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BOARD DIVERSITY AND CORPORATE PERFORMANCE: EVIDENCE FROM THE BELGRADE STOCK EXCHANGE

Raznolikost odbora direktora i uspešnost preduzeća: dokazi
sa Beogradske berze

Abstract

For a discussion group of 88 companies registered on the Belgrade Stock Exchange (BSE) among 2019 and 2024, this investigation analyzes the link between board diversity and corporate performance. We find substantial proof that board gender diversity, board independence, and the existence of an audit committee have a statistically substantial as well as economically measurable positive influence on corporate performance, as measured by return on assets (ROA), return on equity (ROE), and Tobin's Q. We do that with the help of pooled OLS, fixed effects, random effects, and two-step standard metric GMM estimation techniques in order to account for possible endogenous factors. On the other hand, throughout all parameters, CEO duality is associated with significantly poorer financial results.

Keywords: *EU membership, agency theory, data from panels, Belgrade Stock Exchange, corporate management, diversity on boards, and company performance.*

Sažetak

Na uzorku od 88 kompanija listiranih na Beogradskoj berzi (BELEX) u periodu od 2019. do 2024. godine, ovo istraživanje analizira povezanost između diversifikacije odbora i korporativnih performansi. Pronađeni su ubedljivi dokazi da rodna diversifikacija odbora, nezavisnost odbora i postojanje odbora za reviziju ostvaruju statistički značajan i ekonomski merljiv pozitivan uticaj na korporativne performanse, merene putem prinosa na imovinu (ROA), prinosa na sopstveni kapital (ROE) i Tobinovog Q koeficijenta. Kako bi se uvažili potencijalni endogeni faktori, u analizi su primenjene tehnike procene objedinjenog OLS-a (pooled OLS), modela fiksnih i slučajnih efekata, kao i dvostepenog GMM metoda. S druge strane, posmatrano kroz sve parametre, dualnost funkcije generalnog direktora (CEO duality) korelira sa značajno lošijim finansijskim rezultatima.

Ključne reči: *članstvo u EU, agencijska teorija, panel podaci, Beogradska berza, korporativno upravljanje, diversifikacija odbora, performanse preduzeća.*

Introduction

Over the past 20 years, there has been an increasing amount of scholarly and regulatory interest in corporate board composition. The board of directors plays a crucial role in the corporate governance framework of listed businesses as the principal governance mechanism responsible for supervising managerial conduct, keeping an eye on financial success, and representing shareholder interests. A related pattern of changes to regulations in advanced as well as emerging economies has been sparked by an increasing intellectual consensus that board characteristics, such as size, gender composition, member independence, and leadership structure, materially affect firm outcomes [2].

The board's governance role is especially crucial in economies in transition, where ownership arrangements are typified by consolidated blockholdings, remaining ownership by the state, and underdeveloped capital markets. According to [18], the board is the main institutional instrument for managing agency costs, which are a basic aspect of the corporate form and result from the owners' and managers' conflicting interests. While public corporations in Serbia have experienced a two-decade after-privatization consolidation procedure, board governance is still not well institutionalised in comparison to EU criteria; this gap is anticipated to be significantly reduced by the admission procedure.

Adopted in 2012, Serbia's Corporate Governance Code was updated in 2020 to include requirements on independent directors, audit committees, and board composition that were in line with the Principles of the of Corporate Governance and the EU's Fifth Directive. However, there is still a dearth of actual data regarding whether these governance processes result in quantifiable financial advantages for Serbian listed companies. Considering data collected from 2008 to 2012, [15] provide the sole regional analysis that includes Serbia as part of a sample of five Southeast European countries. Although their conclusion that well-educated members of boards are positively correlated with competitiveness and market valuations offers some insight, it is constrained in terms of both temporal breadth and the variety of governance variables they looked at, and it comes before the most contemporary trend of governing innovations.

This discrepancy is specifically addressed in this research. We mix board-level governance data gathered from annual documents and prospectuses with financial information provided by the Business Registers Agency of Serbia to generate a distinctive, manually collected panel-based database that covers 88 BSE-listed businesses operating between 2019 and 2024 (528 firm-year observations). We investigate whether three performance metrics—ROA, ROE, and Tobin's Q—are influenced by five governance variables: boards gender variety, independence of the board, board dimensions, duality of CEO, and the availability of an audit committee. When dealing with the well-known endogenous nature related to governance variables, we use several types of panel estimators, which include system GMM [29].

