OPEN ACCESS
Integrated Business and Financial Studies (IBFS)
ISSN (Online): 3005-9356
ISSN (Print): 3005-9348

Corporate Governance Reforms and Firm Performance: Longitudinal Evidence from an Emerging Economy

Mr. Manssor Ahmed
ACA, APFA, M.Phil. Chief Financial Officer, Rashid Latif Khan Group
Waseem Subhani (Corresponding Author)
Assistant Professor, Institute of Business Administration University of the Punjab, Lahore
Salman Riaz
Assistant Professor, Lahore School of Accountancy and Finance The University of Lahore, Lahore

Abstract

Purpose – This study examines the impact of the code of corporate governance (CCG) before and after promulgation-2002 in Pakistan. The impact of the enhanced (updated) corporate governance code on business performance is also examined in this study, both before and after the 2012 modification.

Design/methodology/approach – It's a longitudinal study based on 20 years of firm observations, from 1999 to 2018, of 202 listed companies in Pakistan. This study applies a two-sample t-test to compare means of control and dependent variables before and after the promulgation and revision of the corporate governance code to evaluate the impact on firms' performance. In furtherance, regression analysis under the fixed effect model has been conducted to evaluate the impact on dependent variables, i.e., The indicators of a company's accounting success return on equity, profit margin, return on assets, return on return on capital employed, and earning per share.

Findings – According to empirical studies, adopting a corporate governance code has a favorable and statistically significant impact on the company's success. The study also reveals the updated corporate governance code's positive and statistically significant effect on business performance.

Research limitations/implications – This study enriches the literature on the role of the code of corporate governance firms accounting performance nexus, strengthening firms' practices. The stakeholder's protection has application to sustainable development practices in the emerging environment.

Originality/value – The distinction from prior studies is examining the impact of code based on a longitudinal period of twenty years and evaluating promulgation and revision to provide evidence that either change enhances the firm performance.

Keywords: Code of Corporate Governance, Firms' Accounting Performance

Introduction

Due to widespread company failure worldwide in the 1980s and 90s, corporate governance gained notoriety[1]. Because of these developments, corporate governance reform is now required to lower economic risks, increase financial risk, foster investor and public confidence in the financial system and procedures within financial institutions, and provide appropriate risk management frameworks and financial performance[2]. In the 1990s, various countries, such as UK, USA, Australia, New Zealand, and Canada, in the world have started legislation on corporate governance. The OECD and the World Bank Group created the Global Corporate Governance Forum in 1999. The Cadbury body, the first corporate governance body established in the United Kingdom, serves as the foundation for developing the code of corporate governance process. Concerns over corporate scandals prompted its establishment in 1991, and the Cadbury Report was released in 1992. After that, based on the recommendations of three different corporate governance committees' reports, including Cadbury Report 1992, Greenbury Report 1995, and Hampel Report 1998, the first corporate governance code, named The

Combined Code, was published and adopted by the London Stock Exchange in 1998[3]. The Best Practices Recommendations and The Australian Principles of Good Governance were introduced by the Australian Stock Exchange (ASX) in 2003. The Listed Companies Corporate Governance code was given by the China Securities Regulatory Commission (CSRC) in 2001. The Indonesian Code for Good Corporate Governance was published and approved by Indonesia's National Committee on Corporate Governance (NCCG) in 2001. To boost investor confidence, two legislative acts were passed in 2001 and 2003, and in 1999, Bolsa Mexicana De Valores (Mexico) produced a voluntary Code of "Best" Corporate Practices (Code). The guideline promotes more transparent accounting and disclosure practices by management, as well as more accurate financial reporting[4].

The corporate governance code in Pakistan was presented at the 5th All Pakistan Chartered Accountants Conference in December 1998. Realizing the importance and need for corporate governance in the business world, in 2002, Pakistan's Securities and Exchange Commission (SECP) released the first corporate governance code which applies to all listed companies in Pakistan. After a decade of enforcement of these codes, a revision was made in 2012. SECP incorporated many new recommendations based on the experience and situations that arose during the decade from 2002 to the revision of these codes and finally issued an improved version of code of corporate governance for Pakistan. The Code of Corporate Governance 2012 covered topics on the makeup of the board, board meetings, essential matters referred to the board of directors for the chief financial officer, company secretary, decision-making, and head of internal audit, as well as the framework for corporate and financial reporting, were covered in greater detail. Moreover, this code first required all listed companies to declare in the annual report that they have complied with the best standards for corporate governance. Codes require all listed businesses to have their compliance statements evaluated and certified by their external auditors to ensure enforcement.

