Journal of Positive School Psychology http://journalppw.com
2022, Vol. 6, No. 4, 4397 – 4411

The Impact of Demographic Diversity in Egyptian Banks on Management Board Performance

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Abstract

In light of the previously discovered discrepancies between the gender, age, time, and education variety of employees and the efficiency of Egyptian banks' banking operations, the purpose of this article is to examine the linear and nonlinear connections between these variables (BANKS). Research found that the number of board members (board gender, age, time, and education) has a positive linear correlation with corporate performance. We found that having a diverse board of directors, regardless of size or industry, had a positive influence on the success of the companies that had it. Gender and occupational disparities have little effect on a company's success.

According to these demographic factors: sexual identity, age, length and education level. Variables like religion or language were omitted from the analysis. The outcomes of this study will be useful to companies that build corporate boards that are heavily focused on knowledge. Having a diverse board of directors is essential for increasing productivity.

Keywords: Corporate governance, demographic diversity, Firm performance.

1. INTRODUCTION

This crisis in the worldwide economy has not only ruined the worldwide banking industry but also deteriorated its condition (Childress, 2011). Childress (2011) argues that a restructured corporate culture is critical to the development of an effective banking sector. The risk management process must be appropriately considered in business management, and this must be applied to the entire organization, requiring a cultural shift (Drennan, 2004).

In the late 1990s, the bankruptcy of Egyptian banks was widely attributed to inadequate corporate governance (Sorour and Howell, 2013). To put it another way, a culture of unity is the set of beliefs and principles that guide the performance of the company's workers (Guiso et al., 2013). Cremer (1993) defines unity culture as a code of communication that may be shared throughout the members of an organization's workforce. A cultural agreement also serves as a means of enhancing one's dexterity. According to O'Reilly and Chatman (1996), management documents view company culture as a set of values that are shared by all employees. As the saying goes, "the way we do things here" is an apt description of an organization's cultural character (Childress, 2011, p. 4).

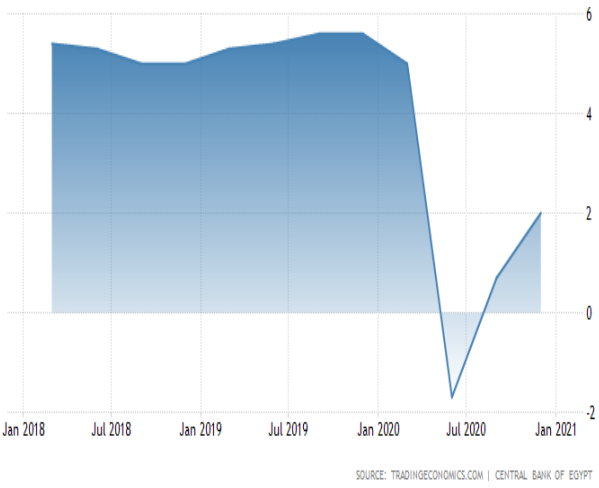
It is crucial for a company 's governing body to define the company's mission and objectives, create goals and determine which strategic choices to pursue to improve the company's performance (Carroll and Buchholtz, 2014; Liao et al., 2015; Zahra and Pearce, 1989). Various board member characteristics, such as gender, tenure, age, and educational attainment, have an effect on the outcomes of these tasks (Hambrick and Mason, 1984; Johnson et al., 2013; Post and Byron, 2015). As a result, it is crucial to look into how student diversity affects academic success. It should be noted that a number of

nations, including Egypt, have recently implemented recommendations and/or mandatory rules aimed at increasing the diversity of corporate boards. This has sparked debates about the demographic distinctions between workers, managers, and professionals (Hillman, 2015; Mahadeo et al., 2012; Zahra and Pearce, 1989).

Research Context: Egypt.

