameters to be estimated. $a$ is the unobserved firm fixed-effects and Year is the year dummy while $u$ is the error term. Risk can be either total risk, systematic risk or idiosyncratic risk and performance can be either Tobin's Q or roa. Industry_k is a dummy variable representing the industry that a firm belongs to according to the Standard Industrial Classification (SIC) code. For example, industry_0 takes a value of one if the firm belongs to Agriculture, Forestry and Fishing (SIC=0) and 0 otherwise.

The subscript I indicates the individual firm (i=1, 2, 3 ... 1517), while t is the day and age (t=2007, 2008 ...2013). The coefficients β are the parameters to be assessed. an is the surreptitiously firm settled impacts and Year is the year sham while u is the blunder term. Hazard can be either add up to chance, efficient hazard or particular hazard and execution can be either Tobin's Q or roa. Industry_k is a spurious variable speaking to

the business that a firm has a place with as indicated by the Standard Industrial Classification (SIC) code. For instance, industry_0 takes an estimation of one if the firm has a place with Agriculture, Forestry and Fishing (SIC=0) and 0 generally.

### 3.4 Descriptive measurements

**Table 2: Summary measurements**

This table reports outline insights for the full example. The example contains an unequal board of 8224 firm-year perceptions from 1517 firms for the period 2007 - 2013. Board qualities are acquired from the RiskMetrics database. Firm qualities are gotten from Compustat. President hazard taking impetus information are gotten from Execucomp and hazard measures processed utilizing value information from the Center at Research in Security Costs. Chief hazard taking motivating forces and firm attributes are winsorized at the first and 99th percentile esteems.All factors are characterized in Table2

| Variable | Mean | S.D. | p25 | p50 | p75 |
|---|---|---|---|---|---|
| **Board Characteristics** | | | | | |
| Proportion of Women | 0.13 | 0.10 | 0.06 | 0.13 | 0.20 |
| Board Size | 9.58 | 2.39 | 8.00 | 9.00 | 11.00 |
| Board Independence | 0.79 | 0.11 | 0.71 | 0.80 | 0.89 |
| **Firm Characteristics** | | | | | |
| Profitability | 0.04 | 0.07 | 0.01 | 0.04 | 0.08 |
| Growth Opportunity | 1.64 | 0.81 | 1.09 | 1.38 | 1.88 |
| Firm Size | 8.29 | 1.62 | 7.13 | 8.16 | 9.28 |
| R&D Intensity | 0.03 | 0.10 | 0.00 | 0.00 | 0.02 |
| Capital Expenditure | 0.07 | 0.14 | 0.02 | 0.03 | 0.06 |
| Capital Structure | 0.41 | 0.43 | 0.12 | 0.29 | 0.53 |
| **CEO Risk-taking Incentives** | | | | | |
| CEO Tenure | 5.14 | 2.19 | 3.50 | 5.00 | 6.60 |
| **Firm Risk Measures** | | | | | |
| Total Risk | 0.40 | 0.21 | 0.26 | 0.35 | 0.50 |
| Systematic Risk | 1.28 | 0.46 | 0.96 | 1.24 | 1.55 |
| Idiosyncratic Risk | 0.31 | 0.16 | 0.19 | 0.27 | 0.38 |
| **Firm Performance Measures** | | | | | |
| Return on Assets | 0.04 | 0.07 | 0.01 | 0.04 | 0.08 |
| Tobin's Q | 1.64 | 0.81 | 1.09 | 1.38 | 1.88 |

Table 2 presents unmistakable measurements of firm, board and CEO factors for the example time frame from 2007 to 2013. The normal extent of ladies in the meeting room is 13%, demonstrating that out of a normal eight-executive board, one chief is female. Contrasted and the mean level of 8.5% announced in Adams and Ferreira (2009), in view of 1939 U.S. firms for the period 1996-2003, the female meeting room portrayal has enormously expanded amid late years. All things considered, the sheets comprise of around 10 individuals and about 79% of the board individuals are free executives. The rest of the factors are in accordance with the outline insights detailed in Sila et al. (2014). The variety of board measure, firm size and CEO residency is generally high.

**Table 3: Key variables by number of female director and comparisons of means for firms with high and low representation of women on boards**

This table shows the means of key variables for subsamples categorized by number of female directors and presents tests of differences in means for key variables between firms with low or high levels of female boardroom representation. Firms with no female directors on boards are classified as low representation firms, while firms with at least two female directors on boards are classified as high representation firms. N is the number of observations within that subsample and % is the percentage of the subsample within the full sample. *** indicates significance at the 1% level. ** indicates significance at the 5% level.

| | Number of Women on Board | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Low Women Firm | | | | | High Women Firm | | |
| | 0 | 1 | 2 | 3 | 4-7 | >0 | >1 | t statistic |
| **Board Characteristics** | | | | | | | | |
| Proportion of Women | 0.00 | 0.11 | 0.20 | 0.28 | 0.36 | 0.17 | | |
| Board Size | 7.94 | 9.38 | 10.59 | 11.26 | 12.13 | 10.12 | 10.85 | -47.562*** |
| Board Independence | 0.75 | 0.78 | 0.82 | 0.82 | 0.83 | 0.80 | 0.82 | -23.939*** |
| **Firm Characteristics** | | | | | | | | |
| Profitability | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.04 | 0.05 | -3.143*** |
| Growth Opportunity | 1.66 | 1.66 | 1.61 | 1.62 | 1.56 | 1.63 | 1.61 | 2.062** |
| Firm Size | 7.41 | 8.07 | 8.94 | 9.23 | 9.77 | 8.57 | 9.07 | -38.863*** |
| R&D Intensity | 0.03 | 0.03 | 0.02 | 0.02 | 0.01 | 0.03 | 0.02 | 8.767*** |
| Capital Expenditure | 0.09 | 0.07 | 0.06 | 0.06 | 0.06 | 0.07 | 0.06 | 6.306*** |
| Capital Structure | 0.39 | 0.41 | 0.43 | 0.38 | 0.42 | 0.41 | 0.42 | -2.255** |
| **CEO characteristics** | | | | | | | | |
| CEO Tenure | 5.68 | 5.21 | 4.82 | 4.51 | 4.55 | 4.97 | 4.73 | 15.712*** |
| **Firm Risk Measures** | | | | | | | | |
| Total Risk | 0.45 | 0.41 | 0.38 | 0.35 | 0.34 | 0.39 | 0.37 | 14.284*** |
| Systematic Risk | 1.39 | 1.29 | 1.22 | 1.12 | 1.11 | 1.24 | 1.19 | 14.789*** |
| Idiosyncratic Risk | 0.35 | 0.31 | 0.28 | 0.27 | 0.26 | 0.29 | 0.28 | 15.556*** |
| **Firm Performance Measures** | | | | | | | | |
| Return on Assets | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.04 | 0.05 | -3.143*** |
| Tobin's Q | 1.66 | 1.66 | 1.61 | 1.62 | 1.56 | 1.63 | 1.61 | 2.062** |
| N | 2034 | 3054 | 2232 | 659 | 245 | 6190 | 3136 | |
| % | 24.73% | 37.14% | 27.14% | 8.01% | 2.98% | 75.27% | 38.13% | |

To casually analyze the connection between the nearness of ladies on sheets and these factors, methods for the needy and illustrative factors from the subsamples assembled by the quantity of female chiefs is computed and revealed in Table 3. Around 75.27% of firms in the example have no less than one female chief. Firms with bigger and more free sheets will probably have female chiefs. This can be normal on the grounds that most female executives are assigned as free chiefs of board positions. Firms with female chiefs have bigger firm size and lower market to book proportions, demonstrating that develop firms will probably choose female executives. Moreover, Table 3 demonstrates that there is a negative monotonic connection between the quantity of female chiefs and

each of the three firm hazard measures (add up to, orderly and quirky hazard), while there is no unmistakable connection between the quantity of female executives and firm execution measures (Tobin's Q and roa).

A two-example t-test (with unequal fluctuations) between the methods for key factors for firms with high and low levels of essence of female chiefs is led to break down whether the distinctions in implies are factually noteworthy. Firms without any ladies on sheets are characterized as low ladies firms,while firms with at least two female chiefs are characterized as high ladies firms. Firms with one lady executive are prohibited from the correlations as a solitary lady on the board is regularly viewed as "tokenism" (Carter et al., 2003). The outcomes revealed in Table 3 demonstrate that factually critical contrasts in the mean qualities amongst high and low level female meeting room portrayals exist for all factors. The examinations uncover that organizations with an abnormal state of female portrayal on sheets have a tendency to have bring down aggregate hazard (0.37 instead of 0.45), methodical hazard (1.19 rather than 1.39) and particular hazard (0.28 rather than 0.35). Moreover, in examination with firms with no female executives, high female portrayal firms have better execution as estimated by return on resources (0.05 rather than 0.04), however more terrible execution as far as Tobin's Q (1.61 instead of 1.66).