Corporate governance explained the role, structure, and function of BoD by considering the organizational structures of organizations[5]. As the

primary tool for the Board of Directors (BoD), an instrument for corporate governance, it is in charge of keeping an eye on a business's operations and assisting its decision-making process to safeguard the legitimate interests of its stakeholders[6]. Generally speaking, the BoD of a company is the entity that sets policies for corporate management and renders judgments on vital firm's matters[7]. Good corporate governance has lowered agency conflicts and encouraged managers to achieve their full potential[8]. Researchers have mainly used two approaches to analyze the impacts between firm performance and corporate governance. Firstly, a growing body of research on corporate governance included references to long-term plans and particular regulations[9]. Secondly, based on the body of writing, they concentrate on the traits and characteristics of a BOD, including CEO duality, age, gender, and board size[10]. There has been a lot of research on the gender of the CEO and other associated members of the board, with different noteworthy board traits and demographics[11]. The tenure and age of the CEO[12], the existence or lack of board duality, the composition and size of the supervisory and formal boards, and the equity stakes of the directors are other noteworthy features. Given that women take less risky decisions than men, female directors and CEOs should be more driven to boost working capital and liquidity in the businesses[13]. Stakeholders' main concern has been the relationship between the business's financial performance and governance structure, which has been the main focus of the corporate governance literature[10]. According to[8], female directors increase the board's effectiveness as determined by the return on assets and Tobin's Q. However, stakeholders and shareholders have recently prioritized environmental and social sustainability [14]. According to[15], there appears to be a favorable correlation between board commitment and corporate social performance. [16]Examined environmental disclosure and corporate governance policies. The two main theories that explain the relationship between business performance and corporate governance are stakeholder theory and agency theory[17] [18]. Critical issues with principal-agent relationships are explained by agency theory. A conflicting relationship may result when the principal's and the agent's goals diverge. According to [19], there is a conflict of interest between

management and shareholders, opportunistic conduct, and information asymmetry. Therefore, agency theory recommends dividing decision-making between the principal and agent and reducing manager discretion to align the aims[20]. Stakeholder theory is a starting point for how a firm gains or loses social legitimacy since it identifies the people for whom companies must have specific responsibilities[14].

1.1 Hypothesis

According to research, ownership structure patterns and corporate governance characteristics are important factors that influence a company's performanceError! Bookmark not defined. Error! Bookmark not defined. [21]Many studies have found Corporate governance characteristics to improve firm performance[22] [23]. Nevertheless, researchers also discovered contrary findings[24] [25]. The influence of Pakistan's code of corporate governance compliance on business performance was examined byError! Bookmark not defined.. They discovered a robust beneficial impact of compliance on firm performance and found that highly compliant firms are less profitable than average or low-compliant enterprises. The discrepancies in research findings about the relationship between nations and companies due to variations in financial and corporate governance structures, business performance, and corporate governance may not always be the same[26]. We formulate our first hypothesis to explore the effect of Pakistan's first corporate governance law on publicly traded corporations in Pakistan as follows:

Hypothesis I: The code of corporate governance is positively related to firm performance

The corporate world has acknowledged the necessity of codes of good corporate governance to ensure sustainable firm performance. A continuous improvement in the characteristics of such codes is indispensable to cope with the governance challenges of uncertain situations in a changing environment. According to [27], 72 codes in 24 countries in 1999 demonstrate the widespread acceptance and rise of good governance standards. In 2008, the European Corporate Governance Institute's website included 189 regulations across 63 nations [28]. Continuous code

improvement by regulatory bodies and legislators shows the expectation of improved governance structure and, indirectly, the firm's performance. Based on this, we establish our second hypothesis as follows:

Hypothesis 2: Improved code of corporate governance is positively related to firm performance

2. Literature Review & Hypothesis Development

2.1 Literature Review

[29] Stated corporate governance as "the system by which companies are directed and controlled." The concept of corporate governance is not new. Although the idea is frequently touted as a recent development, there have always been many ways to regulate CEO conduct from the corporation's founding [30] Corporates have ever faced situations of corporate failures, systematic crises, and scandals, which eventually became the reason for the evolution of corporate governance. The first case we find is Medici Bank[1] in 1494, in which the Medici family incurred significant debt due to the family's wasteful spending, flashy lifestyle, and inability to exercise managerial oversight; as a result, the bank became insolvent. New business rules and procedures were enacted in England due to the financial crisis, South Sea Bubble, documented in the 1700s. Dutch East India Company[2], a sizable publicly traded global corporation established in 1602, suffered from internal corruption, a great market fall in the 18th century, and the disproportionate distribution of dividends relative to profits. End, a wholesale discount bank based in London, Gurney & Company, was called "the bankers' bank" until it failed in 1866. The bank made a large stock investment in railroads. When it went public in 1865, a broad decline in stock values had a negative impact. When the Bank of England declined to provide financial advances, it failed. Accounting fraud was a problem for the real estate company Carrian Group in 1983; as a result, an adviser committed himself, and an auditor was killed. Which was Hong Kong's biggest collapse ever [31] Modern businesses can create a control system distinct from direct ownership if they reach substantial sizes [32] Systemic crises and company failures have been major forces behind the centuries-long evolution of corporate governance[33].

[1] List of a few major corporate collapses is available at https://en.wikipedia.org/wiki/List_of_corporate_collapses_and_scandals [2] List of a few major corporate collapses is available at https://en.wikipedia.org/wiki/List_of_corporate_collapses_and_scandals

3. Data and Methodology

3.1 Data

For the current study, we utilized audited financial statements data of companies listed on the stock exchanges of Pakistan. The data has been obtained from the "Financial Statements Analysis of Non-Financial Companies Listed in Pakistan" (FSA) issued by the State Bank of Pakistan (SBP) from time to time. The non-financial corporate sector in Pakistan encompasses industries such as manufacturing, coal, fuel and energy, paper and paperboard products, electrical machinery and apparatus, coke and refined petroleum products, textiles, sugar. To maintain the consistency with previous studies[3][4] found that financial and insurance sector companies were not considered due to their tighter regulations. Our data covers the period from 1999 to 2018, a 20-year observation. Our initial data include 584 companies over the period under study. After removing the companies that did not exist on any stock exchange over the 20 years under study, our final data sample of companies under examination for our research is 202 companies with 4040 firm-year observations. Following the FSA classification, we display the sample distribution per sector in Table 1.

