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Women on Board and the impact on Financial Firm Performance - A case study in India

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This paper studies the effect of having a gender diverse corporate board on financial firm performance. Past literature indicates that there is inconclusive evidence whether having gender diverse board increases financial firm performance. This is due to different definitions of financial firm performance, gender diversity and the location of firms studied. India is taken as the country of interest to study the effect of having a gender diverse board due to its relatively small female labour participation while simultaneously being one of the few third world countries to have implemented a legislation that requires a minimum number of women present within a corporate board. 4,441 public firms between 2004 and 2016 are used to study the effect of having a gender diverse board on accounting (ROA) and market performance (Tobin's Q) while accounting for institutional intervention, family business, critical mass and independent directors. The results indicates that gender diversity has a positive effect on market performance for non-financial forms. Gender-balanced boards has a negative effect on accounting performance for micro enterprises, while family business that have a higher gender diversity has a positive effect on market performance. Finally, the effect of Companies Act 2013 indicated a negative effect on family businesses with a higher gender diversity in terms of accounting performance. This is consistent across micro enterprises.

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1 Introduction

One of the primary duties of the board of directors is to monitor the performance of the firm in order to maximize the shareholder's wealth. The importance of this monitoring role is further relevant in countries where external mechanisms are less developed (Campbell & Mínguez-Vera, 2008). In order to ensure successful monitoring, the selection of directors is vital and many factors are involved during the recruitment process. In the last two decades, one such factor gaining momentum is the inclusion of women as board members.

To date, numerous studies have already been conducted regarding the relationship between corporate governance and the role of gender diversity. Nevertheless, research remains inconclusive. In theory, having a more diverse board enhances the monitoring process, provides a larger scope of knowledge and contributes by gaining additional access to internal resources. Furthermore, this rising trend as well as the potential benefits of having a gender diverse board have resulted in an expansion of institutional interventions to include women at a corporate board level.

As of 2017, 15% of board seats worldwide are occupied by women, of which 4% hold the position of CEO or board chair (Deloitte (2017)). Furthermore, 77,4% of MSCI ACWI[1] have at least one women on board (WOB), while 31,5% of all global MSCI ACWI boards have at least three women present within the corporate board.

A large contributing factor to the inclusion of women at a top management position is through institutional intervention which has forced firms to adapt by setting or threatening to set a gender quota. Norway, one of the first countries in 2003 to adopt this law required 40% of boards to consist of women. This trend of institutional intervention has broadened globally as more research has been conducted within this field. Spain has similarly implemented this law in 2015 (Adam & Shavit (2009)) and as of 2017, France, Italy and Norway require to have at least three WOB.

The paper makes numerous contributions. Firstly, the number of papers published regarding to gender diversity in India is usually limited to firms on the Indian stock exchange. This paper expands the number of firms studied, allowing further research into different classification of firms and how gender diversity affects various sizes of firms. The second contribution is that the paper includes the analysis of the effect of Companies Act 2013, providing the conclusion whether the act of tokenism is at play. This will provide governmental institutions insights as to whether the legislation is effective or requires adjustment in the future.

This paper is organized in five sections. Firstly, the relevant literature on gender diversity and

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[1]Represents the performance of small- to large-cap stocks from 23 developed and 24 emerging markets

financial firm performance is studied and reviewed with additional context in India. The following section establishes the hypothesis based on previous findings and creates the conceptual framework. The third section focuses on the data and the methodology used to test the hypothesis. Within the fourth section, the results are presented and discussed. Section five includes the robust analysis and suggests improvements for further study. The sixth section discusses the outcomes of the analysis and considers possible improvement points in the current paper. The final section provides the overall conclusion and recommendation for institutions.

2   Literature Review

Within the paper of Hafsi & Turgut (2013), the classification of corporate board diversity falls under two distinct categories: *structural* and *demographic* diversity. Structural diversity refer to attributes such as governance mechanism, board size and number of independent board members. Conversely, demographic diversity within corporate boards refers to the demographic background of board members such as gender, age and ethnicity. The paper of Johnson et al. (2013) expands on this framework by including *human capital*, *social capital* and *busyness* within board composition. Human Capital refers to experience and tenure, while social capital refers to ties to entities, personal relationships and status. Busyness refers to board interlocks, number of meetings attended and outside directors.

The paper focuses on board demographic diversity, specifically the study of gender diversity on financial firm performance. This is due to three reasons. Firstly, the topic of gender is a heavily researched topic in the academic world and as to date, there is inconclusive evidence on the effect between gender diversity and financial firm performance. The paper of Srivastava et al. (2018) defines the phase of this research from 1977 to 2017 in three components. The first being the opinion and experience in the eyes of the board members and shareholders, the second phase focusing on the impact of having a gender diverse board and the final phase dwells in corporate governance itself and how gender diversity is needed and intertwined. The last phase is accompanied with the increasingly institutional intervention. Secondly, stricter regulations are being implemented that require companies to have a minimum number of female representation within the corporate board. Finally, the topic of having a gender diverse board is especially relevant within India, where there is substantial gender inequality within the labor force, and recently due to the enactmentment of the Companies Act in 2013.

A summary of the key literature papers studied is presented in table one, consisting of the linear relationship between gender and financial firm performance (labelled under the header Article Type

as A), the relationship through critical mass (labelled under the header Article Type as B) and gender diversity within India (labelled under the header Article Type as C).

Author (year)	Data (n, type, country, time period)	Article Type	Explanatory Variable (Gender Diversity)	Dependent Variable (Firm Performance)	Model	Conclusion
Adams (2009)	1,939 public USA firms (1996 – 2003)	A	Dummy WOB (yes/no) / WOB ratio	Tobin's Q, ROA	FE	Positive effect
Mahadeo (2012)	42 public Mauritius firms (2007)	A	WOB ratio	ROA	OLS	Positive effect
Joecks (2013)	151 public German Firms (2000 – 2005)	B	Critical Mass / Blau Index	ROE	OLS, RE,	Negative effect. Positive effect (Critical Mass)
Liu (2014)	2000 Chinese firms (1995 - 2011)	B	Dummy WOB (yes/no) / WOB ratio / Critical Mass	ROS, ROA	FE, FE with lagged board variables, GMM	Positive Effect
Srivastava (2018)	300 public Indian firms (2001 - 2015)	C	Number of WOB	COE, ROA	FE, RE, Pooled OLS	Negative effect (COE) Positive effect (ROA).
Kagzi (2018)	200 public Indian firms (2010 - 2014)	C	Blau index /Blau Index squared	Tobin's Q	GMM	No effect
Ghosh (20	200 public Indian banks (2003 - 2012)	C	Dummy WOB (yes/no) / WOB ratio / Blau Index	Tobin's Q, ROA	Dynamic Panel Data, GMM	No effect
Kaur (2017)	28 public Indian banks (2008 - 2014)	C	WOB ratio	ROA, ROE, Tobin's Q, Net Interest Income	OLD, GLS, GMM	Positive effect
Sanan (2016)	148 public firms (2008 -2009 / 2012-2013)	C	WOB ratio	ROA, Tobin's Q	OLS, FE	Positive effect

Table 1: Article overview of key literature studied

Notes: Table one provides an overview of the key literature studied that is used to establish the conceptual framework for this paper. Papers that discuss the linear relationship between gender and financial firm performance are labelled under the header Article Type as A, papers that discuss the relationship through critical mass are labelled under the header Article Type as B and finally gender diversity within India are labelled under the header Article Type as C. Within the column referring to explanatory variable: Dummy WOB refers to a dummy index variable which indicates if there is a women present on the corporate board or not, WOB ratio refers to the ratio/percentage of women present, Number of WOB refers to the number of women present within the corporate board, and Blau Index is an alternative gender diversity index from the paper of Blau (1977).

2.1 Women in India

Within this paper, India is taken as the country of interest to analyze the effect of having a gender diverse board on financial firm performance. The primary reason for this is due to the high disparity of gender diversity and labour participation rates of women in India. According to research published

by Deloitte in 2017, the number of WOB has increased to 12.4% in 2016, a 4.7% increase within two years.

This section of the paper explores the demographic, career development and institutional intervention in India. Understanding the journey a women goes through within the labour force provides valuable insights into the lack of gender diverse corporate boards before the gender quota was set in India. This insight is combined together with the theory behind having a diverse corporate board in the next section to formulate the conceptual framework and the research question of this paper.

From a demographic point of view, India has one of the lowest female labour participation rates in the world (ranked 138th) and ranks 108th out of 149 countries in the Gender Gap Index[2] as of 2018 (WEF, 2018). Furthermore, the literacy rate is ranked 121st with a 59.3% and 78.9% literacy rate for females and males, respectively. In terms of education, enrollment in primary and secondary education is higher for females as opposed to males. Enrollment in tertiary education, both genders stand almost identical at 27% (World Bank, 2018). Part of this phenomena lies within the culture in India, where social family culture is more important that individualism and thus women enjoy a safety net that may not exist in other western countries (Patwardhan et al. (2016b)). A more extreme example is within the Indian middle-class income families, where parents are willing to sacrifice more in order to contribute to their daughters success, and thus resulting in a higher investment in education (Patwardhan et al. (2016b)). Therefore it can be concluded that in the early stages of a womens life in India, the talent pool for women is just as large as for males [3].

The begin of the gender gap in India lies in the transition from education to the labour workforce, called the labour force participation rate. In 2018, 28,7% of women entered the labour market as opposed to 81,7% from men (WEF, 2018). There are two reasons for this: women reach the age of marriage at around the age of 21, which is around the time one is finished with their tertiary education (WEF, 2018). Secondly there is a strong belief that married women whose husbands earn a solid wage should not work outside of their home (Coffey et al. (2018)). Examples include within the area of Urban Uttar Pradesh, where over 60% of male and 40% of female respondents supported this train of thought. Furthermore, according to the paper of Chatterjee et al. (2018), highly educated women tend to marry educated men with a higher income, thus remaining out of the labour force.

With the entry talent pool already being limited for women, further literature is studied in order to understand career development from junior to senior management and if there are additional factors

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[2]Gender Gap Index, measures the gap between between men and women across four categories: Economic Participation and Opportunity, Education Attainment, Health and Survival and Political Empowerment

[3]However, the percentage of tertiary education attained as opposed to enrollment is significantly different; 12,9% for males between the age of 25 an 64, while this is 8,4% for females aged between 25 (World Bank, 2018).

that inhibit a gender diverse working environment. According to the paper of Patwardhan et al. (2016b), labor force of women stands at 28% at junior level, 14.91% at middle level and 9.32% at senior level. Compared to China, Eastern Europe and South East Asia, the percentage of female senior management compromises of 38%, 37% and 35% respectively, while in India this is 15% (Patwardhan et al. (2016a)). Additionally, in 2017, women in India earn 38% less than their male colleagues, therefore increasing the disproportionate incentive to join or continue the labour force (GreenU2019). Powell (2000) explains the above phenomena due to women prioritizing work life balance and job satisfaction compared to males and thus dropping out from the labour force. Boone (2013) further explains that there is a shift from a standard work for barrier to a self-impose barriers, household responsibility and work life balance. This is even more severe in India, where the drop-out rate is ranked one of the highest at 48% percent between junior and middle level (NDTV).

From a demographic and societal perspective, up to the point of tertiary enrollment, there is no gender gap. However, this changes during two key lifetime events: the first being the labour participation drop-out due to marriage and the culture stereotype that women should not work, while the second stage occurs when work life balance and care for family becomes a priority. This in turn results in a very small pool of female candidates who are not family members that can be selected to join the executive board. The other alternative for females to join as board directors is by being family members of existing male board members.

Institutions have taken upon themselves to challenge the system and intervene with the two latest initiatives, namely the Companies Act 2013 as well as the amendment in the securities market.

The Companies Act of 2013 states that all companies need to have at least one female director for the following conditions: 1) all companies whose securities are listed on any stock exchange and 2) have a paid-up capital of Rupees one hundred crore or more, and a turnover of Rupees three hundred cores or more. The act became effective on August 30th 2013, while companies were given till 31st of March 2015 to comply with this legislation. The second initiative was endorsed the Securities and Exchange Board of India (SEBI), which amended their disclosure agreement. Specifically, the board of directors of all listed companies to have an optimum combination of executive and non-executive directors (at least 50 percent non-executive), with at least one female director.

With this legislation, India is among the first developing country that has applied such standard that is currently playing a huge role in the West. The result is that between 2014 and 2016, the number of WOB has increased by 4.7%, reaching 12.4%(Deloitte (2017)).

However, due to the nature of the quota, there have been arising suspicion that tokenism is taking place. In 2018, 25% of female appointed board members are family members of the owners (Bhat-

tacharyya (2018)). This may result in a negative impact on financial firm performance due to skilled and experienced male directors not being selected within the board and there being a possibility that more conflicts arise during meeting due to the fact that the female board member appointed is not value adding or in some cases detrimental to the board of directors.