**Table 4: Breakdown of female directors for subsamples grouped by industry**

| | | Number of women on board | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | | 1 | | 2 | | 3 | | 4-7 | | |
| One-digit SIC | Industry description | Num. of firms | % of firms | Num. of firms | % of firms | Num. of firms | % of firms | Num. of firms | % of firms | Num. of firms | % of firms | Total firms |
| 0 | Agriculture, forestry & fishing | 1 | 33.3% | 1 | 33.3% | 0 | 0.0% | 1 | 33.3% | 0 | 0.0% | 3 |
| 1 | Mining & construction | 32 | 34.0% | 40 | 42.6% | 19 | 20.2% | 3 | 3.2% | 0 | 0.0% | 94 |
| 2 | Manufacturing: food, apparel, paper & chemical | 27 | 12.1% | 69 | 30.8% | 73 | 32.6% | 40 | 17.9% | 15 | 6.7% | 224 |
| 3 | Manufacturing: rubber, leather, stone, metal & electronic | 103 | 28.0% | 149 | 40.5% | 89 | 24.2% | 22 | 6.0% | 5 | 1.4% | 368 |
| 4 | Transportation & communications | 15 | 10.3% | 37 | 25.3% | 54 | 37.0% | 32 | 21.9% | 8 | 5.5% | 146 |
| 5 | Wholesale & retail trade | 19 | 11.9% | 55 | 34.4% | 53 | 33.1% | 25 | 15.6% | 8 | 5.0% | 160 |
| 6 | Financial services | 53 | 17.0% | 105 | 33.8% | 104 | 33.4% | 39 | 12.5% | 10 | 3.2% | 311 |
| 7 | Travel & entertainment | 40 | 26.1% | 60 | 39.2% | 40 | 26.1% | 10 | 6.5% | 3 | 2.0% | 153 |
| 8 | Other services | 12 | 21.1% | 26 | 45.6% | 16 | 28.1% | 3 | 5.3% | 0 | 0.0% | 57 |
| 9 | Public administration | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 1 | 100.0% | 1 |
| Total | | 302 | 19.9% | 542 | 35.7% | 448 | 29.5% | 175 | 11.5% | 50 | 3.3% | 1517 |

`

Table 4 gives the appropriation of female executives by industry characterized by the Standard Industrial Classification (SIC) code. The extent of firms with just a solitary female chief is around 36%, which is somewhat lower than the 40% detailed in Adams and Ferreira (2009). In spite of the fact that the confirmation of tokenism has diminished, the example that most firms with ladies on load up have just a single female chief has not changed significantly after some time. The extent of firms with two female executives nearly approaches 30%, while around 20% of the organizations don't have female chiefs by any means. As can be found in Table 4, the level of female executives fluctuates altogether crosswise over enterprises. Firms in mining and development (one-digit SIC=1); agribusiness, ranger service and angling (one-digit SIC=0) and elastic, cowhide, stone, metal and electronic assembling (one-digit SIC=3) have the most elevated extent of firms without any ladies on sheets (34.0%, 33.3% and 28.0% individually) and the least extent of firms with at least four female chiefs (0%, 0% and 1.4% separately). Interestingly, firms in transportation and correspondence (one digit SIC=4) and discount and retail exchange (one-digit SIC=5) have the least extent of firms without any ladies on sheets (10.3% and 11.9% individually), and the most noteworthy

extent of firms with at least four female executives (5.5% and 5.0% separately). No organizations in three enterprises (one-digit SIC=0, 1 and 8) have in excess of four female executives. This is predictable with female executives being more pervasive in the enterprises identified with customer products, as opposed to foundation, hardware or vitality, as recommended by Adams and Ferreira (2009).

### 3.5 Correlation matrix

Table 5: Correlation matrix among all variables

This table presents correlation matrix among all variables.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1)Total Risk | 1.00 | | | | | | | | | | | | |
| (2) Systematic Risk | 0.58 | 1.00 | | | | | | | | | | | |
| (3) Idiosyncratic Risk | 0.96 | 0.48 | 1.00 | | | | | | | | | | |
| (4)Tobin's Q (Growth Opportunity) | -0.20 | -0.20 | -0.15 | 1.00 | | | | | | | | | |
| (5) Return on Assets | -0.33 | -0.26 | -0.33 | 0.52 | 1.00 | | | | | | | | |
| (6) Proportion of Women | -0.13 | -0.15 | -0.13 | 0.01 | 0.04 | 1.00 | | | | | | | |
| (7) Board Independence | -0.12 | -0.08 | -0.13 | 0.00 | 0.02 | 0.22 | 1.00 | | | | | | |
| (8) Board Size | -0.13 | -0.12 | -0.17 | -0.14 | -0.02 | 0.24 | 0.14 | 1.00 | | | | | |
| (9) Capital Expenditure | -0.002 | 0.04 | -0.01 | -0.05 | -0.05 | -0.07 | 0.05 | -0.04 | 1.00 | | | | |
| (10) Firm Size | -0.20 | -0.13 | -0.27 | -0.21 | -0.02 | 0.27 | 0.21 | 0.57 | 0.08 | 1.00 | | | |
| (11) R&D Intensity | 0.03 | -0.04 | 0.07 | 0.22 | -0.12 | -0.05 | 0.03 | -0.10 | -0.03 | -0.12 | 1.00 | | |
| (12) Capital Structure | 0.04 | 0.04 | 0.04 | -0.06 | -0.14 | 0.02 | 0.00 | -0.02 | 0.07 | 0.08 | -0.08 | 1.00 | |
| (13) CEO Tenure | 0.32 | 0.01 | 0.29 | -0.03 | -0.005 | -0.17 | -0.21 | -0.08 | -0.01 | -0.13 | 0.01 | -0.01 | 1.00 |

Table 5 demonstrates a connection network among the factors utilized as a part of the examination. When all is said in done, the connections between's the logical factors are generally low (littler than 0.6), proposing that the multicollinearity issue ought not be a worry in the investigation. In particular, the high relationship between's the aggregate hazard and eccentric hazard does not prompt multicollinearity since they go about as elective measures of ward factors that are excluded into a relapse at the same time. The variety of aggregate hazard is to a great extent driven by the variety in particular hazard on the grounds that the connection between's the two factors is 0.96. To some degree, steady with the investigation from Table 3, the extent of ladies demonstrates feebly

negative connection with all measures of firm hazard, and positive yet substantially littler relationship with two firm execution measures over all boards. In any case, as the connection lattice just shows generally the connection between the factors without controlling different variables, promote examination of various relapses is required.

### 3.6 Results and dialog

As indicated by the speculations, the discourses of observational outcomes are composed as takes after. Right off the bat, it reports the board relapse comes about utilizing the full example for the examination of the connection between sex assorted variety and firm results in the wake of controlling firm-level determinants, industry conditions and year impacts. Furthermore, comes about joined the connection terms between sexual orientation assorted variety and industry fakers are given so as to investigate whether the impact of sex decent variety on firm results is diverse crosswise over businesses. At long last, the extra examination investigation is led between the gadgets subsector, where female chiefs are less common, and the customer products subsector, where female executives are more pervasive. The vigor checks are talked about in the last part.

**Table 6: Risk measures on gender diversity**

This table reports standard slightest squares and settled impacts estimation of hazard measures. The example comprises of an uneven board of firm-level information from 1517 firms for the period 2007-2013. Every one of the three hazard measures are in logarithm shape. Group hearty standard blunders are accounted for in brackets. OLS particulars incorporate industry (in light of one-digit SIC code) and year settled impacts. Settled impacts determinations just incorporate year settled impacts. *, **, *** indicate factual noteworthiness at 10%, 5% and 1% separately.