As Egypt's economy has experienced a variety of reforms and adjustments, the banking sector has evolved as well. The ownership and performance of banks were affected by the reforms. Since British colonization in the early 1950s, Egypt's economy has gone through numerous phases of economic dominance, including socialism (1959–1973), the open door (Inftah), 1973–1980, and the current phase of economic reform (1981–present) (Bolbol et al., 2005). Egypt is thought to be a promising study ground. As an emerging market (EM), Egypt has a number of economic advantages . Egypt's current growth rate is 2.8%, and future growth is predicted to be even higher (International Monetary Fund, 2021). There are a number of smart young individuals, middle-class young people, and wealthy clients with great sales potential in Egypt in addition to the country's rapid expansion (Coale and Hoover, 2015; Dahlman and Utz, 2005; Kidrond, 2015; Kotwal et al., 2011). Accordingly, the Egyptian government's efforts to liberalize the economy have attracted more international corporations (MNCs), which are looking to invest in Egypt to capitalize on the country's rising economic potential (Chittoor et al., 2009; Pandey et al., 2004).

Figure 1 *Rate of actual GDP growth: Egypt*



2. Conceptual Background: Board Diversity and Banks

Because of the variances in the qualities of its members, the corporate board's diversity represents the company as a whole (Ararat et al., 2015; Harrison and Klein, 2007; Srivastava, 2015). Two basic areas of board diversity were identified by researchers. Both the board's composition and its structure should reflect this diversity. There is a wide range of variance in the composition of boards due to factors such as board size, board type, and board leadership structure (with the CEO and chair as the two most prominent members) (Bertoni et al., 2014; Farag and Mallin, 2016; Pathan and Faff, 2013). Considering this, the demographic board's diversification is defined by the census technique, which includes variables like managerial background, country, and gender (Du, 2014; Hafsi and Turgut, 2013).

A diverse board is important to us for several reasons, including the two listed below. Studies have shown that board diversity has an impact on the performance of the company as a whole, according to earlier research in this field (Hambrick, 2007; Post & Byron, 2015; Zahra & Pearce, 1989). As a second point, developing countries have a lack of structural diversity in the workplace (Ararat et al., 2015).

2.1 Why is board demographic diversity so important for banks?

It is via directors that a company may respond to the challenges of a rapidly changing market (Adams and Ferreira, 2007; Mathisen et al., 2013; Zahra and Pearce, 1989). According to researchers, board diversity can have a variety of effects depending on the setting (Aguilera et al., 2008). In Egypt's banking sector, board changes might have a significant influence. Due to the importance of the board's responsibilities in the banking industry, boards must be able to identify potential possibilities and threats (Oehmichen et al., 2017; Starbuck, 1992). As a result, different boards are expected to give review of professional standards for established strategies. There have been both benefits and drawbacks to increasing board diversity (Hillman, 2015).

3. Conceptual Framework and Hypothesis Propositions

A few textbooks explicitly support the positive or negative impact of board heterogeneity on a company's success. Additionally, the great bulk of the research in this area includes explanations (Terjesen et al., 2009). Existing research on many elements of board and firm performance has led us to develop 13 hypotheses concerning the influence of board diversity on corporate success. Concepts can be summarized in Table 1.