Despite the current situation and even the fact that a large initiative has been taken within India to address the gender gap at a corporate board level, there is still limited amount of empirical research conducted to analyze the effect of WOB on firm performance in India.

2.2 Board Demographic Diversity and Firm Financial Performance

2.2.1 Theoretical Relationship

A significant amount of research has been conducted to identify the effect of having a heterogeneous board on firm performance, however the underlying result remains inconclusive. The difference in results may stem from the usage of different explanatory variables to represent the number of WOB and performance measures (Campbell & Mínguez-Vera (2008)). Furthermore, various research has been conducted in different countries, and their time periods have been taken into account (Campbell & Vera (2010)).

The hypothesis within this paper is based on economic theories that infer the positive and negative relationship between WOB and financial firm performance, whilst taking into account the current situation in India.

2.2.2 A positive relationship

The theory behind a positive relationship between WOB and financial firm performance comes in the form of four theories: Resource-dependency theory, resource-based view, signaling theory and principal-agency theory.

The core idea of the resource-dependency theory (Pfeffer & Salancik (2003)) lies in the organizations ability to access external resources, therefore affecting the behavior of the organization itself. This results in a positive financial performance. The paper of Ali & Ng (2013) argues that a heterogeneous board can access a larger pool of resources through its network of suppliers. Additionally, a more diverse executive board allows for more options to be taken into consideration (Carter et al. (2003)). This is due to the fact that women have a vastly different working experience than men and have better understanding in various areas of the market.

The resource-based view (Barney (1991)) focuses on the concept to exploit external opportunities

using internal resources in new ways. Specifically that there may be a competitive advantage if these resources are limited and hard to imitate within a number of organisations. Diverse boards provides easier access to these internal resources to the firm (Ali et al. (2011)). Additionally, qualitative task, such as CSR and strategic controls are better addressed by females (Bear et al. (2010)), as well as more problem-solving tasks, thus enabling the board to cope better with conflicts and ambiguity (Rosener, 1995). This is even more relevant in India, given the limited number of females present at a senior management level.

Signaling theory (Miller & del Carmen Triana (2009)) presents the idea of reducing information asymmetry between the sender and the receiver. In terms of board diversity, the paper of Carter et al. (2003) states that having a more heterogeneous board can lead to a more positive image of the firm. This in turn will have a positive perception on the customers behaviour and therefore will lead an improvement firm value. Within the paper of Burke & McKeen (1996), the argument is presented that having a diverse corporate board will in turn motivate and provide a positive career aspiration in lower management level. Thus, affecting firm productivity and increasing the number of potential candidates to be selected in the near future.

Provided the argument above, the following hypothesis is formulated:

Hypothesis 1 (H1): *There is a positive relationship between a heterogeneous board and financial firm performance.*

This is further expanded to include the concept of Critical Mass Theory, introduced within the seminal work of Kramer et al. (2006), which splits the composition of the board in terms of gender in four groups. Kramer argues that the input from women result in more productive discussions under a less male-dominated board and is most optimal when the critical mass is reached. Critical Mass is achieved by having a board composition that consists of 30% or more women.

Due to institutional intervention and possible tokenism that may occur in India, an additional metric is added. This metric is called the Outside Legislation (OL), which is defined as a dummy variable if firms have two or more WOB present. These firms are identified to be more open to gender diversity and have taken additional initiative to include more WOB than the minimum amount set by the Companies Act 2013. Compared to the Critical Mass Theory, OL includes more firms that can be studied.

Hypothesis 2 (H2): *There is a strong positive relationship between a heterogeneous board and financial firm performance that have reached Critical Mass (a) and OL (b).*

The final theory is the Principal-Agency Theory (Jensen & Meckling (1976)), which dwells into the theoretical framework that focuses on the arising conflict between the interest of the owner of the firm and the board of directors. This is resolved by including outside members into the board whose interest is not to collude with other shareholders or represent expert monitors. Rather, the additional relevance is to identify women who are independent directors within the board. These female independent directors are more likely to be experienced and are not female family members that do not have the business acumen to run a firm. This results in the contribution factor to not only be due legislation, but to provide additional value with having a diverse and more experience corporate board.

Hypothesis 3 (H3): *Firms that have a higher proportion of independent women present on the corporate board outperform firms with a lower proportion.*

2.2.3 A negative relationship

The inclusion of having a women on board, especially through the institutional intervention in India is not without consequences. The paper of Sheridan & Milgate (2003) surveyed various boards in Australia and concluded that previous male homogeneous boards were averse to gender diversity and preferred to keep the same board composition in terms of gender. The paper of Patwardhan et al. (2016a) showed that the pool of female candidates are limited at senior management level due to family priorities and wage gap. The paper of Hambrick et al. (1996) argues that because a more diverse corporate board results in more critical thinking, the resulting process is more time consuming, leading to higher levels of inefficiency. Similarly, the paper of Adam & Shavit (2009) shows the same reasoning due to an increase in conflict. Additionally, the paper of Saeed & Sameer (2017) has found evidence that an increase in the number of WOB has a negative effect on firm's cash payout in India.

This section of the paper recognizes this line of thought as two theories: Social Identity Theory and Tokenism.

Introduced in the paper of Tajfel (1978), the argument is presented that gender diversity causes increases conflict due to the personal and emotional linkage to the membership. The paper of Ali et al. (2011) incorporates this with gender diversity by defining that the male homogeneous groups are the "in-group" and that the inclusion of women ("out-group"). The "in-group" consider themselves superior and comfortable in the current setting. The inclusion of women may distort the current group resulting in a negative dynamic and conflict.

The theory of tokenism states that a symbolic effort is made in order to abide with legislation set

by institutions as well as preaching towards the shareholders and the public with regards to gender diversity. This results in possibly more competent, skilled male counterparts who may be excluded from the board in order to meet this legislation as well the impact on the firm value being limited (Liu et al. (2014)). More extreme cases are in developing countries where female presence in senior management is limited (Patwardhan et al. (2016a)). This is especially relevant for family businesses in India, where 25% of all WOB are family members in 2018. According to the paper of Adam & Shavit (2009), female directors tend to be associated with shareholderism which consists of upholding tradition and comfort. This reduces firm focus on maximizing profits and shareholder value.

Hypothesis 4 (H4): *There is a negative moderating effect of family business on the gender diversity affecting firm performance.*

2.2.4 Additional Framework

Next to the foundations of this analysis, two crucial components are added to the current conceptual framework and will provide valuable reasoning in the interpretation of results.

Firstly, the size of firms plays a huge role in terms of board heterogeneity. Larger and more successful firms tend to attract more talented individuals which results in a larger pool of female candidates at a senior management level. Additionally, larger firms are more complex and the contribution that women can bring as board member is more valuable. Smaller firms are more likely to have male homogeneous board of directors and are less likely to adapt and allow women to fully play their monitoring role as board members (social identity theory). Furthermore, female directors are more likely to uphold shareholderism in smaller firms.

The second aspect considered is the effect of the Companies Act 2013 and the implications it has on publicly listed firms by requiring to include at least one women in the board of directors. According to the paper of Doldor et al. (2015), the implementation of such quota results in an increase in number of WOB and attracts the most talented female candidates. The paper of Dewally et al. (2017), however indicates that female board members does not replace male board members, but that the board grows in size. This mindset confirms the fact that the boards prefer previous established ways of working which directly imposes the initial barriers and confirms the risk adversity of the board itself. Institutional intervention is required to break this barrier in the short term in order to allow the further development of the role of women in boards in the long run.

Additionally, these two components are dependent on each other. Firstly, not all public smaller firms are required to include at least one women at the board as they do not meet the minimum

requirements set by the Companies Act 2013. Therefore an additional analysis is conducted by the inclusion of a triple interaction between gender diversity, family business and Companies Act 2013 whilst accounting for firm size. As India has proportionally one of the highest amount of family businesses in the world, it is expected that smaller firms that are family businesses do not reap benefits of a gender diverse board, while larger firms do.

3 Data and Methodology

3.1 Data Source

Two databases are collected in order to conduct the research. The first database comes from PROWESS, a database from the Centre of Monitoring Indian Economy (CMIE). The CMIE is a business information company established in 1976 that provides economic and business databases. The data extracted from this database provides financial performance data per company. The second database comes from the MCA (Ministry of Corporate Affairs) which provides board composition related information. The two databases are linked through the use of the Corporate Identity Number (CIN)[4] and is combined with Director Identification Number (DIN) to identify director specific information per firm.

Furthermore, additional steps are taken to further clean the data. Firstly, only companies of which data is available from 2004 to 2016 are included. Secondly, since the sample for private firms and associations is small and therefore does not provide a valid representation of the population, the data only includes public firms. Thirdly, all values for Independent and Executive indicators that have a "NA" are assumed to be Non-independent and Non-executive directors.

The final data processing that takes place is the classification of firms as defined by the MSME (Mirco, Small & Medium Enterprises). This will highlight which firms are affected by the Companies Act 2013 and how gender diversity plays a role depending on firm size. The MSMED Act 2006 Section 7 (MSMED 2006) defines the MSME based on the investment in plant and manufacturing for manufacturing units and investment in equipment for service enterprises. Additionally, a bill has been introduced in 2018 and accepted by the Union Cabinet to amend the definition from investment to turnover per firm (MSMED 2018). Due to the unavailability of investment data, the new proposed definition of MSME in terms of turnover will be used (see Appendix A.1). The firms that fall outside this definition are defined as Large Enterprises.

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[4]CIN uniquely identifies firms and represents the status of the company, the ROC industry code, state code, incorporation year, ownership type and registration number

3.2 Variables

3.2.1 Dependent Variable

Two different dependent variables are taken into consideration as metrics to represent financial firm performance. Return on Asset (ROA), represents the accounting performance. This is the ratio of net income before extraordinary items and discontinued operations to its book value of assets. This measure reflects the performance of women present on the corporate board and is indicative of the magnitude and quality of the pool of female candidates and the likelihood of their nominations as board members.

The other measure is Tobin's Q, a stock-based performance measure representing market performance indicator. Tobin's Q is calculated by taking the ratio of a firms market value [5] to its book value, which reveals the prevailing attitudes toward women in a society and the perceptions of their role in business.

Both indicators present specific insights and tend to be more relevant for different classification of firms. ROA is more suitable for physical-capital-intense firms (Khanna & Palepu (1997)), while Tobin's Q is more appropriate measure of firm performance in the context of Knowledge Intensive Firms (Swart et al. (2003)). Accounting performance is indicative of the magnitude and quality of the pool of female candidates and the likelihood of their nominations as board members. Market performance dwells in the perception of the role of women in society and business (Abdullah et al., 2016).

Winsorizing is applied to both performance metrics in order to account for spurious outliers and limiting extreme values. As opposed to trimming, which removes the outlier, winsorizing results in replacing the value by a percentile. Examples of cases within the data base is where maximum values of and RoA is and for Tobin's Q is. The data is winsorized at a 98% level.

3.2.2 Explanatory Variables

The explanatory variables are taken from the paper of Johnson et al. (2013), which has an extension study of board composition in terms of social capital, human capital and demographics. Five definitions are used from this paper, while the variable WOB_OL is uniquely added to represent the specific case in India with regards to the Companies Act 2013.

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[5]Firms market value is calculated as the following: book value of assets minus the book value of equity plus the market value of equity.

N^o	Hypothesis	Name of Variable	Defintion
1	H1	WOB_Dummy	Dummy variable (WOB: yes/no)
2	H1	WOB_Perc	Percentage of WOB
3	H1	WOB_Count	Number of WOB
4	H1	WOB_Blau	Blau Index (see below)
5	H2	WOB_OL	Dummy variable if WOB >2: yes/no
6	H2	WOB_CM	Dummy variable if WOB >30% : yes/no

Notes: Table two represents the six different gender diversity index primarily used as explanatory variables for the hypothesis. Variables one to four are used within the first hypothesis to represent the positive relationship between gender diversity and financial firm performance. Variable one is a dummy variable, where one represents if a women is present within the board. Variable two is the percentage of women present on the corporate board. Variables three represents the number of women present on the board. Variable four is the blau index which ranges between 0 and 1, where zero represent a complete male homogeneous board and 0.5 an equal heterogeneous board. Variables five and six are used within the second hypothesis to represent gender-balanced boards. WOB_CM is a dummy variable that is equal to one when at least 30 % of board members are female, while WOB_OL is a dummy variable equal to one when at least two women present on the board.

The fourth alternative measure of board gender diversity comes from the Blau (1977) index, which is calculated as the following:

$$WOB\_Blau_{kl} = 1 - \sum_{i=1}^{n} P_i^2$$

Where P_i represents the percentage of WOB in each category and n is the total number of board members. K represents the year and L represents the company specific. Blau Index ranges between 0 and 1, where zero represent a complete male homogeneous board and 0.5 an equal heterogenous board.