| Risk Measures | Total Risk | Systematic Risk | Idiosyncratic Risk | Total Risk | Systematic Risk | Idiosyncratic Risk |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Proportion of | -0.0996 | -0.140 | -0.0767 | 0.0708 | 0.103 | 0.0649 |
| Women | (0.0632) | (0.0866) | (0.0690) | (0.0723) | (0.100) | (0.0760) |
| Board | -0.124** | -0.0740 | -0.171*** | -0.170*** | -0.183** | -0.173*** |
| Independence | (0.0544) | (0.0759) | (0.0583) | (0.0536) | (0.0754) | (0.0600) |
| Board Size | -0.00578* | -0.00440 | -0.00669** | -0.000875 | 0.00634 | -0.00354 |
| | (0.00303) | (0.00409) | (0.00339) | (0.00330) | (0.00449) | (0.00358) |
| Growth Opportunity | -0.0248*** | -0.0591*** | -0.0113 | -0.0173* | -0.00984 | -0.0138 |
| | (0.00855) | (0.0103) | (0.00943) | (0.00896) | (0.0126) | (0.00954) |
| Profitability | -1.271*** | -1.296*** | -1.408*** | -0.374*** | -0.216** | -0.433*** |
| | (0.0840) | (0.114) | (0.0934) | (0.0618) | (0.0909) | (0.0690) |
| Capital Expenditure | 0.0581 | 0.0283 | 0.0802* | -0.0553 | -0.152* | 0.0240 |
| | (0.0436) | (0.0680) | (0.0455) | (0.0661) | (0.0902) | (0.0748) |
| Firm Size | -0.0626*** | -0.0408*** | -0.0748*** | -0.0652*** | -0.0801*** | -0.0615*** |
| | (0.00591) | (0.00778) | (0.00621) | (0.0187) | (0.0236) | (0.0202) |
| R&D Intensity | -0.0321 | -0.271*** | 0.0630 | -0.259*** | -0.174*** | -0.291*** |
| | (0.0464) | (0.0883) | (0.0712) | (0.0265) | (0.0260) | (0.0293) |
| Capital Structure | 0.0184 | 0.0440** | 0.0179 | 0.119*** | 0.161*** | 0.117*** |
| | (0.0151) | (0.0195) | (0.0164) | (0.0196) | (0.0285) | (0.0212) |
| CEO Tenure | -0.00132 | -0.00148 | -0.00266 | -0.00139 | -0.00265 | -0.00209 |
| | (0.00398) | (0.00553) | (0.00432) | (0.00585) | (0.00768) | (0.00649) |
| Constant | -0.475*** | 1.613*** | -0.449*** | -0.467*** | 1.989*** | -0.654*** |
| | (0.118) | (0.165) | (0.118) | (0.167) | (0.218) | (0.179) |
| Observations | 8224 | 8224 | 8224 | 8224 | 8224 | 8224 |
| R-squared | 0.622 | 0.240 | 0.546 | 0.765 | 0.025 | 0.672 |
| Regression Type | OLS | OLS | OLS | Fixed effects | Fixed effects | Fixed effects |
| Year dummies | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry dummies | Yes | Yes | Yes | No | No | No |
| Firms in Sample | 1517 | 1517 | 1517 | 1517 | 1517 | 1517 |

Table 6 displays the OLS comes about and settled impacts comes about on the connection between female meeting room portrayal and firm aggregate, orderly and quirky hazard. To test Hypothesis 1, aside from control factors dominatingly utilized as a part of the present writing, the OLS relapses additionally incorporate one-digit SIC industry fakers and year fakers while the settled impacts relapses just incorporate year

fakers. Three firm hazard measures in the relapses are in the characteristic logarithm frame following Sila et al. (2014). In Hypothesis 1, a negative effect of sexual orientation decent variety on firm hazard is normal.

The OLS comes about (Columns 1-3) indicate negative connections between the level of female chiefs and each of the three hazard measures ($\beta = -0.0996$ ,$\beta = -0.140$,$\beta = -0.0767$ separately), yet none of the coefficients are factually critical. Moreover, the coefficients are not monetarily critical. On account of deliberate hazard, for instance, a

10% expansion within the sight of female executives, which is generally the same as designating one female chief to a nine-chief board, is connected with 0.014 unit diminish in the market show beta. This is generally little considering that the mean estimation of methodical hazard in the example is 1.28. This shows subsequent to controlling for the factors that influence value chance reported in the past writing, negative connection exists between sexual orientation assorted variety and firm hazard measures yet neither factually nor financially huge.

The settled impacts comes about appeared in Columns 4-6, then again, demonstrate positive connection between the level of female executives and every one of the three hazard measures ($\beta = 0.0708, \beta = 0.103, \beta = 0.0649$ individually) however coefficients of each of the three hazard measures remain measurably inconsequential. Every one of the three coefficients are more like zero contrasted with the OLS comes about while the standard mistakes stay comparative for the two arrangements of results. For example, a 10% expansion within the sight of female executives would prompt a 0.0103 unit increment in stock return beta. In addition, the coefficients are not monetarily critical. The examination amongst OLS and settled impacts comes about proposes that the negative connection originates from excluded imperceptible variables. Thusly, no proof is discovered supporting Hypothesis 1: firms with a higher extent of female chiefs are related with bring down level of firm aggregate hazard, methodical hazard and peculiar hazard.

The outcomes are predictable with the discoveries of Sila et al. (2014). In spite of the fact that the synopsis insights demonstrate that generally safe firms have a tendency to have a higher extent of female executives in their meeting room, there is no strong proof proposing that higher female meeting room portrayal is related with bring down value hazard. Indeed, some confirmation is discovered supporting that female meeting room portrayal prompts

higher value hazard. The negative connection between sexual orientation decent variety and firm hazard is well on the way to be credited to inconspicuous firm qualities, for example, corporate culture. These in secret factors may cause the fake negative relationship as they at the same time impact firm hazard and the extent of female

executives on the load up.

I don't watch negative impact of female board portrayal on firm hazard in the example firms, and this might be on the grounds that ladies on sheets have an alternate hazard disposition from ladies in the overall public (Adams and Funk, 2012). A few reasons may clarify why no noteworthy impact of sexual orientation assorted variety on firm hazard is watched. Female chiefs may choose to act in consistence with "male" orders, which might be useful to their vocation way, and in this manner their hazard avoidance trademark may vanish. Additionally, as the minority on the board, it is conceivable that ladies are probably going to affirm the assessments of the greater part and have no noticeable effect in the basic leadership process. The constructive outcome found in some proof is reliable with Adams and Funk (2012), who contend that female executives are significantly more hazard taking than male chiefs.

**Table 7: Performance measures on gender diversity**

This table reports common minimum squares and settled impacts estimation of execution measures. The example comprises of an uneven board of firm-level information from 1517 firms for the period 2007-2013. Tobin's Q is in logarithm frame. Bunch strong standard mistakes are accounted for in enclosures. OLS particulars incorporate industry (in view of one-digit SIC code) and year settled impacts. Settled impacts determinations just incorporate year settled impacts. *, **, *** signify measurable noteworthiness at 10%, 5% and 1% individually

| Performance Measures | Tobin's Q | ROA | Tobin's Q | ROA |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Proportion of Women | 0.162* | 0.00417 | -0.018 | 0.00161 |
| | (-0.0919) | (-0.0127) | (-0.061) | (-0.0173) |
| Board Independence | 0.0314 | -0.000465 | 0.022 | 0.00514 |
| | (-0.0777) | (-0.0111) | (-0.0497) | (-0.0128) |
| Board Size | -0.00446 | -0.00103* | -0.0012 | -0.00145** |
| | (-0.00353) | (-0.000534) | (-0.00267) | (-0.000695) |
| Firm Size | -0.0287*** | 0.00211** | -0.182*** | 0.00183 |
| | (-0.00668) | (-0.00104) | (-0.0181) | (-0.00467) |
| Capital Structure | 0.00857 | -0.0220*** | -0.0328* | -0.0562*** |
| | (-0.0195) | (-0.00331) | (-0.0168) | (-0.00632) |
| Capital Expenditure | -0.0034 | -0.00779 | -0.0525 | -0.0185 |
| | (-0.0689) | (-0.0096) | (-0.0537) | (-0.0146) |
| R&D Intensity | 0.530*** | -0.112*** | -0.0578 | -0.125*** |
| | (-0.149) | (-0.00958) | (-0.0822) | (-0.0478) |
| Constant | 0.990*** | 0.104*** | 1.999*** | 0.0814** |
| | (-0.155) | (-0.0141) | (-0.153) | (-0.0371) |
| Observations | 8224 | 8224 | 8224 | 8224 |
| R-squared | 0.2 | 0.108 | 0.215 | 0.097 |
| Regression type | OLS | OLS | Fixed effects | Fixed effects |
| Year dummies | Yes | Yes | Yes | Yes |
| Industry dummies | Yes | Yes | No | No |
| Firms in Sample | 1517 | 1517 | 1517 | 1517 |

**Table 8: Risk measures on gender diversity across industries**

This table reports standard minimum squares and settled impacts estimation of hazard measures crosswise over businesses. The example comprises of an unequal board of firm-level information from 1517 firms for the period 2007-2013. Every one of the three hazard measures are in logarithm shape. Bunch powerful standard blunders are accounted for in brackets. OLS particulars incorporate industry (in light of one-digit SIC code) and year settled impacts. Settled impacts details just incorporate year settled impacts. *, **, *** signify measurable noteworthiness at 10%, 5% and 1% separately. P-

esteem is of the F-test with the invalid theory: the coefficients on the extent of ladies for various enterprises are the same.