Table −1 *Theoretical viewpoints summarized*

Sr. No	**Name of the theory**	**Theoretical explanation**	Research Question
1	Resource Dependence Theory (Pfeiffer and Selznick 1978)	Resource Dependence Theory offers a rationale for a board's function of providing critical re- sources to the firm.	How board diversity facilitates broad range of internal and external resources to enhance firm performance?
2	Upper Echelons Theory(ham brick and mason .1984)	According to Upper Echelons Theory, directors differ in their cognitive frames, and these cogni- tive frames, in turn, influence firm outcomes.	How board characteristics influences strategic decision making?
3	Agency Theory (Jensenand Mackling , 1976)	As per Agency Theory, a key activity for boards is to monitor board on behalf of shareholders and that effective monitoring can improve firm performance by reducing agency costs.	How board characteristics influences strategic decision making?
4	Stewardship Theory (Donaldson And Davis,1994)	Stewardship Theory claims that directors are essentially trustworthy individuals and therefore good stewards of the resources entrusted to them.This theory proposes that more number of insiderdirectors can enhance firm performance.	How board structural diversity (number of inside directors on boards) influences firm performance?
5	Resource Based View (RBV) (Barney, 1991)	According to the Resource−based View, a firm can gain a sustained competitive advan- tage id it takes addable, rare, inimitable, and non−substitutable resources. Board diversity facilitates these resources to improve firm performance.	How board diversity facilitates the use of internal resource for improving firm performance?
6	Human Capital Theory (Singh, 2007)	Human Capital Theory Focuses Upon the direc tor's expertise for the firm Directors in terms of Insiders, Business Experts and Community Influ ential, facilitate board functioning which can influence firm performance.	How board's social networks influence firm performance?
7	Social capital Theory (Singh, 2007)	Social capital Theory puts emphasis upon a board's Social ties to other sources of influence. This includes links to government and politics, business institutions, educational bodies, financialinstitutions and charity / voluntary sector.	How board's social networks influence firm performance?

8	Critical Mass theory(Lin et al „ 2014),	Critical Mass Theory suggests that the minimum number of woman directors (at least women) constitute the desired critical mass to influence firm performance	What minimum number of woman is needed to influence firm performance?
9	Signaling Theory (Millerand Triana,2009)	Signaling theory to explain how firms use heterogeneous boards to communicate visible signals to gain reputation and status among the stakeholders.	Do board diversity provide signals to the stakeholders of the firm?
10	Behavioral Theory of thefirm (March , 1963)	The Behavioral Theory of the firm Theory of the firm posits that the extensiveness of the search anddecision making processes can be influenced by board demographic attributes	How board diversity influences the decision making process?

Hypothesis Development

3.1 Board demographic diversity: Linear Prediction

In addition to improved decision-making, greater creativity, and better monitoring, researchers have found that diverse teams perform better overall (Adams et al., 2015; Pérez Calero et al., 2016). (Adams and Ferreira, 2009; Ararat et al., 2015). To improve decision-making, Gender Diversity Boards consider a wide range of comprehensive decision-making procedures (Campbell and Mnguez Vera, 2008; Hillman, 2015; McIntyre et al., 2007). It is a result of this linkage that youth boards have access to the most cutting-edge technologies (Jhunjhunwala and Mishra, 2012).

When an organization employs people from a variety of backgrounds, it shows its dedication to a diverse workforce (Spence, 1973). When there are more women on the boards, for example, the organization as a whole has more female employees (Dezsö and Ross, 2012). As a consequence of more boards, more stakeholders, and better-trained employees, decision-making will become more effective. As an outcome, we suggest:

H1a: Firm success will be positively linked to board racial and ethnic diversity (sexual preference, age, length of service, and education).

The social identity hypothesis (Tajfel, 1978) asserts that personality traits such as gender, age, education, and time period influence categorisation, in contrast to the idea of Resource Dependence. In this method, members of a team are only allowed to associate with those who have comparable traits. A group is made up of people who are like-minded in terms of their demographics (e.g., ethnicity), educational attainment, and length of time in the workforce (Veltrop et al., 2015). Deception is facilitated by social class distinctions (Van Knippenberg and Chipspers, 2007), which impair communications and, as a result, the group's ability to function as a whole (Chen et al., 2016).

Studies have found a correlation between worse performance and a variety of board member characteristics, including sexual identity, experience, education, and previous employment. Adams and Ferreira (2009) found that Tobin's poor Q and ROA were linked to a lack of board diversity in their study. In the workplace, there was a link between age differences and poor social performance, according to a research by Hafsi and Turgut (2013). Higher-educated boards have been shown to have a detrimental influence on the success of firms., according to Mahadeo et al. (2012) and Ujunwa (2012) Gender differences were also found to have a detrimental impact on adoption size and adoption size, according to Chen et al. Because of this, we recommend the following.

H1b: Firm success is negatively associated with board diversity programs (gender, age, seniority, and education).