Table 1: Sample distribution by sector

Sector	Com pan- ies Total	1999-2002 Start	1999-2002 End	2003-2012 Start	2003-2012 End	2012-2018 Start	2012-2018 End	Total 1999-2018 Start	Total 1999-2018 End	1999-2018 Start/End Add *	Incomplete Data Less	Final Sample Companies Nos.	Final Sample Companies %	Sample to Population %
		Less	Less											
Textile	238	1	-	10	85	-	23	11	108	1	45	**75**	37	32
Sugar	41	2	-	3	10	-	2	5	12	2	3	**23**	11	56
Chemicals, Ch. Products & Pharma.	55	3	-	9	10	-	2	12	12	1	9	**23**	11	42
Manufacturing	51	3	-	6	19	-	-	9	19	-	7	**16**	8	31
M. Vehicles, Trailers & Autoparts	27	2	-	1	5	-	4	3	9	1	3	**13**	6	48
Cement	24	3	-	3	4	-	3	6	7	1	1	**11**	5	46
Fuel and Energy Sector	29	1	-	8	7	37	-	10	7	-	3	**9**	4	31
Food products	35	2	-	2	17	1	3	5	20	2	5	**7**	3	20
Coke & Refined Petroleum Prod.	11	1	-	3	1	-		4	1	-	-	**6**	3	55
Electrical Machinery & Apparatus	10	-	-	-	2	-	1	-	3	-	1	**6**	3	60
Other Services Activities	21	-	-	3	10	-	1	3	11	-	2	**5**	2	24
Paper, Paperboard & Products	16	-	-	1	6	1	2	2	8	-	2	**4**	2	25
Information & Communication	17	5	-	6	4	-	2	11	6	5	2	**3**	1	18
Mineral products	9	1	-	2	-	1		4	-	-	4	**1**	0	11
	584	**24**	**-**	**57**	**180**	**4**	**43**	**85**	**223**	**13**	**87**	**202**	**100**	**35**

Note: This table has been arranged in descending order based on the number of companies forming the final sample of this study.

* This represents the number of companies whose starting and ending years fall during our study period, which have been counted twice, once in the start column and once in the end column. Therefore, once it has been added back to, reconcile the numbers.

Table 1 shows that the final sample is 35% of the total companies in the initial database. The companies whose data started or ended between the periods under study were excluded. Moreover, those companies whose data for all study period years was unavailable were also removed.

3.2 Measurement of Variables

3.2.1 Independent variables

The promulgation of corporate governance (PCCG) code in Pakistan is considered an independent variable. The first corporate governance code was promulgated in March 2002; therefore, the financial year ending the thirtieth of June 2003 is taken as the first year to explore the effect of compliance on business performance. The period from 1996 to 2002 indicates the firm performance before PCCG, and 2003 to 2012 is the period to measure the performance after PCCG. It has been measured by taking '0' for the period from 1996 to 2002 (a total of 4 years), depicting the period to measure the firm performance before PCCG, and '1' is taken for the period from 2003 to 2012 (total 10 years) representing the period after PCCG. Our second independent variable is the revised corporate governance code (RCCG) issued by SECP in 2012. The effect of the revised code on business performance can be measured from the financial year ending the thirtieth of June 2013. We used the period 2013 to 2018 to measure firm performance after revising the code in 2012 because, in November 2017, SECP once again issued the revised code, which was applicable from the first of January 2018. Therefore, the financial year ending the thirtieth of June 2018 can be considered last year to measure firm performance under the revised code 2012. The study measured by taking '0' from 2003 to 2012 (10 years), representing the period to

estimate the firm performance before RCCG, and 'I' was taken from 2013 to 2018 (6 years), representing the period afterRCCG.

3.2.2 Control variables

Although these features can stress the dependent variables, control variables are crucial to mitigate the effects of changes in the firm's other relevant attributes that are not explicitly considered in the research design. We used assets growth (AG), financial leverage (LEV), firm size (SIZE), sector (SEC), and year (YEAR) dummies as control variables to isolate the effect of promulgation on business performance. Assets growth shows the prospects to invest in the market to achieve desired firm performance. Aligned with the previous studyError! Bookmark not defined., asset growth as a proxy to growth is measured in this study as total assets at year *t* less total assets year *t-1* to total assets year *t-1*. Financial leverage makes it harder for a company to make investments and, consequently, to take advantage of shifts in its performance and competitive positionError! Bookmark not defined.. This study divides total liabilities by total assets to calculate LEV or the risk proxy. The firm's size regulates the possible benefits of breadth, scale, and market dominance. The book "Value of All Assets" is logged to normalize the variable and calculate the company's sizeError! Bookmark not defined..