| Risk Measures | Total Risk | Systematic Risk | Idiosyncratic Risk | Total Risk | Systematic Risk | Idiosyncratic Risk |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Proportion of Women | 0.851*** | 0.876** | 0.970*** | -1.505*** | -2.115*** | -1.284*** |
| | (0.250) | (0.385) | (0.249) | (0.219) | (0.191) | (0.240) |
| Board Independence | -0.133** | -0.0838 | -0.181*** | -0.170*** | -0.180** | -0.172*** |
| | (0.0537) | (0.0756) | (0.0576) | (0.0530) | (0.0742) | (0.0597) |
| Board Size | -0.00521* | -0.00355 | -0.00616* | -0.000879 | 0.00648 | -0.00358 |
| | (0.00301) | (0.00400) | (0.00339) | (0.00326) | (0.00446) | (0.00353) |
| Growth Opportunity | -0.0256*** | -0.0590*** | -0.0124 | -0.0171* | -0.00949 | -0.0136 |
| | (0.00860) | (0.0104) | (0.00947) | (0.00891) | (0.0126) | (0.00950) |
| Profitability | -1.257*** | -1.285*** | -1.391*** | -0.373*** | -0.216** | -0.433*** |
| | (0.0838) | (0.113) | (0.0934) | (0.0618) | (0.0910) | (0.0691) |
| Capital Expenditure | 0.0647 | 0.0331 | 0.0868** | -0.0514 | -0.146 | 0.0272 |
| | (0.0415) | (0.0656) | (0.0440) | (0.0656) | (0.0893) | (0.0746) |
| Firm Size | -0.0639*** | -0.0424*** | -0.0758*** | -0.0664*** | -0.0806*** | -0.0627*** |
| | (0.00579) | (0.00761) | (0.00612) | (0.0184) | (0.0232) | (0.0199) |
| R&D Intensity | -0.0360 | -0.277*** | 0.0594 | -0.246*** | -0.166*** | -0.277*** |
| | (0.0453) | (0.0886) | (0.0697) | (0.0240) | (0.0260) | (0.0266) |
| Capital Structure | 0.0230 | 0.0488** | 0.0229 | 0.116*** | 0.157*** | 0.113*** |
| | (0.0148) | (0.0191) | (0.0163) | (0.0195) | (0.0284) | (0.0210) |
| CEO Tenure | -0.00224 | -0.00259 | -0.00349 | -0.00176 | -0.00285 | -0.00257 |
| | (0.00393) | (0.00544) | (0.00430) | (0.00578) | (0.00763) | (0.00641) |
| $female \times industry_1$ | -0.541 | -0.663 | -0.622* | 2.018*** | 2.892*** | 1.830*** |
| | (0.335) | (0.575) | (0.347) | (0.303) | (0.401) | (0.349) |
| $female \times industry_2$ | -1.344*** | -1.530*** | -1.353*** | 2.016*** | 2.479*** | 1.832*** |
| | (0.299) | (0.434) | (0.301) | (0.258) | (0.256) | (0.280) |
| $female \times industry_3$ | -1.012*** | -1.206*** | -1.161*** | 1.617*** | 2.557*** | 1.342*** |
| | (0.269) | (0.413) | (0.274) | (0.252) | (0.246) | (0.278) |
| $female \times industry_4$ | -1.528*** | -1.582*** | -1.597*** | 1.630*** | 2.288*** | 1.465*** |
| | (0.322) | (0.435) | (0.329) | (0.295) | (0.377) | (0.300) |
| $female \times industry_5$ | -0.813*** | -1.035** | -0.822*** | 1.523*** | 1.942*** | 1.363*** |
| | (0.289) | (0.442) | (0.287) | (0.258) | (0.301) | (0.281) |
| $female \times industry_6$ | -0.542** | -0.456 | -0.659** | 0.882*** | 1.419*** | 0.589* |
| | (0.275) | (0.425) | (0.277) | (0.294) | (0.332) | (0.316) |
| $female \times industry_7$ | -0.638** | -0.406 | -0.889*** | 1.849*** | 2.577*** | 1.606*** |
| | (0.287) | (0.433) | (0.295) | (0.303) | (0.315) | (0.328) |
| $female \times industry_8$ | -1.316*** | -1.041* | -1.400*** | 1.595*** | 2.489*** | 1.246** |
| | (0.439) | (0.575) | (0.460) | (0.490) | (0.686) | (0.513) |
| $female \times industry_9$ | 2.335*** | 0.777** | 3.475*** | 5.077*** | 4.023*** | 6.164*** |
| | (0.260) | (0.394) | (0.261) | (0.243) | (0.235) | (0.270) |
| Constant | -0.567*** | 1.514*** | -0.553*** | -0.454*** | 1.994*** | -0.640*** |
| | (0.0894) | (0.119) | (0.0940) | (0.165) | (0.214) | (0.177) |
| Observations | 8224 | 8224 | 8224 | 8224 | 8224 | 8224 |
| R-squared | 0.627 | 0.248 | 0.550 | 0.767 | 0.030 | 0.674 |
| Regression Type | OLS | OLS | OLS | Fixed effects | Fixed effects | Fixed effects |
| Year dummies | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry dummies | Yes | Yes | Yes | No | No | No |
| F-Statistic (p-value) | 83.19(0) | 15.29(0) | 128.49(0) | 93.22(0) | 36.46(0) | 128.15(0) |
| Firms in Sample | 1517 | 1517 | 1517 | 1517 | 1517 | 1517 |

**Table 9: Performance measures on gender diversity across industries**

This table reports of performance measures across industries. from 1517 firms for the period 2007-2013. Tobin's Q is in logarithm form. are reported in parentheses. OLS specifications include industry (es. *, **, *** denote statistical 1% respectively. the coefficients on the proportion of women for different industries are the same.

| Performance Measures | Tobin's Q | ROA | Tobin's Q | ROA |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Proportion of Women | 1.229*** | 0.152*** | -1.649*** | 0.0245 |
| | (-0.339) | (-0.0502) | (-0.235) | (-0.0354) |
| Board Independence | 0.0434 | 0.00128 | 0.0199 | 0.00568 |
| | (-0.0769) | (-0.0111) | (-0.0497) | (-0.0127) |
| Board Size | -0.00492 | -0.00116** | -0.00135 | -0.00145** |
| | (-0.00352) | (-0.000533) | (-0.00267) | (-0.000694) |
| Firm Size | -0.0290*** | 0.00209** | -0.183*** | 0.00188 |
| | (-0.00668) | (-0.00103) | (-0.018) | (-0.00466) |
| Capital Structure | 0.0082 | -0.0226*** | -0.0322* | -0.0563*** |
| | (-0.0197) | (-0.00334) | (-0.0169) | (-0.00626) |
| Capital Expenditure | -0.00503 | -0.00745 | -0.0523 | -0.0187 |
| | (-0.067) | (-0.00955) | (-0.0536) | (-0.0146) |
| R&D Intensity | 0.535*** | -0.111*** | -0.0553 | -0.126*** |
| | (-0.151) | (-0.00971) | (-0.082) | (-0.048) |
| $female \times industry_1$ | -1.240*** | -0.134* | 0.995*** | -0.0385 |
| | (-0.438) | (-0.0766) | (-0.356) | (-0.0996) |
| $female \times industry_2$ | -0.703* | -0.115** | 1.709*** | -0.04 |
| | (-0.388) | (-0.0565) | (-0.279) | (-0.0565) |
| $female \times industry_3$ | -0.908** | -0.116* | 1.706*** | -0.0242 |
| | (-0.394) | (-0.0616) | (-0.273) | (-0.0534) |
| $female \times industry_4$ | -1.787*** | -0.200*** | 1.594*** | 0.0264 |
| | (-0.387) | (-0.0525) | (-0.262) | (-0.0559) |
| $female \times industry_5$ | -0.833* | -0.177*** | 1.818*** | -0.0205 |
| | (-0.438) | (-0.0604) | (-0.311) | (-0.0549) |
| $female \times industry_6$ | -1.184*** | -0.189*** | 1.596*** | -0.0265 |
| | (-0.365) | (-0.0535) | (-0.248) | (-0.0387) |
| $female \times industry_7$ | -1.343*** | -0.143** | 1.492*** | -0.028 |
| | (-0.47) | (-0.0664) | (-0.28) | (-0.0673) |
| $female \times industry_8$ | -0.809 | 0.00279 | 1.734*** | -0.0442 |
| | (-0.568) | (-0.104) | (-0.364) | (-0.128) |
| $female \times industry_9$ | -2.342*** | -0.160*** | 0.101 | -0.0924* |
| | (-0.345) | (-0.0531) | (-0.256) | (-0.0473) |
| Constant | 0.861*** | 0.0862*** | 2.007*** | 0.0805** |
| | (-0.099) | (-0.011) | (-0.152) | (-0.0369) |
| Observations | 8224 | 8224 | 8224 | 8224 |
| R-squared | 0.206 | 0.112 | 0.217 | 0.098 |
| Regression Type | OLS | OLS | Fixed effects | Fixed effects |
| Year Dummies | Yes | Yes | Yes | Yes |
| Industry Dummies | Yes | Yes | No | No |
| F-Statistic (p-value) | 10.82(0) | 2.91(0.002) | 20.53(0) | 0.78 (0.6336) |

I replicate the above analysis for performance measures and the results are reported in Table 9. The OLS results ) show that the regression coefficients statistically and economically significantly differ across industries. 3) also show similar results. However, in terms of ROA, after controlling becomes 0.6336. This indicates that the coefficients on gender diversity are not statistically significantly different across industries anymore. As a result, the findings are in favour of Hypothesis 4is different across industries. In terms of ROA, the results do not support Hypothesis 4. has no obvious pattern between prevalent. In the case of Tobin's Q, the coefficients on gender.649, -0.654 (-1.649 +0.995) and 0.057 (-1.649 +1.706) respectively prevalent (SIC=4 and 5), the coefficients are - 0.055 (- 1.649 +1.594) and 0.169 (- 1.649 + 1.818) individually. Subsequent to thinking about female representatives in the entire enterprises, I additionally find that the impact of sexual orientation decent variety on firm execution has no undeniable example between businesses in which ladies are pretty much predominant.