3.2.3 Control Variables

The control variables include board characteristics, firm and industry characteristics. Four different board characteristics are included that control for board composition and experience. Board Size represents the number of directors present within the corporate board. Independent/Executive stands for number of independent/executive directors on the board. Board Interlock represents the number of different companies that the total board is present in.

Firm characteristics include family business, which is based of percentage of shares owned by the promoters (In 2013, a legislation has been passed where the promoters can own up to 75% shares). Promoter percentages provide two key information: the first being an indicator of success and the second is and indication of family business. An increase in promoter percentage gives directly an indication to shareholders that there is belief in the success of the company in the near future. The

second indicator falls under family business. Based on the paper of Kota & Singh (2016), family business is defined as a dummy variable which indicates a one if more than 40% of shares are owned by the promoters, given that the business is not owned by the state or the government. Firm Age is the number of years the company is active since the incorporation year.

Industry characteristics include the Herfindahl-Hirschman Index (HHI), which represents the market concentration used to explain market competitiveness.

3.3 Methodology

Since the panel data is of dynamic longitudinal nature, endogeneity, unobserved heterogeneity and reverse causality have to be accounted for.

According to Smith et al. (2006), there is reason to believe that reverse causality[6] is more present for larger firms, which are more likely to appoint women on their board or are self-selected to more successful larger firms. Additionally, endogeneity arises due to omitted variables. This in turn will result in correlation between the explanatory variable and control variables.

Therefore, the fixed effects (FE) model is used, which allows to control firm effects as well as heterogeneity. Furthermore, the FE model is re-run but with the intention to account for endogeneity, by having the explanatory variable and board characteristics lagged. The effect of having a women present may not show the effect on financial firm performance and therefore to measure this effect, the lagged may overcome reverse causality and provide more accurate results. Furthermore, within the Robustness section, the instrumental variable (IV) is used introduced in the paper of Adam & Shavit (2009) to overcome endogeneity.

The FE model is modelled as the following for the first two hypothesis:

$$FirmPerformance_{it} = \beta_0 + \beta_1 WOB_{it} + \beta_2 X_{it} + \alpha_i + \epsilon_{it} \tag{1}$$

where $FirmPerformance$ represents ROA and Tobin's Q at time t and for firm i. WOB represents the explanatory variable consisting of four different measurements of gender diversity for hypothesis one and two for hypothesis two. X_{it} consists of the control variables.

The following two hypothesis have the same formulation as above, however they include an interaction variable between family business, independent directors and gender diversity. The formulation

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[6] An attempt has been made to use the Granger Causality test to confirm reverse causality, however Dickey-Fuller test has indicated that the variables are non-stationary. Stationarity is one of the requirement in order to test Granger causality. Therefore it is assumed that reverse causality has to be accounted for within the regression

for hypothesis three is as follows:

$$FirmPerformance_{it} = \beta_0 + \beta_1 PIF_{it} + \beta_2 PID_{it} + \beta_3 X_{it} + \alpha_i + \epsilon_{it} \tag{2}$$

where PIF stands for percentage of independent female directors and PID stands for percentage of independent directors.

Hypothesis four is formulated as the following:

$$FirmPerformance_{it} = \beta_0 + \beta_1 WOB * FB_{it} + \beta_2 WOB_{it} + \beta_3 FB_{it} + \beta_4 X_{it} + \alpha_i + \epsilon_{it} \tag{3}$$

where FB_{it} is the variable family business at time t for company i and $WOB * FB_{it}$ is the interaction variable between family business and gender diversity. The final formulation includes the triple interaction with the institutional intervention - Companies Act 2013 and is formulated as the following:

$$\begin{aligned} FirmPerformance_{it} = {} & \beta_0 + \beta_1 GF * FB * CompaniesAct2013_{it} + \beta_2 GD * CompaniesAct2013_{it} \\ & + \beta_3 GD * FB_{it} + \beta_4 FB * CompaniesAct2013_{it} + \beta_5 GD_{it} + \beta_6 FB_{it} \\ & + \beta_7 CompaniesAct2013_{it} + \beta_8 X_{it} + \alpha_i + \epsilon_{it} \end{aligned} \tag{4}$$

4 Empirical Results

4.1 Summary Statistics

The database used within this paper consists of 4,441 firms and 47,177 firm year observations between 2004 and 2016. From the 59,167 directors, 4,491 are female directors, therefore representing 7,59% all directors.

Figure one highlights the fact that the number of female directors has increased from 2,5% to 10,6% between 2004 and 2016. This is primarily due to the Companies Act 2013, where majority of public companies in 2015 have officially adopted at least one female board member. Specifically in 2016, 75,2% of companies have one female board member, while 10,1% have more than one female board member. An extrapolation of historical data through time series would indicate that originally this percentage would be 4,5% of WOB, which results in a difference of 6,0% increase due to the policy of the Companies Act 2013.
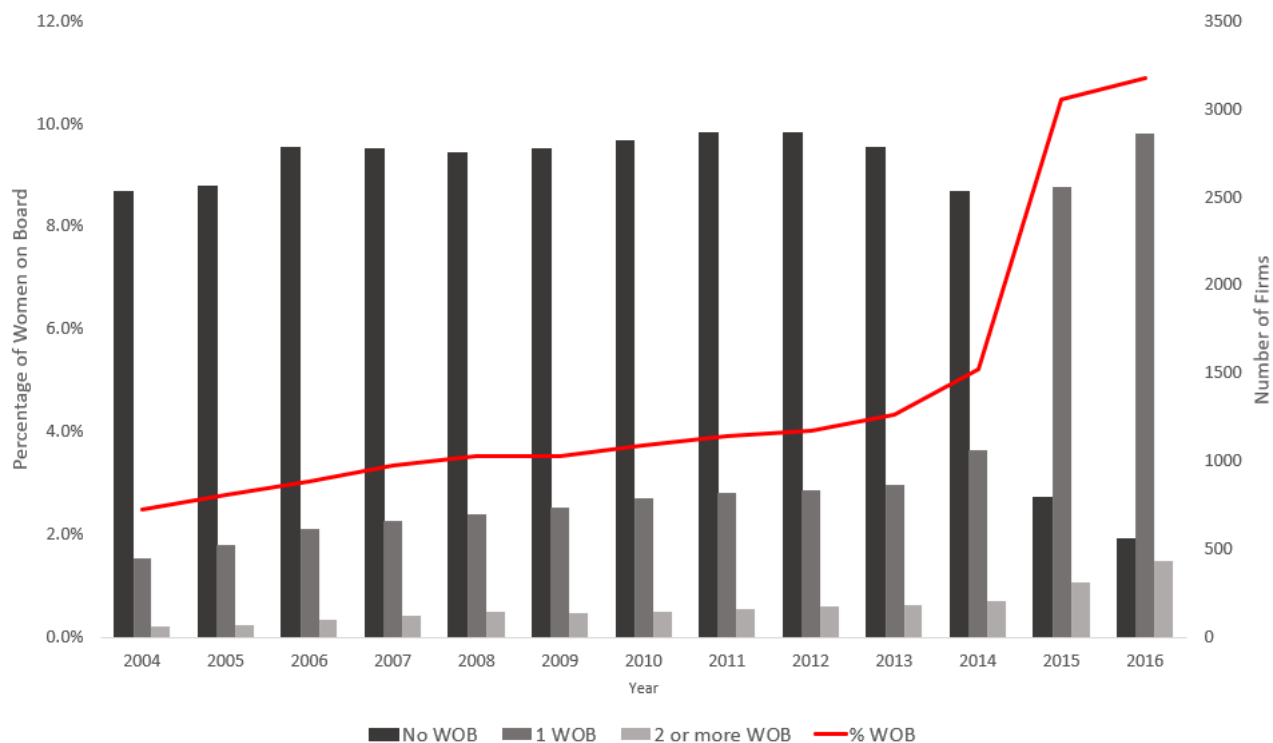
Figure 1: Development of corporate gender diversity from 2004 to 2016

Notes: Figure 1 represents the number of female directors within the board of directors from 2004 to 2016. The line graph represents the percentage of female board members present per year. The bar graph on the second y axis represents the segmentation of number of women on the Board of Directors per company, where no WOB refers to a fully male homogenous board, one/two or more refers to having one/more than one WOB.

A deeper insight in terms of number of companies that have changed its gender diversity before the announcement of the Companies Act 2013 (2012) and after the deadline to abide by this legislation (2016) is summarized in Table 2. 33,6%[7] of firms did not change the number of female board members, while 83,1%[8] of firms have moved from a homogeneous board to having at least one female director. 16,9%[9] of firms stayed as male homogeneous firms (majority of these firms are expected to have a revenue less than 300 crones or a working capital less than 100 crones and therefore not needed to abide the Companies Act 2013).

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[7] (435 + 636 + 107) / 3510
[8] 1960 + 175 / 2570
[9] 435 / 2570

# of WOB		2016			
		Zero	**One**	**O.L.**	**Total**
2012	**Zero**	435	1960	175	2570
	One	30	636	113	779
	O.L.	7	47	107	161
	Total	472	2643	395	3510

Table 2: Number of Firm switches from 2012 to 2016

Notes: Table 2 provides a deeper insight in terms of gender composition before and after the implementation of Companies Act 2013. Zero refers to a homogeneous board of males, one refers to having a single female on the corporate board, O.L. includes having two to five females resent on the board of directors. From this table it can be interpreted that 1130 firms have switched from a homogeneous board in 2012 to having one board member in 2016, representing a large portion of firms that needed to abide with the legislation.

To further understand the current situation, the descriptive statistics is reported in the appendix section (A.2). The mean, standard deviation and firm year observations is reported across the different board composition in terms of female inclusion (No WOB, One WOB and OL) and across the size of firms according to the 2018 proposed definition of MSME (Micro, Small, Medium and Large Enterprises). From the table, it can be concluded that ROA is decreasing for firms that have a more gender diverse board. However, the market performance is higher for firms that have at least a female board members as opposed to a male homogeneous firms. From the perspective of firm size, accounting performance is increasing for larger firms. In terms of market performance, the trend follows a U-shape from micro to large enterprises. This is consistent across firms with different female board composition.

Table 3 reports the correlation matrix for all the variables that will be conducted in the following regressions. There is no immediate concern in terms of correlation, except that the variable number of board members has a relative high correlation with executive and independent directors. This will be checked through a multicollinearity test before running the regressions.

#	N	Mean	S.D	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Financial Performance																				
1 RoA	46,807	0.013	0.125	-0.904	0.358	1.000														
2 Tobin's Q	32,469	1.309	1.450	0.081	10.536	0.044	1.000													
Gender Diverstiy																				
3 WOB_Dummy	47,177	0.334	0.472	0	1	-0.005	0.065	1.000												
4 WOB_Perc	47,177	0.052	0.088	0	1	-0.035	0.053	0.853	1.000											
5 WOB_Count	47,177	0.390	0.606	0	5	0.004	0.055	0.905	0.899	1.000										
6 WOB_OL	47,177	0.048	0.214	0	1	0.015	0.010	0.312	0.539	0.656	1.000									
7 WOB_CM	47,177	0.021	0.142	0	1	-0.020	0.019	0.144	0.451	0.287	0.342	1.000								
8 WOB_Blau	47,177	0.083	0.128	0	0.5	-0.032	0.057	0.917	0.978	0.921	0.491	0.328	1.000							
Board Characteristics																				
9 Board Members	47,177	7.943	3.405	1	39	0.128	0.003	0.115	-0.088	0.147	0.121	-0.105	-0.055	1.000						
10 Interlock	47,177	0.604	0.695	0	7	0.073	0.011	-0.078	-0.128	-0.073	-0.027	-0.054	-0.123	0.225	1.000					
11 Executive	47,177	1.976	1.534	0	15	0.073	-0.009	0.174	0.034	0.176	0.086	-0.047	0.061	0.529	-0.026	1.000				
12 Independent	47,177	3.268	2.180	0	19	0.089	-0.005	0.092	-0.059	0.113	0.088	-0.086	-0.032	0.636	0.204	0.289	1.000			
Firm Characteritics																				
13 Firm Age	47,152	28.169	18.553	0	153	0.038	-0.019	0.037	-0.012	0.033	0.008	-0.016	-0.007	0.233	0.156	0.074	0.123	1.000		
14 Family Business	47,177	0.652	0.476	0	1	0.085	-0.027	0.044	0.023	0.037	0.011	-0.005	0.028	0.018	0.030	0.040	0.020	0.061	1.000	
Industry Characteristics																				
15 HHI	44,551	0.741	0.256	0	1	-0.064	0.040	0.010	0.050	0.010	-0.002	0.025	0.047	-0.143	-0.102	-0.082	-0.097	-0.146	-0.053	1.000

Table 3: Correlation Table

4.2 Relationship between WOB and Financial Firm Performance

4.2.1 Linear Relationship between WOB and Financial Firm Performance

The first regression analyzes the effect of gender diversity on financial firm performance across the full sample of firms. This is conducted across four different explanatory variable with two different dependent variables - ROA and Tobin's Q. In order to ensure that there are no model mispecification, additional tests are conducted before running the first regression. The Hausman specification test was conducted and the fixed model was deemed most appropriate for all four metrics. Additionally, the variance inflation factor (VIF) test is conducted for multicollinearity and there is no concern for this.