3.2.3 Dependent variables

The drivers of measure of company performance that we utilized as dependent variables were return on assets (ROA), return on capital employed (ROCE), profit margin (PM), earning per share (EPS), and return on equity (ROE). These findings align with other research work on the connection between business performance and corporate governance characteristicsError! Bookmark not defined. Error! Bookmark not defined.. While ROE is determined by dividing net income by total equity, ROCE is determined by dividing net income by capital employed, PM is determined by dividing net income by total revenue, and EPS is determined by dividing net income by the number of shares, ROA is determined by comparing net income to the total assets of the companies.

Table 2: Variables

Variable name	Symbo	Prox	Expecte	Measuremen

l	y	d sign	ts
Independent & control variables			
Promulgation of code of corporate governance	PCCG	Presence of code	+	Presence of the code of corporate governance ismeasured by: 0 represents the period from 1999 to 2002 1 represents the period from 2003 to 2012
Revised code of corporate governance	RCCG	Improved code	+	Improved code of corporate governance ismeasured by: 0 represents the period from 2003 to 2012 1 represents the period from 2013 to 2018
Assets growth	AG	Growth	+	(total assets$_t$ – total assets$_{t-1}$)/total assets$_{t-1}$
Financial leverage	LEV	Risk	-	Total liabilities / total assets
Firm size	SIZE	Firm size	+	Natural log of total assets
Firm performance variables				
Return on equity	ROE	Financial performance		Ratio of net income to shareholders' equity
Profit margin	PM	Financial performance		Ratio of net income to total revenue
Return on Capital employed	ROCE	Financial performance		Ratio of net income to capital employed
Return on assets	ROA	Financial performance		Ratio of net income to total assets
Earnings per Share	EPS	Financial performance		Net income/number of shares

3.3 Methodology

Our study used two distinct approaches and assessed the effects of the code of corporate governance's promulgation on company performance and the code of corporate governance's amendment on firm performance. First, by applying two-sample t-tests, we compared the means of 2 periods before and after the promulgation and revision of the corporate governance code. Second, from 1999 to 2018, a dataset of 20 years from 202 listed companies that belongs to the fourteen diverce sectors which involves panel data. [35]Claimed that panel data gives "more information, more variability, less collinearity among variables, more degrees of freedom and more efficiency." We used the fixed and random effect models on our panel data, and we concluded that regression analysis should be run using the fixed effect relying upon the findings of the Hausman test. We also tested the correlation to check the multicollinearity between independent variables. In addition to performing the Heteroskedasticity test, we employed the variance inflation factor approach to verify the tolerance.
The following regression model is developed to investigate the relationship between the promulgation and revision of firm performance and corporate governance;

3.4 Regression Model

1) To test H1, i.e., the code of corporate governance has a positive impact on the firm performance,we estimate the following regression model:

$$\sum_{n=k}^{t} FP_{it} = \beta_0 + \beta_1 PCCG_{it} + \beta_2 \sum_{m=j}^{t} Controls_{it} + \sum YEAR\ Dummies + \sum SEC\ Dummies + \varepsilon_{it}$$

2) To test H2, i.e., improved code of corporate governance further improves firm performance,we estimate the following regression model:

$$\sum_{t}^{t} FP_{it} = \beta_0 + \beta_1 RCCG_{it} + \beta_2 \sum Controls_{it} + \sum YEAR\ Dummies + \sum SEC\ Dummies + \varepsilon_{it}$$

$n=k$ $m=j$

where
FP = firm performance
PCCG = promulgation of code of corporate governance RCCG = revised (improved) code of corporate governance n = number of firm performance indicators
k = firm performance indicator, i.e., ROA, ROE, PM, ROCE, and EPS
m = number of control variables used in the model
j = control variable, i.e., AG, LEV and SIZE
i = company
t = Year

4. Empirical Results and Discussion

The empirical findings are shown here in subsections with analytical commentary and descriptive statistics:

4.1 Descriptive Statistics

Descriptive statistics of a three-period comparison of 202 companies have been given in table 3. The pre-promulgation period consists of four years. 1999 to 2002 refers to the period before the promulgation of the corporate governance code. The post-promulgation period indicates the period from 2003 to 2012, atotal of ten years, which refers to both the time after the promulgation of the corporate governance code and before the revised corporate governance code. 50% of the period belongs to this tenure. The post-revision period is from 2013 to 2018, a six-year period, which refers to the period after the revision of the corporate governance code.

Table 3: Description statistics of independent control and dependent variables

Variables	uni	Pre-Promulgation	Post-Promulgation	Post-Revision

	t	Obs.	Mean	S.D.	Min	Max	Obs.	Mean	S.D.	Min	Max	Obs.	Mean	S.D.	Min	Max
AG	%	808	10.43	30.45	-96.30	609.20	2020	18.96	153.58	-100.00	5108.33	1212	11.29	43.53	-100.00	1214.07
LEV	%	808	64.28	27.37	0.00	212.39	2020	63.97	30.65	0.00	274.72	1212	71.70	126.39	0.00	1334.04
SIZE	log	808	2.92	0.60	0.11	4.82	2020	3.26	0.73	-1.41	5.54	1212	3.56	0.87	-1.41	5.66
ROA	%	808	3.20	10.20	-95.19	75.00	2020	3.83	10.94	-124.08	173.24	1212	4.94	15.29	-164.43	312.61
ROE	%	808	4.01	49.37	-648.92	136.36	2020	7.02	33.00	-627.21	386.88	1212	10.48	27.16	-151.90	448.38
PM	%	808	-5.05	79.97	-1825.00	123.40	2020	0.70	39.01	-1028.70	636.36	1212	5.77	56.95	-351.49	1496.28
ROCE	%	808	1.91	54.22	-1000.00	136.36	2020	5.71	26.32	-309.30	386.15	1212	7.96	15.95	-132.69	157.11
EPS	Rs.	808	3.18	10.64	-69.40	79.60	2020	8.71	32.39	-287.20	828.78	1212	17.43	56.62	-435.98	920.15