**3.6.3 Further test for the hardware business and the buyer products**

Industry Under the grouping of the SIC code, I neglect to discover evident example in the impact of sexual orientation assorted variety on firm results between ventures where female executives are pretty much common. In view of the discoveries of existing writing (e.g. Adams and Ferreira, 2009; Broadbridge, 2010) and the confirmation in the example firms, ladies in the meeting room are less dominating in the gadgets business and more overwhelming in the purchaser merchandise industry. Keeping in mind the end goal to analyze whether the example exists, I additionally lead a different relapse for the subsamples in the hardware business and the customer products industry. At that point, I think about the sign and criticalness of the coefficient between the two subsamples.

**Table 10: Risk measures on sexual orientation decent variety in the gadgets business and the customer merchandise industry**

This table reports settled impacts estimation of hazard measures in the hardware business and the purchaser products industry. The examples in the hardware business and the shopper merchandise industry comprise of an unequal board of firm-level information from 95 firms and 109 firms individually for the period 2007-2013. Every one of the three hazard measures are in logarithm frame. Group strong standard blunders are accounted for in brackets. All particulars incorporate year settled impacts. *, **, *** mean measurable hugeness at 10%, 5% and 1% separately.

| | Electronics industry | | | Consumer goods industry | | |
|---|---|---|---|---|---|---|
| Risk Measures | Total Risk | Systematic Risk | Idiosyncratic Risk | Total Risk | Systematic Risk | Idiosyncratic Risk |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Proportion of Women | 0.0144 | 0.398 | -0.0323 | -0.0249 | -0.266 | 0.0939 |
| | (0.271) | (0.394) | (0.318) | (0.173) | (0.240) | (0.190) |
| Board Independence | -0.326 | 0.0408 | -0.449* | -0.159 | -0.178 | -0.200 |
| | (0.218) | (0.267) | (0.255) | (0.215) | (0.254) | (0.243) |
| Board Size | 0.00276 | 0.0186 | -0.00592 | -0.0226** | -0.0165 | -0.0229* |
| | (0.0108) | (0.0201) | (0.0114) | (0.0106) | (0.0138) | (0.0119) |
| Growth Opportunity | -0.0505* | -0.0620 | -0.0430 | -0.0245 | 0.00590 | -0.0192 |
| | (0.0260) | (0.0474) | (0.0287) | (0.0259) | (0.0351) | (0.0269) |
| Profitability | -0.192 | -0.168 | -0.291* | -1.157*** | -0.532 | -1.546*** |
| | (0.131) | (0.207) | (0.151) | (0.283) | (0.395) | (0.302) |
| Capital Expenditure | -0.514** | -0.856*** | -0.451** | -1.360** | -2.298** | -1.011* |
| | (0.215) | (0.297) | (0.209) | (0.561) | (1.095) | (0.579) |
| Firm Size | -0.121*** | -0.155*** | -0.123** | -0.211*** | -0.222** | -0.218*** |
| | (0.0396) | (0.0582) | (0.0525) | (0.0601) | (0.0996) | (0.0620) |
| R&D Intensity | -1.061** | -1.194 | -1.226** | 4.028* | 14.59*** | 1.103 |
| | (0.430) | (0.723) | (0.509) | (2.223) | (3.273) | (2.330) |
| Capital Structure | 0.105*** | 0.0911* | 0.122*** | 0.113* | 0.231*** | 0.109* |
| | (0.0361) | (0.0496) | (0.0372) | (0.0579) | (0.0821) | (0.0584) |
| CEO Tenure | -0.00134 | 0.0228 | -0.0160 | 0.0188 | 0.00950 | 0.0192 |
| | (0.0211) | (0.0202) | (0.0294) | (0.0228) | (0.0354) | (0.0251) |
| Constant | 0.279 | 2.318*** | 0.419 | 0.919* | 3.311*** | 0.835 |
| | (0.360) | (0.522) | (0.464) | (0.530) | (0.772) | (0.554) |
| Observations | 452 | 452 | 452 | 594 | 594 | 594 |
| R-squared | 0.806 | 0.321 | 0.660 | 0.800 | 0.123 | 0.736 |
| Regression type | Fixed effects | Fixed effects | Fixed effects | Fixed effects | Fixed effects | Fixed effects |
| Year dummies | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry dummies | No | No | No | No | No | No |
| Firms in Sample | 95 | 95 | 95 | 109 | 109 | 109 |

Table 10 reports the settled impact comes about on the connection between female meeting room portrayal and firm hazard, which tends to the issue of in secret firm attributes. Like the relapse comes about for all organizations, the coefficients on sex assorted variety in the two ventures are neither measurably noteworthy nor monetarily critical. In any case, the coefficient indications of aggregate, methodical and particular hazard for the gadgets business ($\beta = 0.0144$, $\beta = 0.398$, $\beta = -0.0323$ separately) are inverse to the coefficient signs for customer merchandise industry ($\beta = -0.0249$,$\beta = -0.266$,$\beta = 0.0939$ respectively).This gives additional confirmation to the contention that

the effect of female meeting room portrayal on the firm hazard is diverse between enterprises. In the hardware business, the coefficients of aggregate hazard and precise hazard are sure, while the coefficient of particular hazard is negative. So also, the coefficient signs are blended for the purchaser merchandise industry. Thus, no conspicuous example is found in the connection between sexual orientation decent variety and firm hazard between businesses where female chiefs are predominant or not.

**Table 11: Performance measures on sexual orientation decent variety in the gadgets business and the shopper products industry**

This table reports settled impacts estimation of execution measures in the hardware business and the buyer merchandise industry. The examples in the gadgets business and the customer products industry comprise of an uneven board of firm-level information from 95 firms and 109 firms individually for the period 2007-2013. Tobin's Q is in logarithm frame. Group vigorous standard mistakes are accounted for in enclosures. All particulars incorporate year settled impacts. *, **, *** signify measurable hugeness at 10%, 5% and 1% individually.

| Performance Measures | Electronics industry | | Consumer goods industry | |
|---|---|---|---|---|
| | Tobin's Q | ROA | Tobin's Q | ROA |
| | (1) | (2) | (3) | (4) |
| Proportion of Women | 0.722* | -0.0546 | 0.132 | 0.0418 |
| | (0.409) | (0.128) | (0.211) | (0.0457) |
| Board Independence | 0.123 | 0.0687 | -0.156 | -0.107** |
| | (0.286) | (0.0776) | (0.204) | (0.0434) |
| Board Size | -0.0123 | -0.00298 | 0.00610 | 0.00185 |
| | (0.0217) | (0.00517) | (0.0118) | (0.00284) |
| Capital Expenditure | 0.476* | -0.0158 | 0.912 | 0.0993 |
| | (0.250) | (0.0925) | (0.688) | (0.125) |
| Firm Size | -0.306*** | 0.0116 | -0.130 | -0.00434 |
| | (0.0657) | (0.0159) | (0.113) | (0.0166) |
| R&D Intensity | -2.881*** | -1.275*** | -2.628 | -2.528*** |
| | (0.466) | (0.157) | (3.763) | (0.562) |
| Capital Structure | 0.0365 | -0.0479** | -0.0287 | -0.0430** |
| | (0.0542) | (0.0235) | (0.0525) | (0.0182) |
| Constant | 3.064*** | 0.0882 | 1.550* | 0.173 |
| | (0.516) | (0.138) | (0.855) | (0.127) |
| Observations | 452 | 452 | 594 | 594 |
| R-squared | 0.357 | 0.309 | 0.359 | 0.178 |
| Regression type | Fixed effects | Fixed effects | Fixed effects | Fixed effects |
| Year dummies | Yes | Yes | Yes | Yes |
| Industry dummies | No | No | No | No |
| Firms in Sample | 95 | 95 | 109 | 109 |