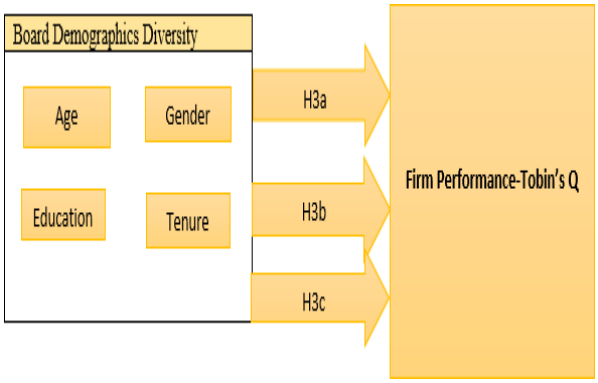


Figure 3 *Conceptual Model: Hypothesis Development*

3.2 Board demographic diversity: Curvilinear Prediction

There is currently a mixed bundle of evidence suggesting a link between the heterogeneity of corporate boards and the company performance, as stated in the preceding two sections (Adams et al., 2015). Studies show that the more diverse a firm is, the better it performs business (Adams and Ferreira, 2009; Ben Amar et al., 2013).

Socialism theory opposes the idea that a great degree of diversity leads to excellent performance, according to resource dependence theory. Conflict can be avoided by demonstrating a non-linear link between the diversity of corporate boards and business success. A nonlinear strategy has been proposed in a few studies (Ali et al., 2013; Ararat et al., 2015; Engelen et al., 2012; Ooi et al., 2015). In light of the resource dependency theory (Pfeffer and Salancik, 1978) and the idea of social identity, we put forth a U-shaped link between diversity on corporate boards and success (Tajfel, 1978). Diversity has been shown to have a positive effect on outcomes, although theoretical integration shows that the degree of diversity has an effect (Ali et al., 2013; Richard et al., 2002). Diverse firms function better when their resources are dependent on one another. Homogeneous boards have been proven to maintain their existing status, according to research (Murray, 1989; Wiersema and Bantel, 1992). There is no room on similar boards for additional information (Wiersema and Bantel, 1992). As board diversity increases, more information and resources become available to help firms perform better (Ararat et al., 2015).

H2: An inverted U-shaped connection between board demographic diversity and the firm's success will be found.

4. Data and Methodology

4.1 Sample and data sources

On the board, this relates to how many directors are in place (Ghabayen, 2012). A board's size is defined as the total number of directors on the management, as determined by Mak and Kusnadi (2005), Uadiale (2010), Johl et al. (2015), Alsahafi et al. (2015), Adams and Mehran (2005), Bathula (2008), De Andres & Vallelado (2008), Bebeji et al. (2015) and Belkheir (2008), among others.

4.2 Measures

This study's dependent variable is firm performance. Researchers frequently employ profitable accounting approaches like as ROA, ROS, or stock market-based indicators such as Tobin's Q or stock returns to evaluate firm performance (Bhagat and Bolton, 2009; Carter et al In. According to Tobin's Q, the market value of a company's assets captures its predicted future cash flows. Competition in the financial sector is increasingly dependent on human capital rather than material assets (Alvesson, 1993; Coff, 1999; Swart and Kinnie, 2003). Tobin's high Q, which may be linked to the firm's accounting performance, reflects this amount of intellectual capital and intangible assets (Bhagat and Bolton, 2009). For organizations that rely heavily on physical capital, accounting-based metrics are more appropriate (Khanna and Palepu, 1997). Because of this, Tobin's Q is an appropriate indicator of a bank's success (Swart and Kinnie, 2003).

Population diversity is an independent variable in this study. There are two ways to gauge the board's diversity, according to the most recent research. In the first step, the effect of board gender, age, nationality, and duration of life is evaluated (Ararat et al., 2015; Ben Amar et al., 2013). An alternative strategy involves examining how board characteristics, such as gender variations, affect the company's performance (Ali et al., 2013; Brown et al., 2017; Windscheid et al., 2016). Both of these methods were used in this study to assess the human board's diversity. To begin, we looked at the impact of the board's overall diversity by combining the following characteristics: gender, age, tenure, and education of the board members. We have created a report called the Total Board Diversity Index to accomplish this

goal (TBDI). For each board, we created their own connected indicators of gender (Board Gender Diversity Index GI), age (Board Age Diversity Index AI), tenure (Board Tenure Diversity I Index TI), and education (Board Education Diversity Index EI).