Notes: This table presents the descriptive statistics for the independent and dependent variables. The pre-promulgation period is 1999- 2002, up to the introduction of Pakistan's first corporate governance code. The post-promulgation period 2003-2012 is also used as pre-revision because in 2012, the code was revised to incorporate significant changes, and the post-revision period is 2013-2018. Assets growth (AG) as a proxy to growth is measured as total assets at year *t* less total assets year *t-I* to total assets year *t-I*, financial leverage (LEV), the proxy of risk is measured as total liabilities divided by total assets, firm size (SIZE) is measured as the natural log of book value of total assets. ROA is measured by net income

to total assets, ROE is measured as net income to total equity, ROCE is measured by net income to capital employed, PM is calculated as net income to total revenue, and EPS is measured by dividing net income over number of shares. The mean of assets growth increased by 82% from 10.43% in the pre-promulgation time to 18.96% in the post-promulgation time. Still, same declined by 40% in the post-revision time compared to the post-promulgation time. The analysis of assets growth along with the increasing trend of SIZE indicates that assets are growing but with a decreasing trend. The means of LEV ratios are 64.28, 63.97, and 71.70, which show an increase of 11.5% from the first period to the last period, indicating the utilization of cash flow for debt servicing. The means of size in all three periods are 2.92, 3.26, and 3.56, respectively, which shows a continuous growth in firm size. ROA ratios in the three periods are 3.20, 3.83, and 4.94, indicating that large firms, on average, have positive performance. The mean ratios of ROE, ROCE, PM, and EPS all show increasing trends, indicating growth in shareholder wealth.

4.2 Comparison of Mean, Analysis, and Discussion

Table 4: Mean comparison using two-sample t-test before and after PCCG

Variables	Post-Promulgation	Pre-Promulgation	Difference	*t*-value	Significance
AG	18.965	10.426	8.538	1.568	0.117
LEV	63.969	64.280	-0.312	-0.252	0.801
SIZE	3.264	2.917	0.347	12.030	0.000***
ROA	3.831	3.199	0.632	1.415	0.157
ROE	7.023	4.013	3.010	1.883	0.060*
PM	0.701	-5.046	5.747	2.558	0.011**
ROCE	5.712	1.908	3.805	2.502	0.012**
EPS	8.705	3.177	5.528	4.751	0.000***

Notes: *Significant at 10% level; **Significant at 5% level; ***Significant at 1% level

Table 4 presents t-test results comparing the means of two periods before and after the promulgation of the corporate governance code in Pakistan. The results show a positive difference in means of all variables except for leverage. Firm size (SIZE) and EPS are significant at 1%, whereas PM and ROCE are significant at 5%. Empirical results support hypothesis H1, that the corporate governance code significantly impacts the company's performance.

Table 5: Mean comparison using two-sample t-test before and after RCCG

Variables	Post-Revision	Pre-Revision	Difference	*t*-value	Significance
AG	11.294	18.965	-7.670	-1.698	0.090*
LEV	71.697	63.969	7.729	2.623	0.009***
SIZE	3.556	3.264	0.292	10.270	0.000***
ROA	4.935	3.831	1.104	2.385	0.017**
ROE	10.483	7.023	3.460	3.078	0.002***
PM	5.769	0.701	5.068	2.996	0.003***
ROCE	7.960	5.712	2.247	2.691	0.007***
EPS	17.428	8.705	8.723	5.570	0.000***

Notes: *Significant at 10% level; **Significant at 5% level; ***Significant at 1% level

Table 5 presents t-test results comparing the means of two periods before and after the revision of the code of corporate governance in Pakistan. Except for AG, where the difference of means is negative, our empirical results show a positive difference of means of all variables. Moreover, ROA is significant at the 5% level, and all other variables show results that are significant at the 1% level except AG, whereas the mean difference is negative. The empirical results are evidence of a significant relationship between firm performance and the revised corporate governance code. The revision is always assumed to be an improvement, and the results of this study support our hypothesis H2 that the improved corporate governance code further improves firm performance.

4.3 Regression Analysis and Discussion

The regression analysis findings under the fixed effect model are shown in Table 6 to illustrate the connection between business performance and the corporate governance code. Implementing the code of corporate governance (PCCG) is taken as a cut-off for analyzing the firm's performance before and after it. PCCG as independent variable and control variables to ascertain their influence on dependent variables, explanatory variables AG, LEV, SIZE, year, and dummy variables sector is used, i.e., ROA, ROE, PM, ROCE, EPS, which are determinants of firm performance. R-squared values are observed, and all five models are significant by their corresponding p-values. Our independent variable, PCCG, shows a positive and significant relationship between the code of corporate governance and firm performance. In light of the above evidence, regulatory controls imposed over the governance of the organizations improve performance.