Table 11 reports the settled impacts comes about on the connection between female meeting room portrayal and firm execution. As far as Tobin's Q, the coefficient on sexual orientation assorted variety for the gadgets business is sure and measurably noteworthy at the 10% level. Additionally, this coefficient has financial effect: a 10% expansion in the female meeting room portrayal would prompt a 0.0722 unit increment in Tobin's Q. Be that as it may, the importance vanishes for the outcomes in the purchaser merchandise industry test. Subsequently, the connection between sexual orientation decent variety and firm execution is essentially positive in the gadgets

business, while it is unimportantly positive in the customer products industry. To some degree, this finding is reliable with the finding of Jurkus et al. (2007) that the beneficial outcome of sexual orientation decent variety on firm execution is particularly huge in the ventures with generally couple of ladies. In the ventures with less ladies, it might be more perceptible that ladies achieve new critical thinking points of view and may cause less clashes in the basic leadership forms. Accordingly sexual orientation assorted sheets can include an incentive in the enterprises where female chiefs are less common. As far as ROA, the coefficient on sexual orientation decent variety for the hardware business is negative ($\beta = -0.0546$) and in the buyer products industry it is certain ( $\beta = 0.0418$), however both are factually inconsequential. Subsequently, the outcomes give additionally support to the contention that the impact of sexual orientation assorted variety on the firm execution is diverse crosswise over enterprises.

### 3.6.4 Robustness check

Keeping in mind the end goal to test the strength of the observational outcomes, I utilize elective measures. I don't play out extra strength check for firm execution since two measures of execution from alternate points of view have just been utilized. The elective intermediary for female meeting room portrayal is a spurious variable, which takes an estimation of one when no less than one lady is available on the board, and zero generally. This measure has been utilized as a part of a few exact examinations to analyze the impact of sexual orientation decent variety on firm results, for example, Campbell and Mínguez-Vera (2008). The relapse models and relapse composes continue as before. The definite outcomes for the impact of sexual orientation decent variety on firm hazard and firm execution are accounted for in Tables 12 and 13 in the Appendix. The heartiness check comes about are fundamentally the same as the first relapse comes about. Most of the coefficients on the factors in the models have a similar sign and centrality. In this way, the experimental outcomes for the impact of sexual orientation decent variety on firm hazard and execution are vigorous to the distinctive measure of

sex assorted variety. The power check comes about ventures are accounted for in Tables 14 and 15 in the Appendix. The OLS aftereffects of the heartiness check are fundamentally the same as the first relapse comes about. Be that as it may, in settled impacts comes about, the coefficients on the connection terms of two enterprises (SIC=0 and 9) are overlooked in light of the fact that female dummy does not vary with time in these two industries and the interaction term of the industry (SIC=4) is omitted because of the collinearity. Only time-varying regressors should be included the fixed effects panel regression model is not suitable to test outcomes is different across industries as female dummy. Besides, results suggest that the empirical results Although there is no strong evidence showing , policies may be affected by gender difference in risk appetite. In other words, -from a male-dominated board, even though these differences fail to be captured by . Many other factors may be affecting volatility, such as firm age. As a result, policy is used as an alternative firm risk measure to explore its relation and development expenditure is viewed as a risky investment due to a highly uncertain payoff. ave some links with the level of R&D expense after controlling for its other determinants, as suggested in the prior . The complete results are reported in Table 16 in the Appendix. OLS results suggest a significantly r ould lead to an increase in R&D intensity, which may .

## 4. Conclusion

### 4.1 Findings

As one of the dimensions of board composition, is attracting greater attention. An increasing number of countries are instigating a mandatory gender quota policy and it is a growing trend to embrace . Better understanding outcomes helps Gender diversity can be a competitive advantage to create corporate value but also involves potential conflicts. Although a large amount of literature reports the risk-averse characteristics of women, it remains unclear whether female directors share the same risk appetite with women in the general population. These evidence does not suggest that such policies

would automatically improve firm outcomes. Finally, considering the evidence and only exists in the electronics industry, it is suggested that policy makers should take industry-specific factors into consideration when making policy initiatives.

### 4.2 Research limitations and further recommendations

A few concerns arise about the analysis n firm risk and performance.Recent studies have highlighted that as both outcomes can be affected by is employed basically to control for such factors when conducting the analysis. However) suggest that reverse causality about board characteristics are dynamic, which is not addressed in this analysis(2001)demonstrate that firms with the highest profit could expect that female directors are likely to self-select into companies that have good performance. In this casewould be observed. Besides, due to risk-averse characteristics, female directors have incentive to join in lower ), which would result representation and firm risk. corporations' female director appointment decisions and the women's incentives to join firms. The reverse causality problem could result in reporting risk o identify the gender-performance relation.) deal with such concerns by employing the dynamic panel system generalized method of moments (DPS-GMM) estimator to analyze the gender-risk relationship. Further study could take the aforementioned concerns of unobserved heterogeneity and reverse causality into consideration to derive a more reasonable result. Secondly, the study only selects two industries to conduct a comparison analysis between industries prevalent or less prevalent. It does not show separate regression results for each sector. Therefore, further researches could add more sectors into the comparison analysis to give a broader view outcomes across industries. Thirdly, the study only considers 1517 U.S. corporations, sampling from the S&P 1500 for a period ranging from 2007 through 2013. The subsample size for each industry is not big enough. The country-specific factors, such as cultural environments, might affect female boardroom representation. The sample size and duration might also have an impact on

the results. Therefore, further studies that utilise a larger multi-country sample for a longer time period across countries should be helpful to better used determinants in the regression models, other factors like CEO cash compensation and firm business segments could be used as determinants in the risk and performance models respectively. However, due to the unavailability of financial data, other determinants are not employed in this study. Besides, other governance mechanisms may also affect female director appointment and firm outcomes, which is worth further investigation. The inclusion of other factors may provide a better explanation of gender-risk and gender-performance relationships for further study.

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## Appendix

**Table 12: Robustness check result about risk measures on gender diversity**

This table reports normal slightest squares and settled impacts estimation of hazard measures. The example comprises of an uneven board of firm-level information from 418 firms for the period 2007-2013. Every one of the three hazard measures are in logarithm shape. Group powerful standard mistakes are accounted for in enclosures. OLS determinations incorporate industry (in view of one-digit SIC code) and year settled impacts. Settled impacts particulars just incorporate year settled impacts. *, **, *** mean factual centrality at 10%, 5% and 1% separately.

| Risk Measures | Total Risk | Systematic Risk | Idiosyncratic Risk | Total Risk | Systematic Risk | Idiosyncratic Risk |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Female Dummy | -0.0238* | -0.0219 | -0.0335** | 0.00946 | 0.0161 | 0.00205 |
| | (0.0128) | (0.0188) | (0.0143) | (0.0130) | (0.0204) | (0.0138) |
| Board | -0.124** | -0.0799 | -0.163*** | -0.168*** | -0.180** | -0.171*** |
| Independence | (0.0537) | (0.0746) | (0.0576) | (0.0534) | (0.0751) | (0.0599) |
| Board Size | -0.00488 | -0.00376 | -0.00518 | -0.00119 | 0.00579 | -0.00359 |
| | (0.00311) | (0.00422) | (0.00344) | (0.00338) | (0.00454) | (0.00367) |
| Growth Opportunity | -0.0250*** | -0.0596*** | -0.0111 | -0.0174* | -0.00994 | -0.0139 |
| | (0.00856) | (0.0103) | (0.00944) | (0.00896) | (0.0126) | (0.00954) |
| Profitability | -1.268*** | -1.293*** | -1.406*** | -0.373*** | -0.216** | -0.433*** |
| | (0.0840) | (0.114) | (0.0933) | (0.0618) | (0.0910) | (0.0689) |
| Capital Expenditure | 0.0591 | 0.0308 | 0.0793* | -0.0554 | -0.152* | 0.0231 |
| | (0.0437) | (0.0682) | (0.0456) | (0.0661) | (0.0902) | (0.0748) |
| Firm Size | -0.0629*** | -0.0417*** | -0.0745*** | -0.0652*** | -0.0801*** | -0.0617*** |
| | (0.00588) | (0.00777) | (0.00614) | (0.0188) | (0.0236) | (0.0202) |
| R&D Intensity | -0.0290 | -0.267*** | 0.0654 | -0.260*** | -0.176*** | -0.292*** |
| | (0.0464) | (0.0877) | (0.0708) | (0.0270) | (0.0257) | (0.0298) |
| Capital Structure | 0.0188 | 0.0444** | 0.0184 | 0.119*** | 0.161*** | 0.117*** |
| | (0.0151) | (0.0195) | (0.0164) | (0.0196) | (0.0284) | (0.0212) |
| CEO Tenure | -0.00116 | -0.00103 | -0.00282 | -0.00139 | -0.00263 | -0.00214 |
| | (0.00398) | (0.00554) | (0.00430) | (0.00585) | (0.00768) | (0.00648) |
| Constant | -0.477*** | 1.613*** | -0.453*** | -0.464*** | 1.993*** | -0.648*** |
| | (0.118) | (0.164) | (0.118) | (0.167) | (0.218) | (0.179) |
| Observations | 8224 | 8224 | 8224 | 8224 | 8224 | 8224 |
| R-squared | 0.622 | 0.239 | 0.546 | 0.765 | 0.024 | 0.672 |
| Regression type | OLS | OLS | OLS | Fixed effects | Fixed effects | Fixed effects |
| Year Dummies | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Dummies | Yes | Yes | Yes | No | No | No |
| Firms in Sample | 1517 | 1517 | 1517 | 1517 | 1517 | 1517 |