VARIABLES	ROA				Tobins's Q			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WOB_Dummy	0.0067***				0.0965***			
	[0.0025]				[0.0307]			
WOB_Perc		0.0167				0.3353		
		[0.0141]				[0.2162]		
WOB_Count			0.0041**				0.0696***	
			[0.0019]				[0.0258]	
WOB_Blau				0.0175*				0.2571*
				[0.0096]				[0.1391]
Board Size	0.0006	0.0008	0.0006	0.0007	0.0058	0.0081	0.0055	0.0078
	[0.0005]	[0.0005]	[0.0005]	[0.0005]	[0.0056]	[0.0056]	[0.0057]	[0.0056]
Interlock	0.0017	0.0015	0.0016	0.0016	-0.0670***	-0.0686***	-0.0667**	-0.0683***
	[0.0020]	[0.0020]	[0.0020]	[0.0020]	[0.0259]	[0.0260]	[0.0259]	[0.0259]
Executive	0.0007	0.0008	0.0007	0.0008	0.0016	0.0018	0.0015	0.0020
	[0.0008]	[0.0008]	[0.0008]	[0.0008]	[0.0093]	[0.0093]	[0.0093]	[0.0093]
Independent	0.0002	0.0002	0.0002	0.0002	-0.0185***	-0.0184***	-0.0186***	-0.0184***
	[0.0005]	[0.0005]	[0.0005]	[0.0005]	[0.0054]	[0.0054]	[0.0054]	[0.0054]
Firm Age	-0.0286***	-0.0280***	-0.0283***	-0.0283***	0.0245***	0.0276***	0.0255***	0.0268***
	[0.0031]	[0.0031]	[0.0031]	[0.0031]	[0.0035]	[0.0033]	[0.0034]	[0.0034]
Family Business	0.0089***	0.0089***	0.0089***	0.0089***	0.0636**	0.0645***	0.0645**	0.0641**
	[0.0025]	[0.0025]	[0.0025]	[0.0025]	[0.0280]	[0.0280]	[0.0280]	[0.0280]
HHI	0.0033	0.0033	0.0033	0.0033	0.2122***	0.2118***	0.2128***	0.2118***
	[0.0046]	[0.0046]	[0.0046]	[0.0046]	[0.0592]	[0.0592]	[0.0592]	[0.0592]
Constant	0.6290***	0.6165***	0.6226***	0.6232***	0.3022***	0.2207**	0.2852***	0.2380**
	[0.0723]	[0.0719]	[0.0722]	[0.0719]	[0.1061]	[0.1031]	[0.1059]	[0.1039]
Observations	44,518	44,518	44,518	44,518	31,752	31,752	31,752	31,752
Number of Firms	4,339	4,339	4,339	4,339	3,678	3,678	3,678	3,678
R-squared	0.027	0.026	0.027	0.027	0.059	0.058	0.059	0.058
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 4: The effect of Gender Diversity on Financial Firm Performance

Notes: Data of 4,441 firms from 2004 to 2016 is collected from PROWESS and MCA. This results in 44,518 firm year observations for models 1 to 4 and 31,752 firm year observations for models 5 to 8. Models one to four run a fixed effects model with the dependent variable ROA, while models five to eight run a fixed effects model with the dependent variable Tobin's Q. All models include year and company fixed effects. Model one and five is regressed using a dummy variable, which indicates if there is a female present on the board or not for company i at time t. Models two and six run the regression with a ratio of women to male board members for company i at time t. Models three and seven use the explanatory variable that counts the number of female board members for company i at time t. Models four and eight use the Blau Index to calculate gender diversity for company i at time t. Almost all models show a significant positive effect of gender diversity on financial firm performance, however models two and six show a positive but no significant effect. Robust t statistics, clustered by state, in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

From the table it can be observed that gender diversity has a positive significant effect on both accounting and market performance, except for WOB_Perc - a gender diversity metric that represents

percentage of female board members. This is possibly due to the fact that this variable is dependent on two variables - number of board members and number of WOB. The coefficient of WOB_Dummy in model one is interpreted as firms that have a female present within the corporate board has an ROA of 0.0067 higher than a male homogeneous firm.

Due to endogeneity, the same model is re-run with the lagged explanatory and board characteristics. The output of this regression is presented within the appendix section A.4. The coefficients for all the models are still positive, however there are no signs of significance. Therefore the previous findings are not robust and the conclusion cannot be made that gender diversity has a positive effect on financial firm performance.

4.2.2 Gender-balanced boards and Financial Firm Performance

| VARIABLES | ROA | | | | Tobin's Q | | | |
| | FE Model | | FE Model with lag | | FE Model | | FE Model with lag | |
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
WOB_OL	-0.0016		0.0007		0.0244		0.0245	
	[0.0037]		[0.0039]		[0.0603]		[0.0687]	
WOB_CM		-0.0139**		-0.0079		0.0792		0.0937
		[0.0058]		[0.0068]		[0.1031]		[0.0973]
Board Size	0.0008	0.0007	-0.0001	-0.0001	0.0078	0.0083	-0.0023	-0.0018
	[0.0005]	[0.0005]	[0.0005]	[0.0005]	[0.0056]	[0.0056]	[0.0060]	[0.0060]
Interlock	0.0014	0.0014	-0.0005	-0.0005	-0.0704***	-0.0706***	-0.0854***	-0.0856***
	[0.0020]	[0.0020]	[0.0020]	[0.0020]	[0.0260]	[0.0259]	[0.0289]	[0.0289]
Executive	0.0007	0.0007	-0.0005	-0.0005	0.0012	0.0012	-0.0161*	-0.0161*
	[0.0008]	[0.0008]	[0.0008]	[0.0008]	[0.0093]	[0.0093]	[0.0096]	[0.0096]
Independent	0.0002	0.0002	-0.0004	-0.0004	-0.0185***	-0.0184***	-0.0288***	-0.0288***
	[0.0005]	[0.0005]	[0.0004]	[0.0004]	[0.0054]	[0.0054]	[0.0057]	[0.0057]
Firm Age	-0.0275***	-0.0275***	-0.0024***	-0.0024***	0.0298***	0.0299***	-0.0063*	-0.0062*
	[0.0031]	[0.0031]	[0.0003]	[0.0003]	[0.0031]	[0.0031]	[0.0035]	[0.0035]
Family Business	0.0090***	0.0091***	0.0069**	0.0070**	0.0649**	0.0648**	0.0703**	0.0702**
	[0.0025]	[0.0025]	[0.0027]	[0.0027]	[0.0280]	[0.0280]	[0.0319]	[0.0318]
HHI	0.0032	0.0031	0.0035	0.0034	0.2113***	0.2116***	0.1797***	0.1805***
	[0.0046]	[0.0046]	[0.0049]	[0.0049]	[0.0592]	[0.0592]	[0.0614]	[0.0615]
Constant	0.6066***	0.6063***	0.0745***	0.0747***	0.1818*	0.1748*	1.6653***	1.6585***
	[0.0719]	[0.0718]	[0.0101]	[0.0100]	[0.1018]	[0.1014]	[0.1207]	[0.1204]
Observations	44,518	44,518	39,215	39,215	31,752	31,752	28,730	28,730
R-squared	0.026	0.027	0.028	0.028	0.058	0.058	0.056	0.056
Number of firms	4,339	4,339	4,205	4,205	3,678	3,678	3,568	3,568
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 5: Critical Mass and Outside Legislation Effect on Financial Firm Performance
Notes: Data of 4,441 firms from 2004 to 2016 is collected from PROWESS and MCA. This results in 44,518 firm year observations for the first two models, 39,215 for models 11 and 12, 31,752 firm year observations for models 13 and 14 and 28,730 for models 15 and 16. Models 9 to 12 run a fixed effects model with the dependent variable ROA, while models 13 to 16 run a fixed effects model with the dependent variable Tobin's Q. In addition, models 10, 12, 14 and 16 use the lagged variables for gender diversity and board characteristics. All models include year and company fixed effects. Models 9, 11, 13 and 15 run the regression using the gender diversity that represents having at least two women present at the board. The rest of the models run the regression with the variable critical mass - representing if at least 30% of the board members are female. Models 9, 13 and 20 have a negative, insignificant effect expect for model 10 which is negatively significant at a 5% level. Models 11, 13 to 16 have a positive, but insignificant effect. Robust t statistics, clustered by state, in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

With the general effect of gender diversity studied, past research has shown that a gender-balanced board - consisting of at least 30 percent women - allows for the optimal environment for female directors to fulfill their monitoring role. Additionally, this sort of environment is not prone to the effect of tokenism that may be accompanied with the Companies Act 2013. Table four presents the output similar to the previous table with the inclusion of critical mass and firms that have included more than one women on board (above the minimum required by the Companies Act 2013).

From the table, it can be interpreted that firms that have reached critical mass have a negative significant effect on accounting performance (Model 10). However, this result is insignificant and therefore not robust when rerunning the model with lagged gender diversity (Model 12). In terms of market performance, the coefficients of Critical Mass and OL are positive, however the effect themselves are insignificant and no conclusion can be made.

Combining the results from table four and five, indicate that there is a positive effect of having a gender diverse board on financial firm performance, however this is not robust and therefore the first hypothesis is rejected. The effect is further diminished when the definition of gender diversity is adjusted to consider the effect of a larger group of women present with a corporate board. The second hypothesis is therefore as well rejected.

4.2.3 Gender Diversity and the role of firm size

The above conclusion is further studied if this is consistent across different types of firms. The sample is split into four firm classification based on the MSME - Micro, Small, Medium and Large Enterprises. The output is presented within the appendix section A.5 and A.6.

The effect of gender diversity is negative but insignificant across both market and accounting performance for micro enterprises. The lagged FE model offers the same conclusion, except that WOB_Perc is negatively significant. Th effect of gender diversity is significantly positive on accounting performance (except for WOB_Dummy) and on market performance (except for WOB_Perc and WOB_Blau) for Small Enterprises. The lagged model indicates no significant effect in terms of accounting performance, however this is significantly positive in terms of market performance (except for WOB_Perc). For Medium Enterprises, gender diversity affects both market and accounting performance (except for WOB_Count in the case for accounting and WOB_Perc for market performance). However, these results are not significant across the lagged FE model. For Large Enterprises, there is no significant effect in terms of accounting performance (except for WOB_Dummy). Despite this, the effect is significant positive across all definitions in terms of market performance. Similarly to medium enterprises, the effects are not robust in when lagging the gender diversity metrics (except for WOB_Count in the

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case of market performance).

In the second hypothesis, gender-balanced boards negatively affect accounting performance for micro enterprises. Furthermore, the results are robust for boards that have reached critical mass. In terms of market performance, all the effects are negatively insignificant except for the lagged model that uses critical mass. In terms of small enterprises, all the effects are positively insignificant, except for model 105, where OL positively significantly affects accounting performance in the lagged model. In terms of medium enterprises, most effects on accounting performance are negatively insignificantly affecting except for OL which is positively insignificant in the lagged model. In terms of market performance, all effects are negatively insignificantly affecting except for critical mass which is negatively significantly affecting. For Large enterprises, the effect of gender diversity is negatively insignificantly affecting market performance, while this is positive in terms of market performance (Except for critical mass in the lagged model).

In conclusion, when accounting for firm size, gender diversity in small enterprises have a positive effect on market performance, while gender-balanced firms (critical mass) has a negative effect on accounting performance.

4.3 Interaction Variables

With the relationship between gender diversity and taking account for firm size is established, interactive variables are included such as independence and family business in order to gain further insights and to further study the effect of having a non-male homogeneous board. Both variables are crucial in terms of the analysis as independence accounts for experienced directors and family business accounts for tokenism.

Since there are almost consistent results across the four different definitions of gender diversity in first two hypothesis, the analysis is further conducted with only one of the explanatory variable - Blau Index.

4.3.1 Independence

Independent female boards members have shown to be especially relevant in India, as they tend to be more experienced and therefore are more likely able to fulfill their monitoring role and overcoming the principal-agency problem. Table six uses the same control and dependent variables as previous models, however the explanatory variables are changed to percentage of independent directors and the percentage of independent female directors.

The percentage of independent directors on the board has a positive insignificant effect when the dependent variable is accounting performance (negative insignificant for lagged FE model), whilst the effect is negatively significant effect on the market performance. The explanatory variable - percentage independent women - has a negative insignificant effect on accounting performance, while the effect is positively insignificant on market performance.