Table 6: Regression analysis to determine the impact of PCCG on firm performance

Variables	(1) ROA	(2) ROE	(3) PM	(4) ROCE	(5) EPS
PCCG	2.092***	6.490***	9.292***	5.896**	-0.197
	(0.001)	(0.008)	(0.003)	(0.01)	(0.902)
AG	0.001	0.009	0.000	0.011**	0.002
	(0.283)	(0.119)	(0.994)	(0.033)	(0.489)
LEV	-0.137***	-0.107***	-0.184***	-0.284***	-0.196***
	(0.000)	(0.008)	(0.000)	(0.000)	(0.000)
SIZE	-1.500**	-7.596**	-5.534	-13.570***	5.214***
	(0.048)	(0.013)	(0.150)	(0.000)	(0.009)
Year	Yes	Yes	Yes	Yes	Yes

Sector	Yes	Yes	Yes	Yes	Yes
Constant	300.605*	304.230	503.204	-637.045	-1094.893***
	(0.050)	(0.620)	(0.517)	(0.268)	(0.007)
Observations	2828	2828	2828	2828	2828
R-squared	0.116	0.080	0.052	0.049	0.064
P-value	0.000***	0.000***	0.000***	0.000***	0.000***

Note: Table shows the coefficient values of each determinant of firm performance. Significance value is given in parentheses below the coefficient value. *Significant at 10% level; **Significant at 5% level; ***Significant at 1% level

Assets growth (AG) has shown a consistently positive association with measures of firm performance, which is aligned with**Error! Bookmark not defined.**; however, we didn't find a statistically significant relationship except for ROCE. Additionally, a statistically significant negative association between LEV and company performance is shown in this study. The above indicates that low-level leveraged companies are good performers. Contrary to our expectations, the empirical results of our study show a negative relationship between SIZE and firm performance, except in the case of EPS, where it shows a positive relationship. The relationship between SIZE and firm performance indicators is significant except for PM.

Table 7 shows the regression analysis results under the fixed effect model to explore the effect of the revised corporate governance code on firm performance, which is hypothesis H2 in the current study. Improvement of governance is a continuous process that needs iterations all the time. Similarly, to improve the code and ultimately improve the firm's performance, the revision in the code of corporate governance (RCCG) was made in Pakistan in 2012, which is taken as the cut-off for analyzing the firm's performance before and after it. RCCG, the independent

variable, control variables AG, LEV, SIZE, and dummy variables sector and year are used as explanatory factors to ascertain how they affect dependent variables, i.e., ROA, ROE, PM, ROCE, EPS, which are determinants of firm performance. R-squared values are observed, and all five models are found to be significant by their corresponding p-values. The empirical findings demonstrate a statistically significant and favourable correlation between the company's performance and the updated corporate governance code. The evidence is that robust management and improved governance have ultimately positively impacted the firm performance.

Table 7: Regression analysis to determine the impact of RCCG on firm performance

Variables	(1) ROA	(2) ROE	(3) PM	(4) ROCE	(5) EPS
RCCG	3.791***	9.748***	9.852***	5.455***	1.427
	(0.000)	(0.000)	(0.001)	(0.000)	(0.542)
AG	0.002	0.008*	0.002	0.009***	0.003
	(0.339)	(0.06)	(0.734)	(0.004)	(0.514)
LEV	-0.002	0.003	-0.006	-0.002	-0.021**
	(0.616)	(0.742)	(0.621)	(0.786)	(0.044)
SIZE	-1.405*	-4.805**	-1.079	-11.280***	6.070**
	(0.087)	(0.019)	(0.733)	(0.000)	(0.017)
Yr	Yes	Yes	Yes	Yes	Yes
Scode	Yes	Yes	Yes	Yes	Yes
Constant	573.394***	1238.129***	1109.538*	0.068	-1441.703***
	(0.001)	(0.004)	(0.099)	(1.000)	(0.008)
Observations	3232	3232	3232	3232	3232

R-squared	0.104	0.070	0.04 I	0.031	0.048
P-value	0.000***	0.000***	0.012**	0.000***	0.000***

Note: Table shows the coefficient values of each determinant of firm performance. Significance value is given in parentheses below the coefficient value. *Significant at 10% level; **Significant at 5% level; ***Significant at 1% level

The result shows AG has a positive relationship with firm performance indicators, which is aligned with a previous study cited by[36]. However, the relationship between AG and firm performance is significant only in the case of ROE and ROCE. Similarly, consistent with our expectations and results in Table 6, LEV shows a negative relationship with firm performance except in the positive ROE case. Still, its relationship with firm performance indicators is insignificant. Only in the case of EPS is it negative and significant at a 5% level. The empirical results of this study for SIZE are pretty similar in both Table 6 and Table 7, where the relationship between SIZE and firm performance measures is negative except for EPS, where it is positive, and the relationship is significant in all cases except in case of PM where it is not significant. The negative relationship indicates that the firm size needs to be more focused by the management in terms of governance. The increase in firm size increases the challenges of good governance and maintaining the performance level.