A diverse board of directors' influence was measured using the Blau index (1977) Pi is the proportion of the board members who fall into each of the four categories, where n is the total number of members on the board. It is possible to have a Blau Diversity Index value of 0 or 1. According to Miller and Triana (2009b), the zero value of this indicator signifies an absolute correlation, whereas the large values indicate a high degree of variation. To put it another way, a board with no female members would have an index of zero, whereas a board having female members would have an index of half (GI). See Appendix 5 for a more in-depth explanation of how these indicators are calculated.

Several variables are included in our multivariate model. Total assets, age, R&D investment, and profit (debt equity ratio) were all kept under strict controls using these four different metric-based approaches. For this project, we used both a firm size (a complete asset log) and a firm age (a log for many years of life) (Tushman et al., 1985). As a next step, we oversaw R&D expenditures in line with the company's newly acquired expertise (Heyden et al., 2015). One extra metric of flexibility (credit / equity) (Dezsö and Ross, 2012) promotes good performance in order to work efficiently. We have used yearly and business profiles to keep tabs on an unidentified company's progress and outcomes (Dezsö and Ross, 2012).

Table−1 *Definition of Variables*

Sr. No.	Variable	Measure
1	Dependent variable : Firm Performance	
	Tobin's Q	Stock market capitalization plus book value of liabilities as a ratio of total assets
2	Endogenous Variables	
2.1	Total Board Diversity Index (TBDI)	Blau Index combining four demographic diversity variables such as Gender , Age , Tenure and Education
2.2	Gender Diversity Index (GI)	Blau Index
2.2.1	Gender Diversity Index square	Square of Gender diversity Index
2.3	Age Diversity Index (AI)	Blau Index
2.3.1	Age Diversity Index square	Square of Age diversity Index
2.4	Tenure Diversity Index (TI)	Blau Index
2.4.1	Tenure Diversity Index square	Square of Tenure Diversity Index
2.5	Education Diversity Index (TI)	Blau Index
2.5.1	Education Diversity Index square	Square of Education Diversity Index
3	Control Variables	
3.1	Firm size	Natural logarithm of Total Assets
3.2	Firm's Age	Natural logarithm of Firm's Age
3.3	Leverage	Debt to Equity Ratio
3.4	R&D Investment	Natural logarithm of R&D Investment
3.5	**Board Size**	Natural logarithm of the number of directors on the board

4.3 Methodology

In order to control for racism and subtle differences, we have to use a data model of dynamic longitudinal panels to examine our hypotheses. Because of this, we used the GMM technique to evaluate our hypothesis (Arellano and Bond, 1991). To avoid weak metal concerns in the Difference GMM process, we employed the GMM System rating (Arellano and Bover, 1995) rather than the Difference GMM standard. The remaining value has been classified as metals in accordance with previous studies (Uotila et al., 2009). The statistical test of H Hansen (1982) J was used to evaluate the performance of the instruments as well. The findings substantially support the legitimacy of the metal collection.

Additionally, the GMM technique addresses f endogeneity and causal relapse. This indicates that a variety of boards can help a company's performance; there may be some evidence that

better-performing companies have more boards. Different board members may rely on the success of the company, which means that the relationship between board members and business performance might be inverted.

4.4 Mathematical Equations

1. Firm Performance

=β0+β1(board diversity)+β2(R&D Investment)+β3(firm size) + β4(firm's age)+ β5(leverage) + β6(board size+ β7(previous year's firm per performance)+β8(year dummy)+ ε

4.5 Statistical Analysis

Table 2 displays the descriptive statistics for the study's variables. his includes means, standard deviations, and correlation coefficients:

5. Analysis and Results

Table 2 provides the descriptive statistics for the variables used in the study, as well as their correlations. It reports that out of all diversity indexes, Gender diversity Index (GI) has a low mean value thereby indicating that the level of gender diversity is very less on the company boards.