In the appendix A.7, the analysis is further conducted to include firm size. Percentage of independent director is significantly negatively affecting market performance for small,medium and large enterprises. Additionally, the percentage of female independent directors is positively significant affecting market performance for medium and large enterprises. This is however not robust when running the lagged model.

In conclusion, independent directors have a negative significant effect on market performance for small, medium and large enterprises. Independent female directors have a positive significant effect on market performance for medium and large enterprises, however the results are not robust. The paper of Nguyen et al. (2017) highlighted the fact that independent directors may not be able to fulfill their monitoring role due to information asymmetry, expertise disadvantage and lack of ownership concentration. Female independent directors may overcome these obstacles due to the fact that there is a limited number of female directors available of which are most likely to be highly experienced and provide a stronger monitoring role as board members.

VARIABLES	ROA		Tobin's Q	
	FE Model	FE Lagged Model	FE Model	FE Lagged Model
	(17)	(18)	(19)	(20)
% Independent Women	-0.0115	-0.0079	0.3925	0.0606
	[0.0210]	[0.0234]	[0.2889]	[0.3356]
% Independent Directors	0.0010	0.0038	-0.2168***	-0.2875***
	[0.0040]	[0.0041]	[0.0525]	[0.0556]
Constant	0.6032***	0.0351***	0.2834***	1.7571***
	[0.0722]	[0.0098]	[0.1044]	[0.1238]
Observations	44,518	39,145	31,752	28,730
R-squared	0.026	0.022	0.059	0.057
Number of firms	4,339	4,204	3,678	3,568
Year FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes

Table 6: The effect of (female) independent directors on financial firm performance in India

Notes: Data of 4,441 firms from 2004 to 2016 is collected from PROWESS and MCA. This results in 44,518 firm year observations for model 17, 39,215 for model 18, 31,752 firm year observations for model 19 and 28,730 for model 20. Models 17 and 18 run a fixed effects model with the dependent variable ROA, while models 19 and 20 run a fixed effects model with the dependent variable Tobin's Q. In addition, models 18 and 20 use the lagged variables for gender diversity and board characteristics. All models include year and company fixed effects. All models use two variables of interest, % Independent Directors which is defined as percentage of independent directors and % independent women which is defined as percentage of independent directors that are female. Within models 19 and 20, the coefficient for percentage of independent directors is negatively significant at 1 % significance level. Robust t statistics, clustered by state, in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

4.3.2 Family Business

The final hypothesis orients around the concept that 25 percent of businesses that have a female present on the board of directors are actually family members and that female family board members are included in order to maintain share power as well as to comply with legislation. In terms of accounting performance, family business is positively significant indicating that family business have a higher accounting performance compared to non-family businesses. However, the effect of the blau index has disappeared and there is no significant effect in terms of the interaction variable. In terms of market performance, the effect of family business is not significant and marginal effect of the blau index in the previous regressions has disappeared. However, the interaction variable is positively significant and robust. This aligns with the idea behind the paper of Bjuggren et al. (2018), where female leadership in family businesses contribute a positive on profit. Therefore the hypothesis is rejected as there is a positive effect in the interaction between family business and gender diversity on market performance. However, the interaction variable is not significant for different firms size and therefore no additional conclusion can be made (Appendix A.8).

VARIABLES	ROA		Tobin's Q	
	FE	FE with lag	FE	FE with lag
	(21)	(22)	(23)	(24)
WOB x Family Business	-0.0025	0.0164	0.5617***	0.5875***
	[0.0142]	[0.0146]	[0.2024]	[0.2060]
WOB Blau	0.0191	-0.0025	-0.1047	-0.3326
	[0.0141]	[0.0156]	[0.2036]	[0.2190]
Family Business	0.0091***	0.0062**	0.0235	0.0469
	[0.0028]	[0.0028]	[0.0306]	[0.0319]
Constant	0.6240***	0.0768***	0.2655**	1.6915***
	[0.0721]	[0.0102]	[0.1038]	[0.1249]
Observations	44,518	39,215	31,752	28,730
R-squared	0.027	0.028	0.059	0.057
Number of firms	4,339	4,205	3,678	3,568
Year FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes

Table 7: The effect of Family Business and Gender Diversity on Financial Firm Performance
Notes: Data of 4,441 firms from 2004 to 2016 is collected from PROWESS and MCA. This results in 44,518 firm year observations for model 21, 39,215 for model 22, 31,752 firm year observations for model 23 and 28,730 for model 234. Models 21 and 22 run a fixed effects model with the dependent variable ROA, while models 23 and 24 run a fixed effects model with the dependent variable Tobin's Q. In addition, models 22 and 24 use the lagged variables for gender diversity and board characteristics. All models include year and company fixed effects. WOB Blau represents the gender diversity, Family Business indicates if the firm is a family business (more than 40% shares are owned by the promoters and the interaction variable between WOB Blau and gender diversity. Family Business is significantly positive in models 21 and 22, whilst the interaction variable is significantly positive for models 23 and 24. Robust t statistics, clustered by state, in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

4.4 The role of tokenism due to Companies Act 2013

The final analysis orients around the implementation of the Companies Act 2013. This will help to understand if having a more gender diverse board has contributed in terms of financial performance. The official implementation of the Companies Act 2013 has taken place in 2015 and therefore a time period dummy is included that marks the period when the Companies Act 2013 has initiated. Since the focus orients around the Companies Act 2013, the lagged FE model is not included due to the illogical interpretation with the lagged gender diversity.

Table eight presents the analysis while using the blau index as the definition of gender diversity. Within accounting performance, the effect of gender diversity, family business and its interaction remains the same as deduced in the previous hypothesis. The accounting performance for firms perform better after the Companies Act 2013 has taken place, as well as family business and firms with a higher gender diversity index after legislation has taken place. Despite the increase in accounting performance, the triple interaction between Companies Act 2013, family business and gender diversity indicate that tokenism has played its role and that the effect is negatively affecting.

In terms of market performance, the effect of gender diversity, family business and its interaction is similar to the previous regression. Firms are performing worse since the Companies Act 2013, however this is not the case for firms with a higher gender diverse board. Family business are performing better after Companies Act 2013, however this is not significant. The triple interaction is again negative, however the results is not significant.

In the appendix section (A.9), the consistency of this analysis is checked across different sizes of firms. Additionally, the Companies Act 2013 has only impact on large enterprises. The triple interaction is significantly negative for micro enterprises. Despite the fact that the Companies Act 2013 is only affecting large enterprises, there is a clear effect on micro enterprises.

VARIABLES	ROA	Tobin's Q
	(25)	(26)
WOB 6	0.0169	0.1007
	[0.0160]	[0.2257]
Family Business	0.0075***	0.0228
	[0.0028]	[0.0305]
Companies Act 2013	0.2830***	-0.4199*
	[0.0365]	[0.2477]
WOB 6 x Family Business	-0.0104	0.4674**
	[0.0165]	[0.2278]
WOB 6 x Companies Act 2013	0.0746**	-0.4705
	[0.0329]	[0.4190]
Companies Act 2013 x Family Business	0.0262***	0.0929
	[0.0085]	[0.0947]
Companies Act 2013 x Family Business x WOB 6	-0.0726*	-0.1613
	[0.0385]	[0.4688]
Constant	0.6000***	-0.5975
	[0.0736]	[0.5100]
Observations	44,518	31,752
R-squared	0.027	0.060
Number of firms	4,339	3,678
Year FE	Yes	Yes
Company FE	Yes	Yes

Table 8: The additional effect of Companies Act 2013 on the financial firm performance

Notes: Data of 4,441 firms from 2004 to 2016 is collected from PROWESS and MCA. This results in 44,518 firm year observations for model 25, 39,215 for model 26. Model 25 runs a fixed effects model with the dependent variable ROA, while model 26 runs a fixed effects model with the dependent variable Tobin's Q. All models include year and company fixed effects. WOB Blau represents the gender diversity, Family Business indicates if the firm is a family business (more than 40% shares are owned by the promoters). Companies Act 2013 refers to a time dummy period indicating a one after 2014. The rest of the variables are form of interaction between the previously mentioned variables. In model 21, family business, Companies Act 2013, interaction between Companies Act 2013 and family business is positively significant. However, the triple interaction is negatively significant at a 10 percent significance level. In model 22, the interaction between family business and gender diversity is positively significant at a 5 percent significance level, while Companies Act is negatively significant at a 10 percent significance level. Robust t statistics, clustered by state, in parentheses * p < 0.10, ** p < 0.05, *** p < 0.01.

5 Robustness and Model Improvements

The Robustness and Model Improvements section focuses on several key aspects in order to confirm the results and potentially improve the model conducted. This consists of four components: robust definition, model specification, sample data size and IV. The prior two components have already been included in the report itself through the form of five different definitions of gender diversity and the re-regression of the same model with lagged variables. The next section further explores the other two components.

5.1 Sample Data

5.1.1 Non-financial firms

Financial firms, such as banking and insurance firms are removed due to having different regulation (governed by Banking Regulation Act 1949, or the division under Ministry of Corporate Affairs and capital structures (Srivastava et al. (2018)). Within appendix A.3, sections are identified according to their CIN number. Therefore firms that fall under Financial and insurance activities (Section K) are dropped from analysis, resulting in 3,588 non-financial firms and 38,501 firm year observations.

The output themselves are not reported within the paper, however adjustments in terms of significance or signs are in detail discussed. The removal of financial firms, results in WOB_Perc to be positively significant to ROA in FE models for hypothesis one, while for the FE lagged model WOB_Dummy, WOB_Count and WOB_Blau are now positively significant for market performance. Repeating the same procedure for Hypothesis two results in the critical mass to not be significantly negative. Therefore, the positive effect of gender diversity is strengthen with the exclusion of financial firms.

Dwelling deeper into firm size, the results are slightly adjusted. For hypothesis one, firms that fall under hypothesis one for micro enterprises are now all positively significant for market performance. For small enterprises, WOB_Count is now not significant anymore. No changes took place for medium and large enterprises. In terms of second hypothesis, no changes have been made for the coefficients.

For the third hypothesis, the effect of percentage independent women is now positively insignificant, whilst the effect of percentage independent directors is negatively insignificant for micro enterprises. For the fourth hypothesis, WOB_Blau is now significantly negative for micro enterprises in terms of accounting performance.

In the final regression, Companies Act 2013 is now negatively insignificant and the interaction between Companies Act 2013 and Family Business is insignificant for accounting performance for micro

enterprises. Furthermore, the interaction of gender diversify and Companies act is now significantly positive. In small enterprises, the interaction between Companies Act and Family Business is not positive but still insignificant.

With exclusion of financial firms, the linear effect of gender diversity is positively significant on market performance. This is in particular the case for micro enterprises. Furthermore, the negative effect of firms that have reached critical mass has disappeared as well.

5.2 IV

Due to possible endogeneity, throughout the paper FE model with lagged explanatory and board characteristics have been implemented. A different approach to overcome reverse causality is by introducing an instrumental variable to replace gender diversity. This instrument variable requires to be correlated with WOB, but uncorrelated with firm performance except through controlled variables.

The instrument variable used in this paper originates from the paper of Adam & Shavit (2009) which argues that the current barrier for a gender diverse board is driven by the social network dominated which is currently dominated by males. From this statement, the IV is built upon the idea that the more males are inter-connected with females, the more likely female directors will be recruited in the board. Since informal connections cannot be defined, the best possible alternative is to consider board interlocks - directors that are present in other firms. Therefore the instrument variable is defined as the fraction of male directors on the board that are present in other non-homogeneous boards. The smaller the fraction, the smaller the gender diversity and therefore the correlation exists with gender diversity.

The output is presented in the appendix (A.10) and is conducted for hypothesis one and four. In terms of hypothesis one, no significant effect is present. Micro enterprises have a significant negative effect on accounting performance and large enterprises have a positive significant effect on market performance. In terms of the fourth hypothesis, the interaction variable is insignificant for market performance. No further adjustments have been noticed for the interaction variable in terms of firm size.

6   Discussion and Further Improvements

This paper has provided indication that having a gender diverse board has an effect on financial firm performance. This is analyzed across multiple definitions of gender diversity metrics as well as incorporating the role of independent directors and family businesses. Finally, the effect of Companies Act 2013 is included in the analysis as well as highlighting the role of gender diversity across different types of firms. The results are shared below and further discussed with current literature.

Regarding the effect of gender diversity and financial firm performance, gender diversity has a positive effect on market performance for small enterprises, while micro enterprises have a negative effect on accounting performance. Furthermore, when financial firms are removed, gender diversity has an effect across all firms in term terms of market performance and no conclusion can be made with regarding to accounting performance. The prior conclusion can be partially explained by the fact that small enterprises can benefit of having access to larger pool of resources (Ali & Ng, 2013). Additionally, given the fact the effect is now significant for non finance firms indicates that social identity theory is in play for financial firms. The latter conclusion is due to the fact that having more women on board can lead to disturbances and therefore the monitoring role is compromised (Adam & Shavit, 2009). Furthermore, the paper of Mínguez-Vera & Martin (2011) argues that women are more likely to adopt less risky policies and therefore result in negative firm performance.