5. Conclusion

In the modern corporate world, the value of a formal code of corporate governance presence has become vital. The objective of this study is to find the effect of the presence of a code of corporate governance on firm performance. [37] Claim that strong corporate governance increases shareholder capital by signaling that a company will likely have fewer potential issues with information asymmetry and conflicts of interest between managers and shareholders. Based on our examination of 202 listed companies in Pakistan and their longitudinal financial observations consisting of 20 years of performance and in pursuance of empirical results, this study shows a strong correlation between corporate governance codes and business performance. The results provide statistical evidence in

support of hypothesis H1 that the code of corporate governance has a positive impact on firm performance. Governance is a continuous process that requires code to be improved through continuity in monitoring, reviewing, and adding new controls. It removes the weak and ineffective provisions to cope with the emerging challenges of modern corporate structures, advanced technologies, and environments. The improved code should strengthen the corporate governance controls, improving business performance. Based on this concept, we built our hypothesis H2 that an improved corporate governance code further enhances the firm performance. The results of our study provide supporting evidence for our hypothesis. This study found a significant and positive impact of Pakistan's revised corporate governance code on firm performance. This present investigation validates the results of earlier research**Error! Bookmark not defined.** [36], indicating a favourable correlation between asset growth and company success. The study investigated that the firm size has a negative and significant relationship with firm performance. The study also indicates that with the increase in firm size, performance challenges increase; thus, management must be more effective and vigilant to cope with the governance issues of larger firms. The results of this study provide support in favor of efforts by the regulatory bodies, including Securities & Exchange Commission of Pakistan, Pakistan Stock Exchange, and other professional bodies, to introduce formal legal corporate guidelines. The improvement in the code provides better guidelines to the management of organizations to govern the business more effectively. This study encourages regulatory bodies to monitor code implementation properly in each organizationto secure the interest of shareholders and other stakeholders.

Researchers have carried out numerous studies during the past 20 years, examining the impact of various attributes of the code of corporate governance on firm performance. Some research studies showed the effect of overall code adoption or revised code on firm performance. So far as the novelty of the study is concerned, this is probably the first study based on 202 listed companies in Pakistan, an emerging economy, which revealed the effect of the corporate governance code on firms' performance, both the codes were first promulgated in Pakistan in 2002. It also looks at the effect

of the code on firms' performance after the country's revised code was released in 2012. One of the study's shortcomings is the lack of information about share market prices. Future research can assess the effect of code on business performance using market-based firm performance determinants such as Tobin's Q. Similar studies can also be replicated in other emerging economies.

References

[1] Okike, E. (2019), *Corporate Governance in Commonwealth Countries*, International Centre for Research in Accountability and Governance, available at: (accessed 17 July 2020).

[2] Aebi, V., Sabato, G. and Schmid, M. (2012), "Risk management, corporate governance, and bank performance in the financial crisis", Journal of Banking & Finance, Vol. 36 No. 12, pp. 3213–3226.

[3] Okike, E. (2019), *Corporate Governance in Commonwealth Countries*, International Centre for Research in Accountability and Governance, available at: (accessed 17 July 2020).

[4] Machuga, S. and Teitel, K. (2009), "Board of director characteristics and earnings quality surrounding implementation of a corporate governance code in Mexico", *Journal of International Accounting, Auditing and Taxation*, Vol. 18 No. 1, pp. 1–13.

[5] Campbell, J.L. (2007), "Why would corporations behave in socially responsible ways? an institutional theory of corporate social responsibility | Academy of Management Review", *Academy of Management Review*, Vol. 32 No. 3, pp. 946–967.

[6] Kaplan, R.S. (2001), "Strategic Performance Measurement and Management in Nonprofit Organizations", *Nonprofit Management and Leadership*, Vol. 11 No. 3, pp. 353–370.

[7] Krechovská, M. and Procházková, P.T. (2014), "Sustainability and its Integration into Corporate Governance Focusing on Corporate Performance Management and Reporting", *Procedia Engineering*, Vol. 69, pp. 1144–1151.

[8] Terjesen, S., Aguilera, R.V. and Lorenz, R. (2015), "Legislating a Woman's Seat on the Board: Institutional Factors Driving Gender Quotas for Boards of Directors", *Journal of Business Ethics*, Vol. 128 No. 2, pp. 233–251.

[9] Hendry, K. and Keil, G. (2004), "The role of the board in firm strategy: integrating agency and organizational control perspective.", *Corporate Governance: An International Review*, Vol.12 No. 4, pp. 500–520.

[10] Dalton, D.R., Daily, C.M., Johnson, J.L. and Ellstrand, A.E. (1999), "Number of Directors and Financial Performance: A Meta-Analysis", *Academy of Management Journal*, Academy of Management, Vol. 42 No. 6, pp. 674–686.

[11] McGuinness, P.B., Lam, K.C.K. and Vieito, J.P. (2015), "Gender and other major board characteristics in China: Explaining corporate dividend policy and governance", *Asia Pacific Journal of Management*, Vol. 32 No. 4, pp. 989–1038.

[12] Peng, M.W., Zhang, S. and Li, X. (2007), "CEO Duality and Firm Performance during China's Institutional Transitions", *Management and Organization Review*, Cambridge University Press, Vol. 3 No. 2, pp. 205–225.

[13] Zeng, S. and Wang, L. (2015), "CEO gender and corporate cash holdings. Are female CEOs more conservative?", Asia-Pacific Journal of Accountancy & Economics, Routledge, Vol.22 No. 4, pp.449-474.