Table2. *Descriptive Statistics*

Variable	mean	SD	1	2	3	4	5	6	7	8	9	10	11
Tobin's Q	3.7098	5.878885	1										
Board's Size	10.126	0.31621	∗∗−.209	1									
Gender Diversity Index	0.1988	0.24367	∗∗−.086	∗∗.127	1								
Age Diversity Index	0.7048	0.14727	0.023	0.081	0.026	1							
Tenure Diversity Index	0.6346	0.38464	∗∗.165	∗∗−.084	0.025	∗∗.217	1						
Education Diversity Index	0.6327	0.16625	−0.086	−0.017	−0.039	−0.03	0.028	1					
total Board Diversity Index	2.5827	1.005954	0.055	0.008	∗∗.320	∗∗.325	∗∗.619	∗∗.146∗∗	1				
Firm Size	24.43	1.5127	−.433	∗∗.284	0.07	∗∗−.125	∗∗−.364	∗∗.201	∗∗−.138	1			
Leverage	0.699	4.880778	−0.032	−0.036	∗∗−.135	−0.06	−0.014	∗.085	−0.073	0.041	1		
R&D	331.044	1.888879	−0.045	∗∗.149	−0.029	−0.072	−0.066	∗.120	−0.016	∗∗.332	0.001	1	
Firm's Age	3.4530	0.670455	∗∗−.136	∗∗.246	∗.100	−.107	∗∗.148	−0.014	∗.101	∗∗.163	−0.038	−0.027	1

**p<.01, *p<.05

Table 2 represents the consequences of GMM deference. Hypothesis 1 suggests that the diversity of the human board may be well matched and consistent with strong performance. In accordance with firm performance, Hypothesis 2 argues that human board fluctuations may be negative and sequential. We utilized a two-step model with Tobin's Q as a dependent variable to test hypotheses 1 and 2. According to the data, Tobin's Q has a positive linear association with variation in the general board of persons.

Hypothesis 3 proposes that a U-shaped link exists between the diversity of the human board and the firm's success. Model 3 includes the TBDI and its duplicate names (Haans et al., 2016) to test hypothesis 3's total variance board value. Results under Model 3 in table 3 indicate that line performance is unaffected by the board variation.

Continuing our investigation, we ran regressions using the Gender, Age, Tenure, and Education Indexes as independent factors and Tobin's Q as a dependent variable. Tobin's Q has a positive correlation with the Education and Age Diversity Index, as evidenced by the positive coefficient of Age Index and Education Index in model 4.

Table−3−*GMM analysis with Tobin's Q*

Method	GMM			
Dependent Variable	Tobin's Q			
Models	Models−1 Linear Rela-tionship	Moddels−2 curvilinear Relationship	Model−3− Linear Rela tionship	Modde−4 Curvilinear re-lationship
Tobin's Q (Lag 1)	0.533 (0.126)***	0.551544 (0.124973)***	−3.033952 (0.336024)***	−0.179765 (0.044631)***
R&D	−0.403 (0.223)	−0.403476 (0.0869)	1.733275 (0.869085)	−0.009097 (0.152297)*
Firm size	2.358 (0.291)	2.223754 (2.166043)	−12.6995 (3.982404)	−1.617735 (1.448521)**
Leverage	0.018 (0.643)	0.016676 (0.6837)	1.09444 (1.64438)	0.015466 (0.070028)
Sample size	1.0257 (0.194)	1.0994 (0.1766)	2.042259 (1.729136)	0.737138 (0.757898)
Firm's Age	0.076 (0.7797)	0.080675 (0.664096)	1.128691 (0.536195)*	0.466578 (0.230761)**
Total board-Diversity Index	0.510125 (0.0067)***	−0.865245(0.3003)		
Total board-Diversity *Index*^{2}		0.220638(0.0979)		
Gender Diver-sity Index			−5.558695(2.772784)	3.311772(2.647106)
Gender Diver-sity *Index*^{2}				−4.13129(3.701011)
Age Diversity Index			6.638171(2.966054)*	−3.370542 (3.75419)
Age Diversity *Index*^{2}				6.071332 (8.512624)
Tenure Diver- sity Index			4.019924 (6.043496)	−3.370542(3.75419)