The percentage of independent directors is negatively affecting market performance. This is especially the case for small, medium and large enterprises. The reasoning behind this is that majority of the businesses in India are family business and the monitoring role and expertise behind independent directors are viewed as negatively affecting financial firm performance. Institutional intervention has played a role as well for independent directors through the Companies Act 2013[10]. Therefore, similarly to the argument of tokenism for gender diversity, the same thought process can be be made for independent directors. The percentage of independent female directors is positively significant for medium and large enterprises, however this is not robust when running the lagged FE model.

Looking from the perspective of family businesses, family businesses that have a higher gender diversity index have a positive significant index for market performance. This conclusion aligns with the paper of Bjuggren et al. (2018). In order to ascertain the fact that tokenism does not come into place, the Companies Act 2013 was included in the analysis. The triple interaction (in terms of accounting performance) is negatively significant. This highlights the fact that tokenism is in play and that skilled male counterparts are excluded from the business (Liu et al., 2014). Further

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[10]Section 149 from the Companies Act 2013, a third of all directors required to be independent directors for listed companies and at least two directors require to independent directors for non listed firms

deep-dive reveals that this is primarily the case for micro enterprises which were not affected by the Companies Act 2013. This leads to two possible reasoning. The first is that these firms have joined the band wagon to include females in the board of directors, which were actually family members and resulted in shareholderism. The second possible reasoning is that due to the large demand of female board members since Companies Act 2013 and the limited number of experience women in senior management, females are more likely to be present across multiple boards. This will result in less focus and therefore a weaker monitoring role within micro enterprises.

The current research in the paper can be expanded and further improved upon. Firstly, a different model can be used instead of the fixed effects model. One such model is called the Arellano-Bond one step method, which addresses endogeneity from unobserved heterogeneity, relationship between board structure and past financial performance. Secondly, the definition of family business is defined under the variable of promoter and the assumption is taken that females present within these family businesses are likely to be family members as well. This is not necessarily the case and the definition should be changed to identify if the females in the board are family members or not. This will provide a more accurate analysis and a more correct interpretation. Fourthly, the Companies Act 2013 is relevant for public firms that are traded in the stock market. A more in depth analysis would separately run the analysis for firms on stock exchange market. The results will be likely similar to large enterprises. Fifthly, the current definitions used as financial firm performance is not without their drawbacks. The definition of market performance (Tobins Q) is endogenous since managers can under invest and therefore operate below the firms profit maximizing scale and therefore the firms NPV will reduce. This will result in an increase in Tobins Q (Dybvig & Warachka, 2012). Lastly, the direct effect of gender diversity is analyzed in the short term. In the long run, female candidates are less likely to drop out before senior management in gender diverse boards and the result of the Companies Act 2013 is likely to indirectly affect the effect of gender diversity though middle management.

7 Conclusion

The present study analyzes 4,441 public firms in India and focuses on the effect of gender diversity - a specific type of demographic diversity - on two different financial firm performances: accounting (ROA) and market (Tobin's Q) performance.

What can be concluded from the analysis is that the inclusion of women does have a positive significant effect on market performance for non-financial firms. Additionally, the positive effect is observed as well for small enterprises for the full sample. However, boards that have reached critical mass has a negative effect on accounting performance. Independent directors have a negative effect on small, medium and large enterprises in terms of market performance, while family businesses with a higher gender diversity have a positive effect. The inclusion of Companies Act 2013 to family business and gender diversity results in a negative significant effect for accounting performance. This is observed as well for micro enterprises.

The paper contributes to the academic world by extending the current existing literature in terms of sample size of firms in India and highlights the importance of including the size of firm when conducting research with regards to gender diversity. Additionally, the paper highlights that tokenism comes into play for family business due to the effect of institutional intervention through the Companies Act 2013. For policy makers, several useful insights can be made. Firstly, it should be considered in the near future to expand the policy from one WOB to a a minimum board requirement of female members as a percentage. This is seen implemented across many countries and can help overcome tokenism. Secondly, role of gender diversity in micro enterprises is highlighted and required attention.

A Appendices

A.1 MSME Definition

Enterprises	Investment Amount (MSMED 2006)	Turnover Amount (2008 Proposed Definition)
	Manufacturing Sector	
Micro Enterprises	Less than twenty five lakh rupees	Turnover up to five crore rupees
Small Enterprises	More than twenty five lakh rupees but does not exceed five crore	Turnover between five and up to 75 crore rupees
Medium Enterprises	More than five crore rupees but less than ten crore rupees	Turnover between 75 and up to 250 crore rupees
Large Enterprises	More than ten crore rupees	Turnover from 250 crore rupees onwards
	Service Sector	
Micro Enterprises	Less that ten lakh rupees	Turnover up to five crore rupees
Small Enterprises	More than ten lakh rupees but does not exceed two crore rupees	Turnover between five and up to 75 crore rupees
Medium Enterprises	More than two crore rupees but less than five crore rupees	Turnover between 75 and up to 250 crore rupees
Large Enterprises	More than five crore rupees	Turnover from 250 crore rupees onwards

Table 9: MSME Defintion of Firm Classification

Notes: One lakh rupees = 100.000 rupees and One crore = 10.000.000 rupees

A.2 Descriptive Statistics

Size of Firms	Financial Performance	Full Sample			No WOB			One WOB			OL		
		Mean	*Std. Dev.*	*N*	*Mean*	*Std. Dev.*	*N*	*Mean*	*Std. Dev.*	*N*	*Mean*	*Std. Dev.*	*N*
Full Sample	*RoA*	0.013	0.125	46,807	0.012	0.125	31,100	0.011	0.129	13,445	0.026	0.104	2,262
	Tobin's Q	1.310	1.450	32,469	1.244	1.351	21,040	1.442	1.631	9,799	1.356	1.473	1,630
Micro Enterprises	*RoA*	-0.021	0.155	8,305	-0.020	0.154	5,578	-0.025	0.160	2,371	-0.020	0.139	356
	Tobin's Q	1.679	2.006	3,562	1.698	2.014	2,233	1.662	2.013	1,154	1.562	1.849	175
Small Enterprises	*RoA*	0.012	0.117	12,067	0.011	0.121	8,103	0.011	0.113	3,342	0.026	0.090	622
	Tobin's Q	1.115	1.187	8,934	1.066	1.084	5,919	1.236	1.382	2,545	1.074	1.234	470
Medium Enterprises	*RoA*	0.032	0.090	7,539	0.032	0.088	5,158	0.029	0.094	2,068	0.039	0.090	313
	Tobin's Q	1.101	1.004	6,574	1.068	0.919	4,482	1.185	1.195	1,829	1.079	0.911	263
Large Enterprises	*RoA*	0.049	0.082	11,328	0.050	0.083	6,987	0.048	0.797	3,678	0.552	0.079	663
	Tobin's Q	1.357	1.276	10,190	1.256	1.120	6,227	1.490	1.454	3,374	1.660	1.570	589

Table 10: Descriptive Statistics

A.3 Industry Definition

Section	J	Information and communication
Division	59	Motion picture, video and television programme production, sound recording and music publishing activities
Group	591	Motion picture, video and television programme activities
Class	5914	Motion picture projection activities
Subclass	59141	Motion picture or video tape projection in cinemas, in the open air or in other projection facilities

Section	Description	Section	Description
A	Agriculture, forestry and fishing	L	Real estate activities
B	Mining and quarrying	M	Professional, scientific and technical activities
C	Manufacturing	N	Administrative and support service activities
D	Electricity, gas, steam and air conditioning supply	O	Public administration and defence; compulsory social security
E	Water supply; sewerage, waste management and remediation activities	P	Education
F	Construction	Q	Human health and social work activities
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	R	Arts, entertainment and recreation
H	Transportation and storage	S	Other service activities
I	Accommodation and Food service activities	T	Activities of households as employers; undifferentiated goods- and services producing activities of households for own use
J	Information and communication	U	Activities of extraterritorial organizations and bodies
K	Financial and insurance activities		

A.4 Hypothesis One - Lag

VARIABLES	ROA				Tobins's Q			
	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
L.WOB_Dummy	0.0031				0.0354			
	[0.0026]				[0.0349]			
L.WOB_Perc		0.0071				0.0544		
		[0.0155]				[0.2407]		
L.WOB_Count			0.0022				0.0312	
			[0.0020]				[0.0288]	
L.WOB_Blau				0.0084				0.0589
				[0.0107]				[0.1569]
Constant	0.0782***	0.0753***	0.0776***	0.0765***	1.7080***	1.6685***	1.7093***	1.6757***
	[0.0105]	[0.0102]	[0.0104]	[0.0102]	[0.1270]	[0.1240]	[0.1264]	[0.1251]
Observations	39,215	39,215	39,215	39,215	28,730	28,730	28,730	28,730
Number of Firms	4,205	4,205	4,205	4,205	3,568	3,568	3,568	3,568
R-squared	0.028	0.028	0.028	0.028	0.056	0.056	0.056	0.056
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 11: Lagged gender diversity and financial firm performance in India

A.5 Hypothesis One - Firm Size

VARIABLES	ROA				Tobins's Q			
	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)
WOB_Dummy	-0.0012				-0.1602			
	[0.0085]				[0.1351]			
WOB_Perc		-0.0397				-0.8515		
		[0.0369]				[0.6765]		
WOB_Count			-0.0049				-0.1445	
			[0.0064]				[0.1190]	
WOB_Blau				-0.0138				-0.6555
				[0.0264]				[0.4831]
Constant	-0.0640**	-0.0678**	-0.0685**	-0.0660**	-0.7954*	-0.7458*	-0.8271*	-0.7833*
	[0.0272]	[0.0270]	[0.0276]	[0.0269]	[0.4403]	[0.4293]	[0.4397]	[0.4311]
Observations	7,974	7,974	7,974	7,974	3,474	3,474	3,474	3,474
Number of Firms	1,717	1,717	1,717	1,717	1,066	1,066	1,066	1,066
R-squared	0.016	0.016	0.016	0.016	0.050	0.050	0.050	0.051
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 12: Gender diversity and financial firm performance for micro enterprises in India

VARIABLES	ROA				Tobins's Q			
	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)
L.WOB_Dummy	-0.0066				-0.1393			
	[0.0100]				[0.1567]			
L.WOB_Perc		-0.0884**				-0.8705		
		[0.0450]				[0.8341]		
L.WOB_Count			-0.0088				-0.0937	
			[0.0080]				[0.1489]	
L.WOB_Blau				-0.0454				-0.6181
				[0.0324]				[0.5975]
Constant	-0.0296	-0.0343	-0.0331	-0.0336	0.7973	0.8272	0.8228	0.7985
	[0.0363]	[0.0359]	[0.0366]	[0.0361]	[0.5945]	[0.5805]	[0.5840]	[0.5822]
Observations	5,401	5,401	5,401	5,401	2,368	2,368	2,368	2,368
Number of Firms	1,272	1,272	1,272	1,272	771	771	771	771
R-squared	0.017	0.018	0.017	0.018	0.039	0.039	0.038	0.039
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 13: Lagged gender diversity and financial firm performance for micro enterprises in India

VARIABLES	ROA				Tobins's Q			
	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)
WOB_Dummy	0.0081				0.1096*			
	[0.0051]				[0.0580]			
WOB_Perc		0.0487**				0.4199		
		[0.0234]				[0.3631]		
WOB_Count			0.0078**				0.0760*	
			[0.0038]				[0.0455]	
WOB_Blau				0.0315*				0.3248
				[0.0177]				[0.2305]
Constant	-0.0258	-0.0289*	-0.0266	-0.0281*	0.3600**	0.3539**	0.3533**	0.3559**
	[0.0167]	[0.0161]	[0.0165]	[0.0162]	[0.1523]	[0.1467]	[0.1521]	[0.1484]
Observations	12,016	12,016	12,016	12,016	8,910	8,910	8,910	8,910
Number of Firms	2,170	2,170	2,170	2,170	1,779	1,779	1,779	1,779
R-squared	0.031	0.031	0.031	0.031	0.070	0.069	0.069	0.069
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 14: Gender diversity and financial firm performance for small enterprises in India

VARIABLES	ROA				Tobins's Q			
	(59)	(60)	(61)	(62)	(63)	(64)	(65)	(66)
L.WOB_Dummy	0.0044				0.1470**			
	[0.0060]				[0.0626]			
L.WOB_Perc		0.0254				0.5092		
		[0.0255]				[0.4095]		
L.WOB_Count			0.0060				0.0959*	
			[0.0042]				[0.0493]	
L.WOB_Blau				0.0151				0.4940*
				[0.0204]				[0.2533]
Constant	0.0800***	0.0781***	0.0826***	0.0785***	1.9146***	1.8182***	1.8772***	1.8635***
	[0.0213]	[0.0207]	[0.0211]	[0.0210]	[0.2249]	[0.2206]	[0.2256]	[0.2222]
Observations	8,935	8,935	8,935	8,935	6,860	6,860	6,860	6,860
Number of Firms	1,699	1,699	1,699	1,699	1,418	1,418	1,418	1,418
R-squared	0.025	0.025	0.025	0.025	0.066	0.065	0.065	0.066
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 15: Lagged gender diversity and financial firm performance for small enterprises in India