**Table 13: Robustness check result about execution measures on sexual orientation decent variety**

This table reports standard slightest squares and settled impacts estimation of execution measures. The example comprises of a lopsided board of firm-level information from 1517 firms for the period 2007-2013. Tobin's Q is in logarithm frame. Bunch powerful standard blunders are accounted for in enclosures. OLS determinations incorporate industry (in view of one-digit SIC code) and year settled impacts. Settled impacts particulars just incorporate year settled impacts. *, **, *** indicate measurable essentialness at 10%, 5% and 1% separately.

| Performance Measures | Tobin's Q | ROA | Tobin's Q | ROA |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Female Dummy | 0.0342* | 0.00267 | 0.000772 | -0.000719 |
| | (0.0202) | (0.00302) | (0.0132) | (0.00366) |
| Board Independence | 0.0347 | -0.00138 | 0.0212 | 0.00528 |
| | (0.0770) | (0.0109) | (0.0496) | (0.0127) |
| Board Size | -0.00566 | -0.00116** | -0.00123 | -0.00142** |
| | (0.00369) | (0.000552) | (0.00271) | (0.000709) |
| Capital Expenditure | -0.00540 | -0.00765 | -0.0521 | -0.0186 |
| | (0.0691) | (0.00960) | (0.0535) | (0.0146) |
| Firm Size | -0.0281*** | 0.00206** | -0.182*** | 0.00181 |
| | (0.00663) | (0.00105) | (0.0181) | (0.00467) |
| R&D Intensity | 0.526*** | -0.112*** | -0.0574 | -0.125*** |
| | (0.149) | (0.00960) | (0.0823) | (0.0478) |
| Capital Structure | 0.00803 | -0.0220*** | -0.0330** | -0.0561*** |
| | (0.0195) | (0.00331) | (0.0168) | (0.00633) |
| Constant | 0.988*** | 0.105*** | 1.997*** | 0.0819** |
| | (0.157) | (0.0138) | (0.153) | (0.0370) |
| Observations | 8224 | 8224 | 8224 | 8224 |
| Regression Type | OLS | OLS | Fixed effects | Fixed effects |
| Year Dummies | Yes | Yes | Yes | Yes |
| Industry Dummies | Yes | Yes | No | No |
| R-squared | 0.199 | 0.109 | 0.215 | 0.097 |
| Firms in Sample | 1517 | 1517 | 1517 | 1517 |

**Table 14. Strength check result about hazard measures on sexual orientation**

assorted variety crosswise over businesses This table reports normal slightest squares

and settled impacts estimation of hazard measures crosswise over ventures. The example comprises of a lopsided board of firm-level information from 1517 firms for the period 2007-2013. Every one of the three hazard measures are in logarithm frame. Bunch powerful standard mistakes are accounted for in enclosures. OLS determinations incorporate industry (in light of one-digit SIC code) and year settled impacts. Settled impacts determinations just incorporate year settled impacts. *, **, *** signify measurable importance at 10%, 5% and 1% separately. P-esteem is of the F-test with the invalid theory: the coefficients on female sham for various businesses are the same.

| Risk Measures | Total Risk | Systematic Risk | Idiosyncratic Risk | Total Risk | Systematic Risk | Idiosyncratic Risk |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Female Dummy | 0.211** | 0.209 | 0.239*** | 0.00864 | -0.0144 | -0.0000843 |
| | (0.105) | (0.182) | (0.0798) | (0.0402) | (0.0568) | (0.0375) |
| Board Independence | -0.126** | -0.0777 | -0.169*** | -0.163*** | -0.174** | -0.165*** |
| | (0.0528) | (0.0741) | (0.0568) | (0.0530) | (0.0745) | (0.0596) |
| Board Size | -0.00507* | -0.00383 | -0.00550 | -0.00139 | 0.00574 | -0.00376 |
| | (0.00305) | (0.00420) | (0.00337) | (0.00337) | (0.00454) | (0.00366) |
| Growth Opportunity | -0.0251*** | -0.0588*** | -0.0117 | -0.0175** | -0.00958 | -0.0141 |
| | (0.00860) | (0.0104) | (0.00948) | (0.00892) | (0.0126) | (0.00950) |
| Profitability | -1.256*** | -1.286*** | -1.389*** | -0.370*** | -0.213** | -0.430*** |
| | (0.0838) | (0.113) | (0.0933) | (0.0618) | (0.0914) | (0.0689) |
| Capital Expenditure | 0.0688 | 0.0393 | 0.0890** | -0.0506 | -0.147 | 0.0281 |
| | (0.0426) | (0.0668) | (0.0449) | (0.0657) | (0.0897) | (0.0746) |
| Firm Size | -0.0628*** | -0.0417*** | -0.0743*** | -0.0665*** | -0.0798*** | -0.0633*** |
| | (0.00574) | (0.00761) | (0.00602) | (0.0186) | (0.0235) | (0.0201) |
| R&D Intensity | -0.0239 | -0.261*** | 0.0685 | -0.258*** | -0.176*** | -0.289*** |
| | (0.0444) | (0.0878) | (0.0679) | (0.0280) | (0.0256) | (0.0312) |
| Capital Structure | 0.0250* | 0.0500*** | 0.0258 | 0.117*** | 0.160*** | 0.115*** |
| | (0.0148) | (0.0191) | (0.0162) | (0.0196) | (0.0287) | (0.0211) |
| CEO Tenure | -0.00198 | -0.00184 | -0.00374 | -0.00179 | -0.00324 | -0.00254 |
| | (0.00402) | (0.00556) | (0.00435) | (0.00575) | (0.00757) | (0.00642) |
| $Female\ Dummy \times industry_1$ | -0.165 | -0.169 | -0.197** | 0.0178 | 0.0751 | 0.0279 |
| | (0.109) | (0.190) | (0.0859) | (0.0494) | (0.0804) | (0.0502) |
| $Female\ Dummy \times industry_2$ | -0.378*** | -0.407** | -0.403*** | 0.0619 | 0.0399 | 0.0736 |
| | (0.112) | (0.191) | (0.0912) | (0.0529) | (0.0783) | (0.0527) |
| $Female\ Dummy \times industry_3$ | -0.255** | -0.256 | -0.309*** | 0.0100 | 0.0801 | 0.00501 |
| | (0.107) | (0.185) | (0.0826) | (0.0440) | (0.0646) | (0.0425) |
| $Female\ Dummy \times industry_4$ | -0.367*** | -0.349* | -0.402*** | Omitted | Omitted | Omitted |
| | (0.116) | (0.190) | (0.0957) | | | |
| $Female\ Dummy \times industry_5$ | -0.252** | -0.314* | -0.257*** | 0.0246 | 0.0275 | 0.0312 |
| | (0.110) | (0.190) | (0.0865) | (0.0487) | (0.0805) | (0.0484) |
| $Female\ Dummy \times industry_6$ | -0.126 | -0.108 | -0.154* | -0.0923* | -0.0760 | -0.0921* |
| | (0.108) | (0.185) | (0.0842) | (0.0529) | (0.0770) | (0.0504) |
| $Female\ Dummy \times industry_7$ | -0.205* | -0.156 | -0.264*** | 0.0324 | 0.0481 | 0.0380 |
| | (0.110) | (0.188) | (0.0879) | (0.0526) | (0.0689) | (0.0547) |
| $Female\ Dummy \times industry_8$ | -0.234* | -0.165 | -0.267** | 0.0966 | 0.210 | 0.0531 |
| | (0.120) | (0.195) | (0.105) | (0.129) | (0.180) | (0.127) |
| $Female\ Dummy \times industry_9$ | 0.0741 | 0.192 | -0.0656 | Omitted | Omitted | Omitted |
| | (0.110) | (0.186) | (0.0874) | | | |
| Constant | -0.622*** | 1.466*** | -0.619*** | -0.455*** | 1.994*** | -0.634*** |
| | (0.0695) | (0.0928) | (0.0753) | (0.166) | (0.218) | (0.178) |
| Observations | 8224 | 8224 | 8224 | 8224 | 8224 | 8224 |
| R-squared | 0.628 | 0.247 | 0.552 | 0.766 | 0.027 | 0.673 |
| Regression Type | OLS | OLS | OLS | Fixed effects | Fixed effects | Fixed effects |
| Year dummies | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry dummies | Yes | Yes | Yes | No | No | No |
| F-Statistic (p-value) | 12.55(0) | 12.05(0) | 8.21(0) | 1.75(0.0927) | 1.16(0.3251) | 1.93(0.0611) |
| Firms in Sample | 1517 | 1517 | 1517 | 1517 | 1517 | 1517 |