Tenure Diver-sity *Index*^{2}				2.84666(3.66 0576)
Education Di-versity Index			−6.436538(2.681831)	−1.044336(4. 693702)
Education Di-versity *Index*^{5}				1.148665 (4.918951)
Hansen J−*statistic*^{a}	5.587378	5.477926	6.103356	8.936703
Wald x^{25}	14.80742 (6)∗∗	11.11494(8)	12.52964(9)	20.30879(11)
^{1c} (1)	−1.817569∗	0.634882	−1.874664∗	−2.072774∗∗
^{2c} (2)	0.759157	−0.556486	−0.623058	0.220124

Firm standard errors in parenthesis .∗∗∗p<.05;∗p<.01;^{a} H0 ; instruments are valid ;^{5} Degree of freedom in Parenthesis ;^{e} 1 and 2 are values for Arellano−Bond tests for AR(1) and AR(2) in first differences ,respectively.

As required by Egypt's Businesses Act, 2013, all publicly listed Egyptian companies must have at least one female board member, therefore we conducted regression analysis on a subset of our sample (i.e., from 2010 to 2012) to examine the effect of board gender diversity on company success. Gender diversity on boards of directors had no influence on the financial performance of the firms in our sample from 2010 to 2012, as shown in Table 3. (i.e., prior to the Companies Act, 2013).

Table−4 *GMM analysis with Gender diversity Index (Time period: 2010 to 2013)*

Method	**GMM**	
Dependent Variable	**Tobin's**	
Models	Model−9 Linear Relationship	**Model −10 Curvilinear Rela-tionship**
Dependent Variable(Lag1)	−0.163 (0.146)∗∗	**−0.106 (0.205)∗∗**
R&D	−0.059 (0.508)	**0.303 (1.110)**
Firm Size	−0.578 (2.436)	**−2.315 (3.228)**
Leverage	−0.022 (0.053)	**0.015 (0.111)**
Firm's Age	−5.529 (8.126)	**−6.294 (9.614)**
Age Diversity Index	2.244 (2.149)	**−44.818 (83.050)**
Age Diversity *Index*^{2}		**89.970 (165.552)**
Hansen J−*statistic*^{a}	1.364	**0.537**
Wald x^{25}	25.724(5)	**185.965(6)**

^{1c} **(3)**	−0.552**	**0.935****
^{2c} **(4)**	−0.989	**−0.964**

Firm standard errors in parenthesis .*p<.001;**p<.05;*p<.01;[a] H0 ; instruments are valid ;[5] Degree of freedom in Parenthesis ;[c] 1 and 2 are values for Arellano−Bond tests for AR(1) and AR(2) in first differences , respectively.**

6. Discussions and Conclusions:

The study's two main goals were to (1) provide additional evidence of the interconnectivity of demographics (gender, age, and education) banking performance and (2) conduct a thorough evaluation of curvilinear relationships between corporate governance and performance outcomes, which may synchronize other findings together in prior studies. The results of the study were published in the Journal of Business Research. The demographic board index, which comprises gender, age, education, and duration, has a favorable correlation with linear and strong performance, according to the findings of this study. There were favorable effects on both firms' practices from age differences in all four populations studied. (a) Tobin's Q was negatively impacted by educational inequalities; (b) Gender and ownership differences were not associated to strict performance.