VARIABLES	ROA				Tobins's Q			
	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)
WOB_Dummy	0.0124**				0.1056**			
	[0.0049]				[0.0520]			
WOB_Perc		0.0658*				0.6135		
		[0.0350]				[0.3831]		
WOB_Count			0.0074				0.0879**	
			[0.0046]				[0.0439]	
WOB_Blau				0.0468**				0.4219*
				[0.0211]				[0.2406]
Constant	0.1630***	0.1550***	0.1576***	0.1576***	0.7278***	0.6671***	0.7207***	0.6863***
	[0.0212]	[0.0211]	[0.0213]	[0.0211]	[0.1846]	[0.1765]	[0.1826]	[0.1795]
Observations	7,532	7,532	7,532	7,532	6,570	6,570	6,570	6,570
Number of Firms	1,608	1,608	1,608	1,608	1,433	1,433	1,433	1,433
R-squared	0.076	0.075	0.075	0.075	0.121	0.121	0.121	0.121
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 16: Gender diversity and financial firm performance for medium enterprises in India

VARIABLES	ROA				Tobins's Q			
	(75)	(76)	(77)	(78)	(79)	(80)	(81)	(82)
L.WOB_Dummy	0.0022				0.0559			
	[0.0058]				[0.0788]			
L.WOB_Perc		0.0445				0.6579		
		[0.0418]				[0.6113]		
L.WOB_Count			0.0018				0.0626	
			[0.0054]				[0.0662]	
L.WOB_Blau				0.0274				0.3939
				[0.0255]				[0.3766]
Constant	0.1690***	0.1731***	0.1688***	0.1737***	1.5228***	1.5452***	1.5473***	1.5507***
	[0.0270]	[0.0275]	[0.0277]	[0.0275]	[0.2810]	[0.2721]	[0.2760]	[0.2769]
Observations	5,366	5,366	5,366	5,366	4,796	4,796	4,796	4,796
Number of Firms	1,295	1,295	1,295	1,295	1,174	1,174	1,174	1,174
R-squared	0.058	0.058	0.058	0.058	0.106	0.107	0.106	0.107
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 17: Lagged gender diversity and financial firm performance for medium enterprises in India

VARIABLES	ROA				Tobins's Q			
	(83)	(84)	(85)	(86)	(87)	(88)	(89)	(90)
WOB_Dummy	0.0065**				0.1421***			
	[0.0032]				[0.0451]			
WOB_Perc		0.0249				1.0669***		
		[0.0267]				[0.4130]		
WOB_Count			0.0034				0.1081***	
			[0.0026]				[0.0410]	
WOB_Blau				0.0189				0.6525***
				[0.0164]				[0.2441]
Constant	0.1234***	0.1160***	0.1196***	0.1174***	0.1355	0.0524	0.1229	0.0702
	[0.0152]	[0.0146]	[0.0152]	[0.0147]	[0.2291]	[0.2236]	[0.2249]	[0.2244]
Observations	11,317	11,317	11,317	11,317	10,185	10,185	10,185	10,185
Number of Firms	1,405	1,405	1,405	1,405	1,343	1,343	1,343	1,343
R-squared	0.101	0.101	0.101	0.101	0.120	0.120	0.120	0.120
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 18: Gender diversity and financial firm performance for large enterprises in India

VARIABLES	ROA				Tobins's Q			
	(91)	(92)	(93)	(94)	(95)	(96)	(97)	(98)
L.WOB_Dummy	0.0012 [0.0031]				0.0746 [0.0502]			
L.WOB_Perc		0.0005 [0.0258]				0.5213 [0.4180]		
L.WOB_Count			0.0000 [0.0025]				0.0719* [0.0435]	
L.WOB_Blau				0.0020 [0.0154]				0.3254 [0.2542]
Constant	0.1632*** [0.0161]	0.1611*** [0.0156]	0.1610*** [0.0160]	0.1616*** [0.0157]	1.5499*** [0.2609]	1.4994*** [0.2505]	1.5715*** [0.2543]	1.5107*** [0.2526]
Observations	9,569	9,569	9,569	9,569	8,669	8,669	8,669	8,669
Number of Firms	1,273	1,273	1,273	1,273	1,217	1,217	1,217	1,217
R-squared	0.103	0.103	0.103	0.103	0.115	0.114	0.115	0.115
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 19: Lagged gender diversity and financial firm performance for large enterprises in India

A.6 Hypothesis Two - Firm Size

VARIABLES	ROA				Tobin's Q			
	FE Model		FE Lagged Model		FE Model		FE Lagged Model	
	(99)	(100)	(101)	(102)	(103)	(104)	(105)	(106)
WOB OL	-0.0210* [0.0120]		-0.0166 [0.0155]		-0.1205 [0.2722]		-0.0337 [0.4647]	
WOB CM		-0.0228* [0.0117]		-0.0287** [0.0138]		-0.0252 [0.2069]		0.0261 [0.2313]
Constant	-0.0672** [0.0271]	-0.0619** [0.0267]	-0.0259 [0.0355]	-0.0213 [0.0350]	-0.6756 [0.4301]	-0.6449 [0.4347]	0.9252 [0.5761]	0.9294 [0.5909]
Observations	7,974	7,974	5,401	5,401	3,474	3,474	2,368	2,368
R-squared	0.017	0.017	0.017	0.018	0.049	0.049	0.038	0.038
Number of firms	1,717	1,717	1,272	1,272	1,066	1,066	771	771
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

VARIABLES	ROA				Tobin's Q			
	FE Model		FE Lagged Model		FE Model		FE Lagged Model	
	(107)	(108)	(109)	(110)	(111)	(112)	(113)	(114)
WOB OL	0.0118 [0.0077]		0.0147** [0.0067]		0.0270 [0.1023]		0.0464 [0.1045]	
WOB CM		0.0085 [0.0083]		0.0129 [0.0098]		0.1049 [0.1330]		0.1201 [0.1162]
Constant	-0.1845 [0.1281]	-0.1894 [0.1283]	0.0765*** [0.0205]	0.0744*** [0.0204]	0.6322*** [0.1535]	0.6254*** [0.1526]	1.7638*** [0.2163]	1.7538*** [0.2152]
Observations	12,016	12,016	8,935	8,935	8,910	8,910	6,860	6,860
R-squared	0.031	0.031	0.025	0.025	0.068	0.069	0.064	0.064
Number of firms	2,170	2,170	1,699	1,699	1,779	1,779	1,418	1,418
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 20: Critical Mass and Outside Legislation effect on financial firm performance segmented in India - Micro and Small Enterprises

VARIABLES	ROA				Tobin's Q			
	FE Model		FE Lagged Model		FE Model		FE Lagged Model	
	(115)	(116)	(117)	(118)	(119)	(120)	(121)	(122)
WOB OL	-0.0048		0.0004		0.0796		0.0980	
	[0.0096]		[0.0127]		[0.0860]		[0.1316]	
WOB CM		-0.0238		-0.0187		-0.1906***		0.2289
		[0.0219]		[0.0232]		[0.0665]		[0.1896]
Constant	0.1452***	0.1464***	0.1660***	0.1661***	0.5996***	0.5886***	1.4664***	1.4418***
	[0.0211]	[0.0212]	[0.0272]	[0.0268]	[0.1652]	[0.1645]	[0.2383]	[0.2396]
Observations	7,532	7,532	5,366	5,366	6,570	6,570	4,796	4,796
R-squared	0.074	0.075	0.058	0.058	0.120	0.120	0.106	0.106
Number of firms	1,608	1,608	1,295	1,295	1,433	1,433	1,174	1,174
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

VARIABLES	ROA				Tobin's Q			
	FE Model		FE Lagged Model		FE Model		FE Lagged Model	
	(123)	(124)	(125)	(126)	(127)	(128)	(129)	(130)
WOB OL	-0.0031		-0.0019		0.0372		0.0598	
	[0.0051]		[0.0052]		[0.1108]		[0.1275]	
WOB CM		-0.0016		-0.0222		0.0642		-0.0830
		[0.0127]		[0.0234]		[0.1739]		[0.0916]
Constant	0.1114***	0.1124***	0.1605***	0.1611***	-0.0909	-0.1029	1.4320***	1.4150***
	[0.0143]	[0.0142]	[0.0150]	[0.0150]	[0.2224]	[0.2239]	[0.2444]	[0.2472]
Observations	11,317	11,317	9,569	9,569	10,185	10,185	8,669	8,669
R-squared	0.101	0.100	0.103	0.103	0.118	0.118	0.114	0.114
Number of firms	1,405	1,405	1,273	1,273	1,343	1,343	1,217	1,217
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 21: Critical Mass and Outside Legislation effect on financial firm performance segmented in India - Medium and Large Enterprises

A.7 Hypothesis Three - Firm Size

VARIABLES	Micro Enterprise				Small Enterprise			
	ROA		Tobin's Q		ROA		Tobin's Q	
	FE Model	FE Lagged Model	FE Model	FE Lagged Model	FE Model	FE Lagged Model	FE Model	FE Lagged Model
	(131)	(132)	(133)	(134)	(135)	(136)	(137)	(138)
% Independent Women	-0.0175	-0.0761	-0.5066	-0.6885	-0.0229	-0.0120	-0.3207	-0.0393
	[0.0510]	[0.0682]	[0.7986]	[0.8139]	[0.0420]	[0.0517]	[0.4471]	[0.5294]
% Independent Directors	-0.0023	0.0007	-0.1409	-0.0476	-0.0166**	-0.0096	-0.1565*	-0.1918**
	[0.0113]	[0.0136]	[0.1742]	[0.2130]	[0.0080]	[0.0085]	[0.0808]	[0.0818]
Constant	-0.0639**	-0.0508	-0.6373	0.9246	-0.2290*	0.0383*	0.6761***	1.8287***
	[0.0268]	[0.0355]	[0.4380]	[0.5809]	[0.1262]	[0.0199]	[0.1550]	[0.2125]
Observations	7,974	5,402	3,474	2,368	12,016	8,935	8,910	6,860
R-squared	0.016	0.017	0.050	0.038	0.030	0.021	0.068	0.064
Number of firms	1,717	1,272	1,066	771	2,170	1,699	1,779	1,418
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

VARIABLES	Medium Enterprise				Large Enterprise			
	ROA		Tobin's Q		ROA		Tobin's Q	
	FE Model	FE Lagged Model	FE Model	FE Lagged Model	FE Model	FE Lagged Model	FE Model	FE Lagged Model
	(139)	(140)	(141)	(142)	(143)	(144)	(145)	(146)
% Independent Women	0.0161	0.0243	0.9559*	0.8943	0.0312	0.0335	0.9448**	0.4682
	[0.0473]	[0.0478]	[0.5154]	[0.8117]	[0.0320]	[0.0295]	[0.4673]	[0.4931]
% Independent Directors	-0.0042	-0.0102	-0.2558***	-0.2030***	0.0128**	0.0079	-0.1824*	-0.3435***
	[0.0091]	[0.0097]	[0.0755]	[0.0772]	[0.0065]	[0.0058]	[0.0972]	[0.1095]
Constant	0.1478***	0.1363***	0.7650***	1.5979***	0.1110***	0.1403***	0.0646	1.5792***
	[0.0201]	[0.0219]	[0.1747]	[0.2606]	[0.0144]	[0.0146]	[0.2326]	[0.2614]
Observations	7,532	5,366	6,570	4,796	11,317	9,569	10,185	8,669
R-squared	0.074	0.053	0.122	0.107	0.101	0.103	0.119	0.116
Number of firms	1,608	1,295	1,433	1,174	1,405	1,273	1,343	1,217
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 22: Effect of (female) independent directors on financial firm performance segmented based on firm size in India

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A.8 Hypothesis Four - Firm Size