**Table 15: Robustness check result about execution measures on sexual orientation assorted variety crosswise over ventures**

This table reports common slightest squares and settled impacts estimation of erformance measures crosswise over ventures. The example comprises of a lopsided board of firm-level information from 1517 firms for the period 2007-2013. Tobin's Q is in logarithm shape. Group vigorous standard blunders are accounted for in brackets. OLS details incorporate industry (in light of one-digit SIC code) and year settled impacts. Settled impacts particulars just incorporate year settled impacts. *, **, *** mean factual importance at 10%, 5% and 1% individually. P-esteem is of the F-test with the invalid speculation: the coefficients on the female sham for various businesses are the same.

| Performance Measures | Tobin's Q | ROA | Tobin's Q | ROA |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Female Dummy | 0.262 | 0.0382*** | -0.00363 | 0.00256 |
| | (0.197) | (0.00392) | (0.0323) | (0.00963) |
| Board Independence | 0.0438 | 0.00106 | 0.0197 | 0.00490 |
| | (0.0766) | (0.0110) | (0.0493) | (0.0128) |
| Board Size | -0.00566 | -0.00111** | -0.00122 | -0.00142** |
| | (0.00366) | (0.000548) | (0.00270) | (0.000709) |
| Capital Expenditure | -0.00305 | -0.00688 | -0.0545 | -0.0193 |
| | (0.0665) | (0.00956) | (0.0533) | (0.0145) |
| Firm Size | -0.0279*** | 0.00209** | -0.183*** | 0.00181 |
| | (0.00661) | (0.00103) | (0.0180) | (0.00465) |
| R&D Intensity | 0.524*** | -0.111*** | -0.0542 | -0.125*** |
| | (0.151) | (0.00968) | (0.0793) | (0.0478) |
| Capital Structure | 0.00743 | -0.0227*** | -0.0341** | -0.0561*** |
| | (0.0198) | (0.00335) | (0.0168) | (0.00631) |
| $Female\ Dummy \times industry_1$ | -0.265 | -0.0335*** | -0.0708 | -0.00263 |
| | (0.202) | (0.0102) | (0.0512) | (0.0130) |
| $Female\ Dummy \times industry_2$ | -0.144 | -0.0292*** | 0.0741 | -0.00339 |
| | (0.205) | (0.00853) | (0.0620) | (0.0174) |
| $Female\ Dummy \times industry_3$ | -0.221 | -0.0337*** | 0.0280 | -0.00363 |
| | (0.201) | (0.00769) | (0.0410) | (0.0124) |
| $Female\ Dummy \times industry_4$ | -0.420** | -0.0498*** | Omitted | Omitted |
| | (0.208) | (0.00728) | | |
| $Female\ Dummy \times industry_5$ | -0.0967 | -0.0317*** | 0.00319 | -0.00235 |
| | (0.207) | (0.00904) | (0.0556) | (0.0138) |
| $Female\ Dummy \times industry_6$ | -0.284 | -0.0522*** | 0.00317 | 0.000816 |
| | (0.199) | (0.00558) | (0.0361) | (0.0101) |
| $Female\ Dummy \times industry_7$ | -0.195 | -0.0240*** | -0.0192 | -0.00888 |
| | (0.207) | (0.00910) | (0.0494) | (0.0155) |
| $Female\ Dummy \times industry_8$ | -0.238 | -0.00590 | -0.0941 | -0.0191 |
| | (0.218) | (0.0220) | (0.0692) | (0.0356) |
| $Female\ Dummy \times industry_9$ | -0.476** | -0.0541*** | Omitted | Omitted |
| | (0.203) | (0.00856) | | |
| Constant | 0.832*** | 0.0795*** | 2.002*** | 0.0819** |
| | (0.0600) | (0.00873) | (0.152) | (0.0368) |
| Observations | 8224 | 8224 | 8224 | 8224 |
| R-squared | 0.206 | 0.113 | 0.217 | 0.098 |
| Regression Type | OLS | OLS | Fixed effects | Fixed effects |
| Year Dummies | Yes | Yes | Yes | Yes |
| Industry Dummies | Yes | Yes | No | No |
| F-Statistic (p-value) | 4.32(0) | 13.55(0) | 1.29(0.2518) | 0.18(0.9903) |
| Firms in Sample | 1517 | 1517 | 1517 | 1517 |

**Table 16: Robustness check result about hazard taking strategy measure on sexual orientation decent variety**

This table reports standard slightest squares and settled impacts estimation of the innovative work force. The example comprises of a lopsided board of firm-level information from 1517 firms for the period 2007-2013. Bunch strong standard mistakes are accounted for in enclosures. OLS determinations incorporate industry (in view of one-digit SIC code) and year settled impacts. Settled impacts determinations just

incorporate year settled impacts. *, **, *** mean measurable criticalness at 10%, 5% and 1% separately. P-esteem is of the F-test with the invalid speculation: the coefficients on the extent of ladies for various ventures are the same.

| Risk-taking Policy Measure | R&D Intensity | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Proportion of Women | -0.0369** | -0.0381 | 0.314*** | 0.0434** |
| | (0.0148) | (0.0326) | (0.0488) | (0.0210) |
| Board Independence | 0.0259 | 0.0286 | 0.0226 | 0.0312 |
| | (0.0191) | (0.0237) | (0.0195) | (0.0249) |
| Board Size | -0.00236*** | -0.000629 | -0.00234*** | -0.000661 |
| | (0.000648) | (0.000635) | (0.000663) | (0.000638) |
| Growth Opportunity | 0.0438*** | 0.00183 | 0.0440*** | 0.00193 |
| | (0.0149) | (0.00537) | (0.0150) | (0.00533) |
| Firm Size | 0.00180 | -0.00131 | 0.00180 | -0.000544 |
| | (0.00174) | (0.00578) | (0.00173) | (0.00579) |
| Profitability | -0.508** | -0.165*** | -0.508** | -0.165*** |
| | (0.199) | (0.0618) | (0.200) | (0.0606) |
| Capital Structure | -0.0224*** | -0.00231 | -0.0220*** | -0.00271 |
| | (0.00571) | (0.00255) | (0.00578) | (0.00261) |
| Ln( Total Risk) | -0.00322 | -0.0206 | -0.00364 | -0.0196 |
| | (0.00539) | (0.0142) | (0.00540) | (0.0134) |
| CEO Tenure | 0.000685 | 0.00288 | 0.000690 | 0.00287 |
| | (0.00113) | (0.00232) | (0.00113) | (0.00227) |
| $female \times industry_1$ | | | -0.279*** | -0.0308 |
| | | | (0.0554) | (0.0203) |
| $female \times industry_2$ | | | -0.414*** | -0.298 |
| | | | (0.0785) | (0.212) |
| $female \times industry_3$ | | | -0.360*** | -0.0436* |
| | | | (0.0600) | (0.0235) |
| $female \times industry_4$ | | | -0.295*** | -0.0284 |
| | | | (0.0508) | (0.0183) |
| $female \times industry_5$ | | | -0.361*** | -0.0345 |
| | | | (0.0510) | (0.0252) |
| $female \times industry_6$ | | | -0.322*** | -0.0515* |
| | | | (0.0477) | (0.0289) |
| $female \times industry_7$ | | | -0.378*** | -0.0245 |
| | | | (0.0689) | (0.0180) |
| $female \times industry_8$ | | | -0.289*** | -0.0426 |
| | | | (0.0768) | (0.0282) |
| $female \times industry_9$ | | | -0.204*** | 0.110*** |
| | | | (0.0738) | (0.0264) |
| Constant | -0.0262 | -0.0110 | -0.0668** | -0.0169 |
| | (0.0345) | (0.0800) | (0.0281) | (0.0823) |
| Observations | 8224 | 8224 | 8224 | 8224 |
| R-squared | 0.181 | 0.030 | 0.183 | 0.036 |
| Regression Type | OLS | Fixed effects | OLS | Fixed effects |
| Year Dummies | Yes | Yes | Yes | Yes |
| Industry Dummies | Yes | No | Yes | No |
| F-Statistic (p-value) | | | 6.77(0) | 3.40(0.0004) |
| Firms in Sample | 1517 | 1517 | 1517 | 1517 |