Table−5 *Summary of the Analysis*

Sr.no	Board diversity	Firm Performance (Tobin's Q)
1	Gender Diversity Index (GI)	**Not supported**
2	Age Diversity Index (AI)	+
3	Education Diversity Index (EL)	−
4	**Tenure Diversity Index (TI)**	**Not supported**

6.1 Linear consequences of board diversity programs on firm performance

The plurality of a company's board of directors has a direct impact on its capacity to function. It is now easier for board members to help critical financial services achieve greater levels of performance because of these results (Boyd, 1990; Kim and Kim, 2015; Pfeffer and Salancik, 1978; Zhang, 2012).

A further analysis indicated that boards with a wide mix of demographics better fit the Banks' needs. Therefore, boards with a diverse membership are better able to deal with complex issues (Campbell and Mnguez Vera, 2008; Dezsö and Ross, 2012; Oehmichen et al., 2017); innovate (Ali et al., 2013; Per- ryman et al., 2015; Zona et al., 2013); identify market opportunities and threats to strategic decision-making (Ali et al., 2013). (Hambrick, 2007; Oehmichen et al., 2017; Post and Byron, 2015). In order to keep up with the worldwide competition in the banking industry, the various boards help to attract outstanding bank personnel (Ali et al., 2013; Hillman, 2015; McIntyre et al., 2007). The consideration of more extensive information for decision-making is another key advantage of population variety (Buse et al., 2016; Haynes and Hillman, 2010).

6.2 Effects of Individual Diversity Measures

The board's diversity affects the company's success in several ways (Adams et al., 2015). To further our understanding of board variance, we also examined four other versions of board variance. The first sign is a lack of equality between the sexes. Results demonstrate that between 2010 and 2014, gender differences in active performance had no link with performance. We are still looking into the impact of the 2013 Companies Act, which

mandates the inclusion of women in management positions, therefore we are looking at sample analyses and data from as far back as 2012.

Board diversity may be measured by the average age of its members. To put it another way, the age difference indicator had a positive correlation with performance. This has led to unique expectations for improved company performance among small and old boards. Researchers say that young directors have a better education and are more up-to-date on new technology (Bonn et al., 2004; Hatfield, 2002). Elder board members, on the other hand, bring a wealth of experience and wisdom to the table that can improve board decision-making (January and Mishra, 2012; Li et al., 2011). Some banks make strategic decisions based on the credentials of junior and senior executives.

The educational background of the board members can also have an effect on the outcome. It has been discovered that Tobin's Q is negatively impacted by this indicator of educational variation. There must be an opinion regarding Tobin's Q in order to get an independent market value. Tobin's Q shows that investors' lack of consistency is a problem because of the wide range of knowledge they possess. A wide diversity of educational backgrounds misrepresents business boards.

The amount of time spent by the board members is a strong predictor of the final variance. " This metric of land ownership diversity does not appear to have an impact on the firm's performance. Hafsi and Turgut's (2013) prior study is consistent with this new discovery.

7. Contribution

Companies might begin by enhancing the diversity of their board of directors. Egyptian companies will benefit from this since it will help them strike a balance between "board operations" and "executive management." Our research reveals that a diverse workforce has a favorable effect on the bottom line of a company. There are numerous additional elements that can contribute to a strong performance in addition to the population disparities, such as the global economy, competition, and government funding (Carroll and Buchholtz, 2014).

Egyptian banks' performance is positively influenced by board price fluctuations, according to our findings. Increasingly, directors are taking a more active role in determining the company's strategy and operations. Board members in banks are often distinct from those in other businesses when it comes to their personal traits (Oehmichen et al., 2017; Swart and Kinnie, 2003).

Additionally, Egyptian authorities will benefit from this research, which will aid in the development of recommendations and rules for the formation of corporate boards with desired attributes, such as board members' ages and tenure on the board. For the fourth time, established research shows that the effectiveness of a company's board of directors is influenced by the composition of its membership (Hillman, 2015). The effectiveness of corporate boards and the link between company success and the board have yet to be examined in any research. The variety of the general public board appears to have an influence on the results of our sample of big publicly listed businesses in Egypt, contrary to previous findings.

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