[14] Naciti, V. (2019), "Corporate governance and board of directors: The effect of a board composition on firm sustainability performance", *Journal of Cleaner Production*, Vol. 237, p. 117727.

[15] Burke, J.J., Hoitash, R. and Hoitash, U. (2019), "The Heterogeneity of Board-Level Sustainability Committees and Corporate Social Performance", *Journal of Business Ethics*, Vol. 154 No. 4, pp. 1161–1186.

[16] Brammer, S., Brooks, C. and Pavelin, S. (2006), "Corporate Social Performance and Stock Returns: UK Evidence from Disaggregate Measures", *Financial Management*, Vol. 35 No. 3, pp. 97–116.

[17] Freeman, R.E. (1984), *Strategic Management: A Stakeholder Approach*, Vol. 2010, Cambridge University Press, New York.
[18] Jensen, M.C. and Meckling, W.H. (1976), "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure", *Journal of Financial Economics*, Vol. 3, pp. 305–360.
[19] Ortas, E., Álvarez, I., Jaussaud, J. and Garayar, A. (2015), "The impact of institutional and social context on corporate environmental, social and governance performance of companies committed to voluntary corporate social responsibility initiatives", *Journal of CleanerProduction*, Vol. 108, pp. 673–684.
[20] Fama, E.F. and Jensen, M.C. (1983), "Separation of Ownership and Control", *The Journal of Lawand Economics*, The University of Chicago Press, Vol. 26 No. 2, pp. 301–325.
[21] Cheung, Y.-L., Connelly, J.T., Jiang, P. and Limpaphayom, P. (2011), "Does Corporate Governance Predict Future Performance? Evidence from Hong Kong", *Financial Management*, Vol. 40 No. 1, pp. 159–197.
[22] Rashid, K. and Islam, S.M.N. (2013), "Corporate governance, complementarities and the value of a firm in an emerging market: the effect of market imperfections", *Corporate Governance: The International Journal of Business in Society*, Emerald Group Publishing Limited, Vol. 13 No. 1, pp. 70–87.
[23] Siagian, F., Siregar, S.V. and Rahadian, Y. (2013), "Corporate governance, reporting quality, and firm value: evidence from Indonesia", *Journal of Accounting in Emerging Economies*, Emerald Group Publishing Limited, Vol. 3 No. 1, pp. 4–20.
[24] Hutchinson, M. (2002), "An analysis of the association between firms' investment opportunities, board composition and firm performance", *Asia-Pacific Journal of Accounting & Economics*, Routledge, Vol. 9 No. 1, pp. 17–38.
[25] Yammeesri, J. and Kanthi Herath, S. (2010), "Board characteristics and corporate value: evidence from Thailand", *Corporate Governance: The International Journal of Business in Society*, Emerald Group Publishing Limited, Vol. 10 No. 3, pp. 279–292.
[26] Doidge, C., Andrew Karolyi, G. and Stulz, R.M. (2007), "Why do countries matter so much for corporate governance?", *Journal of Financial Economics*, Vol. 86 No. 1, pp. 1–39.
[27] Aguilera, R.V. and Cuervo-Cazurra, A. (2004), "Codes of Good Governance Worldwide: What isthe Trigger?", *Organization Studies*, SAGE Publications Ltd, Vol. 25 No. 3, pp. 415–443.
[28] Zattoni, A. and Cuomo, F. (2008), "Why Adopt Codes of Good Governance? A Comparison of Institutional and Efficiency Perspectives", *Corporate Governance: An International Review*,Vol. 16 No. 1, pp. 1–15.
[29] Cadbury, A. (1992), *The Committee on the Financial Aspects of Corporate Governance*, Gee andCompany, London.
[30] Cadbury, A. (2002), *Corporate Governance and Chairmanship: A Personal View*, Oxford University, New York.
[31] Dagli, H., Eyuboglu, K. and Ayaydin, H. (2012), "Performance Evaluation of Corporate Governance Index in Turkey", *Journal of Accounting and Finance*, Vol. 12 No. 2, pp. 163–172.
[32] Berle, A.A. and Means, G.C. (1932), *The Modern Corporation and Private Property*, Commere Clearing House, Inc., New York.
[33] Ruparelia, R.V. and Njuguna, A. (2016), "The evolution of Corporate Governance and consequent Domestication in Kenya", *International Journal of Business and Social Science*, United States International University - Africa, Vol. 7 No. 5, available at: http://erepo.usiu.ac.ke:8080/xmlui/handle/11732/2967 (accessed 17 July 2020).
[34] Ghazali, N.A.M. (2010), "Ownership structure, corporate governance and corporate performance in Malaysia", *International Journal of Commerce and Management*, Emerald Group Publishing Limited, Vol. 20 No. 2, pp. 109–119.
[35] Gujrati, D. (2011), *Econometrics by Example*, Vol. 2011, Palgrave Macmillan, London, UK.
[36] Love, I.K., Leora F. (2002), *Corporate Governance, Investor Protection, and Performance in Emerging Markets*, The World Bank, available at:https://doi.org/10.1596/1813-9450-2818.
[37] Chen, W.-P., Chung, H., Hsu, T.-L. and Wu, S. (2010), "External Financing Needs, Corporate Governance, and Firm Value", *Corporate Governance: An International Review*, Vol. 18 No. 3, pp. 234–249.