	Micro Enterprise				Small Enterprise			
	ROA		Tobin's Q		ROA		Tobin's Q	
VARIABLES	FE Model	FE Lagged Model	FE Model	FE Lagged Model	FE Model	FE Lagged Model	FE Model	FE Lagged Model
	(147)	(148)	(149)	(150)	(151)	(152)	(153)	(154)
WOB x Family Business	-0.0204	0.0261	0.9016	0.6534	-0.0085	-0.0360	0.1010	0.2497
	[0.0363]	[0.0401]	[0.7119]	[0.6908]	[0.0288]	[0.0327]	[0.2692]	[0.3335]
WOB Blau	-0.0024	-0.0619	-1.1138*	-0.9944	0.0369	0.0389	0.2611	0.3342
	[0.0345]	[0.0466]	[0.6694]	[0.7738]	[0.0284]	[0.0299]	[0.2859]	[0.3200]
Family Business	-0.0166*	-0.0176	0.0647	-0.0257	0.0156***	0.0109*	0.0883*	0.0429
	[0.0086]	[0.0110]	[0.1667]	[0.1825]	[0.0056]	[0.0060]	[0.0512]	[0.0589]
Constant	-0.0669**	-0.0331	-0.7409*	0.8053	-0.1852	0.0773***	0.6960***	1.8712***
	[0.0270]	[0.0360]	[0.4310]	[0.5821]	[0.1281]	[0.0212]	[0.1605]	[0.2238]
Observations	7,974	5,401	3,474	2,368	12,016	8,935	8,910	6,860
R-squared	0.016	0.018	0.052	0.040	0.031	0.025	0.069	0.066
Number of firms	1,717	1,272	1,066	771	2,170	1,699	1,779	1,418
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Medium Enterprise				Large Enterprise			
	ROA		Tobin's Q		ROA		Tobin's Q	
VARIABLES	FE Model	FE Lagged Model	FE Model	FE Lagged Model	FE Model	FE Lagged Model	FE Model	FE Lagged Model
	(155)	(156)	(157)	(158)	(159)	(160)	(161)	(162)
WOB x Family Business	-0.0061	0.0081	0.5533	0.1561	0.0109	0.0386*	0.2286	0.0831
	[0.0305]	[0.0352]	[0.3668]	[0.3920]	[0.0232]	[0.0206]	[0.3639]	[0.3236]
WOB Blau	0.0515*	0.0210	0.0057	0.2713	0.0115	-0.0240	0.4971	0.2693
	[0.0297]	[0.0387]	[0.3848]	[0.4858]	[0.0250]	[0.0217]	[0.3808]	[0.3568]
Family Business	0.0084	-0.0025	-0.0226	-0.0355	0.0133***	0.0129***	-0.0101	0.0094
	[0.0060]	[0.0064]	[0.0456]	[0.0490]	[0.0040]	[0.0040]	[0.0467]	[0.0499]
Constant	0.1574***	0.1739***	0.7079***	1.5546***	0.1178***	0.1619***	0.0785	1.5116***
	[0.0212]	[0.0275]	[0.1793]	[0.2760]	[0.0147]	[0.0157]	[0.2229]	[0.2522]
Observations	7,532	5,366	6,570	4,796	11,317	9,569	10,185	8,669
R-squared	0.075	0.058	0.122	0.107	0.101	0.103	0.120	0.115
Number of firms	1,608	1,295	1,433	1,174	1,405	1,273	1,343	1,217
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 23: The effect of Family Business and Gender Diversity of Financial Firm Performacen segmented on firm size in India

A.9 Triple Interaction and Firm Size

	Micro Enterprise		Small Enterprise		Medium Enterprise		Large Enterprise	
VARIABLES	ROA	Tobin's Q	ROA	Tobin's Q	ROA	Tobin's Q	ROA	Tobin's Q
	(163)	(164)	(165)	(166)	(164)	(165)	(166)	(167)
WOB 6	-0.0452	-1.3867*	0.0574**	0.5783**	0.0596*	0.0922	0.0349	0.7304*
	[0.0404]	[0.7834]	[0.0278]	[0.2837]	[0.0342]	[0.4310]	[0.0280]	[0.3733]
Family Business	-0.0201**	0.0238	0.0149***	0.0975**	0.0083	-0.0241	0.0134***	-0.0061
	[0.0087]	[0.1703]	[0.0055]	[0.0495]	[0.0061]	[0.0455]	[0.0038]	[0.0463]
Companies Act 2013	0.0089	-1.4602	-0.1520**	-0.9242*	0.0339	0.1523	-0.0894***	0.0722
	[0.0932]	[1.1281]	[0.0754]	[0.5185]	[0.0541]	[0.5511]	[0.0346]	[0.3320]
WOB 6 x Family Business	0.0177	1.2995	-0.0365	-0.2349	-0.0210	0.5928	-0.0199	0.1079
	[0.0427]	[0.8134]	[0.0298]	[0.2781]	[0.0347]	[0.4173]	[0.0283]	[0.3813]
WOB 6 x Companies Act 2013	0.1986**	1.8264	0.0107	-1.0876	0.0199	-0.2257	-0.0355	-0.8397
	[0.0826]	[1.3079]	[0.0724]	[0.9385]	[0.0650]	[0.6350]	[0.0626]	[0.6988]
Companies Act 2013 x Family Business	0.0461*	0.6551*	0.0309	-0.0160	0.0094	0.0553	0.0029	-0.0313
	[0.0252]	[0.3835]	[0.0201]	[0.2472]	[0.0177]	[0.1643]	[0.0130]	[0.1436]
Companies Act 2013 x Family Business x WOB 6	-0.2170**	-2.8720*	-0.0392	0.8834	-0.0071	-0.3195	0.0426	0.3613
	[0.0919]	[1.6900]	[0.0827]	[0.9672]	[0.0765]	[0.7776]	[0.0732]	[0.7585]
Constant	0.0115	-2.2900	-0.1786	-0.9745	0.2423**	0.9574	-0.0865	0.0180
	[0.1489]	[1.8526]	[0.1282]	[0.8832]	[0.1106]	[1.1122]	[0.0805]	[0.8391]
Observations	7,974	3,474	12,016	8,910	7,532	6,570	11,317	10,185
R-squared	0.018	0.055	0.032	0.071	0.076	0.122	0.101	0.121
Number of firms	1,717	1,066	2,170	1,779	1,608	1,433	1,405	1,343
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 24: The additional effect of Companies Act 2013 on the financial firm performance segmented on firm size in India

A.10 Robustness - IV

VARIABLES	ROA				Tobins's Q			
	(167)	(168)	(169)	(170)	(171)	(172)	(173)	(174)
WOB_Dummy	-0.0244 [0.0214]				-0.1202 [0.2725]			
WOB_Perc		-0.1641 [0.1431]				-1.0446 [2.3652]		
WOB Count			-0.0210 [0.0184]				-0.1036 [0.2350]	
WOB_Blau				-0.1029 [0.0899]				-0.6027 [1.3656]
Constant	0.5270*** [0.1026]	0.5148*** [0.1103]	0.5284*** [0.1017]	0.5129*** [0.1116]	0.0207 [0.3651]	0.0390 [0.3250]	0.0154 [0.3769]	0.0332 [0.3377]
Observations	44,514	44,514	44,514	44,514	31,750	31,750	31,750	31,750
Number of Firms	4,339	4,339	4,339	4,339	3,678	3,678	3,678	3,678
R-squared								
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 25: Gender diversity (with IV) and financial firm performance in India

VARIABLES	ROA				Tobins's Q			
	(171)	(172)	(173)	(174)	(175)	(176)	(177)	(178)
WOB_Dummy	-0.1132* [0.0612]				-1.4586 [1.0703]			
WOB_Perc		-0.5313* [0.2870]				-7.7998 [5.9341]		
WOB_Count			-0.1058* [0.0577]				-1.3686 [1.0305]	
WOB_Blau				-0.3438* [0.1850]				-4.9512 [3.7083]
Constant	-0.1642*** [0.0610]	-0.1273*** [0.0440]	-0.1822*** [0.0700]	-0.1366*** [0.0478]	-2.0071* [1.0738]	-1.5605* [0.8157]	-2.3621* [1.3617]	-1.6838* [0.8810]
Observations	7,973	7,973	7,973	7,973	3,474	3,474	3,474	3,474
Number of Firms	1,717	1,717	1,717	1,717	1,066	1,066	1,066	1,066
R-squared								
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 26: Gender diversity (with IV) and financial firm performance for micro enterprises in India

VARIABLES	ROA				Tobins's Q			
	(179)	(180)	(181)	(182)	(183)	(184)	(185)	(186)
WOB_Dummy	-0.0334				0.2946			
	[0.0679]				[0.7624]			
WOB_Perc		-0.2180				3.2090		
		[0.4452]				[8.4758]		
WOB_Count			-0.0299				0.3015	
			[0.0606]				[0.7863]	
WOB_Blau				-0.1339				1.4824
				[0.2728]				[3.8637]
Constant	-0.2295	-0.1897	-0.2379	-0.2010	0.9337	0.9673	0.9919	0.9154
	[0.1463]	[0.1293]	[0.1550]	[0.1291]	[0.7977]	[0.9001]	[0.9531]	[0.7559]
Observations	12,013	12,013	12,013	12,013	8,908	8,908	8,908	8,908
Number of Firms	2,170	2,170	2,170	2,170	1,779	1,779	1,779	1,779
R-squared								
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 27: Gender diversity (with IV) and financial firm performance for small enterprises in India

VARIABLES	ROA				Tobins's Q			
	(187)	(188)	(189)	(190)	(191)	(192)	(193)	(194)
WOB_Dummy	0.0180				-0.4948			
	[0.0450]				[0.5364]			
WOB_Perc		0.1140				-3.0671		
		[0.2882]				[3.2961]		
WOB_Count			0.0140				-0.3732	
			[0.0352]				[0.4035]	
WOB_Blau				0.0713				-1.9206
				[0.1796]				[2.0677]
Constant	0.1706***	0.1616***	0.1678***	0.1637***	-0.0774	0.1817	0.0152	0.1304
	[0.0624]	[0.0420]	[0.0560]	[0.0465]	[0.7212]	[0.4503]	[0.6225]	[0.5023]
Observations	7,532	7,532	7,532	7,532	6,570	6,570	6,570	6,570
Number of Firms	1,608	1,608	1,608	1,608	1,433	1,433	1,433	1,433
R-squared								
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 28: Gender diversity (with IV) and financial firm performance for medium enterprises in India

VARIABLES	ROA				Tobins's Q			
	(195)	(196)	(197)	(198)	(199)	(200)	(201)	(202)
WOB_Dummy	0.0330				0.6671**			
	[0.0223]				[0.3139]			
WOB_Perc		0.3169				6.2848**		
		[0.2180]				[2.9832]		
WOB_Count			0.0288				0.5608**	
			[0.0197]				[0.2628]	
WOB_Blau				0.1776				3.5415**
				[0.1215]				[1.6744]
Constant	0.1678***	0.1586***	0.1727***	0.1598***	1.0158*	0.8112*	1.0685*	0.8359*
	[0.0411]	[0.0358]	[0.0445]	[0.0364]	[0.5497]	[0.4709]	[0.5740]	[0.4788]
Observations	11,317	11,317	11,317	11,317	10,185	10,185	10,185	10,185
Number of Firms	1,405	1,405	1,405	1,405	1,343	1,343	1,343	1,343
R-squared								
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 29: Gender diversity (with IV) and financial firm performance for large enterprises in India

VARIABLES	Full Sample		Micro Enterprise		Small Enterprise		Medium Enterprise		Large Enterprise	
	ROA	Tobin's Q	ROA	Tobin's Q	ROA	Tobin's Q	ROA	Tobin's Q	ROA	Tobin's Q
	(203)	(204)	(205)	(206)	(207)	(208)	(209)	(210)	(211)	(212)
WOB x Family Business	0.0135	0.5104	0.2539	1.2237	0.0094	-0.8580	-0.2348	0.8958	0.0814	0.4339
	[0.0649]	[0.8372]	[0.2142]	[4.1299]	[0.1470]	[1.6421]	[0.1451]	[1.4891]	[0.0879]	[1.3010]
WOB Blau	-0.1122	-1.0035	-0.5255**	-5.8739	-0.1411	2.3153	0.2716	-2.6572	0.1124	3.2085
	[0.0952]	[1.5737]	[0.2606]	[5.9292]	[0.2713]	[4.7297]	[0.2188]	[2.5432]	[0.1478]	[1.9540]
Family Business	0.0083	0.0297	-0.0412*	0.0757	0.0153	0.1490	0.0229**	-0.0420	0.0090	-0.0142
	[0.0060]	[0.0661]	[0.0222]	[0.3962]	[0.0124]	[0.1181]	[0.0113]	[0.0996]	[0.0076]	[0.0956]
Constant	0.5078***	0.0409	-0.1337***	-1.6892*	-0.2013	0.9321	0.1623***	0.1505	0.1601***	0.8417*
	[0.1113]	[0.3365]	[0.0479]	[0.8983]	[0.1296]	[0.7753]	[0.0476]	[0.4995]	[0.0363]	[0.4785]
Observations	44,514	31,750	7,973	3,474	12,013	8,908	7,532	6,570	11,317	10,185
Number of firms	4,339	3,678	1,717	1,066	2,170	1,779	1,608	1,433	1,405	1,343
R-squared										
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 30: The effect of Family Business and Gender Diversity (with IV) of Financial Firm Performacen segmented on firm size in India

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