Three additions to the literature are provided by the article. First, making use of a more extended and contemporary time series than any earlier evaluation, it provides revised, post-reform findings on board performance and correlated variables in Serbia. With the goal to account for concurrent bias, it additionally offers system GMM standard estimating, which is a methodological enhancement above the literature currently accessible in Southeast Europe. Third, it looks at sector-specific heterogeneity in governance impacts, demonstrating that the results premium linked to board diversity is more notable in the financial services and ICT sectors, characterized by the greatest amount of data asymmetries and the worth of various knowledge sets.

This is how the rest of the study is arranged. The conceptual background and empirical research are looked at in Section 2. The parameters, sample size, as well as data are given in Section 3. The empirical approach is described in Section 4. Findings are shown in Section 5. The consequences and constraints are addressed in Section 6, and recommendations for policy are put forward in Section 7.

Theoretical Framework and Literature Review

Agency Theory and Board Governance

Agency theory, that has its starting point in the revolutionary research of [18], is the prominent theoretical structure

for analyzing board management. These writers explain a relationship of agency as “a contractual arrangement pursuant to which one or more individuals (the principal[s]) contract with another individual (called the agent) to provide certain service on their behalf, which includes delegated certain powers to make decisions to the agent” and demonstrate how the agent may not always act in the most beneficial way for the principal when this delegation takes position. The primary organizational instrument for minimizing these agency expenses is the board of directors, which integrates managerial rewards with shareholder value by overseeing management practices, approving major strategic choices, and establishing executive salaries.

That idea is further elaborated upon by [14], who make a distinction between decision control (the authorization and monitoring of those choices) and decision management (the start and execution of significant decisions). They contend that independent board members are essential for credible supervision because they do not have the potential conflicts of interest that insider directors almost inevitably do, and because efficient boards centralize decision control, especially in highly complex organizations. A substantial amount of empirical research on the connection between board autonomy and corporate performance has been generated as a consequence of this theoretical proposition.

A contrasting perspective can be found by the theory of resource dependence [25], which holds that boards are both providers of resources and monitoring mechanisms. Directors enable access to networks of information, finances, business clients, governmental relations, and authority. From this vantage point, diversity on the board on the basis of gender, professional experience, and origin broadens the firm’s pool of capabilities and enhances its capacity to adapt. The agency and reliance on resources points of view are put together into one system by [17], who contend that having diversity on the board has favorable impacts on both resource provision and evaluation accuracy.

Board Diversity and Firm Performance: Empirical Evidence

Although there is an enormous amount of empirical studies on the connection between gender diversity on boards

and corporate performance, the conclusions drawn are varied owing to differences in measurement, approach, and institutional context. In an important US sample, gender-diverse boards were found to demonstrate greater oversight—as demonstrated by CEO turnover responsiveness to performance—though enhanced supervision was shown to lower firm value in well-run corporations [1]. A favorable relationship between ROA and ROI and the percentage of women on US corporate boards was identified in another study [13]. Null results were generated for Dutch enterprises, underlining the importance of context [20]. Using Spanish data, a substantial positive impact of gender variety on Tobin’s Q was uncovered [9].

The findings is more consistently favorable for emerging and transition economies. It was found that Southeast European businesses with a greater percentage of female board members are typically overvalued on the overall market, although the relationship fluctuates based on the market-specific performance metric employed [15]. For Serbian banking institutions from 2017 to 2021, it was found that board size had a favorable impact on profits during the COVID-19 epidemic, while gender composition influences were contextually dependent [8]. Worldwide study indicates that nations with stronger institutional frameworks benefit more from gender diversity in terms of performance metrics [27], a finding that is immediately applicable in Serbia.

Achievement gains are more reliably connected to board independence, especially in concentrated ownership settings where independent directors’ main monitoring role is most essential [5]. The theoretical explanation is clear: independent directors help to monitoring integrity and do not have the same corporate conflicts of interest as insider directors. A curvilinear (inverted-U) relationship among independence and performance may arise from excessive independence, though, as it can also limit the board’s ability to access company-specific expertise [4].

It is hypothesized that CEO duality, which combines the responsibilities of chief operating officer and board chairman in one person, will reduce tracking efficacy by consolidating authority and removing the balances and checks that come with distinct leaders. This hypothesis is largely supported by empirical data: A study of US banks

found that if the CEO also chairs the board, ROA and cost efficiency are reduced [26]. More recently, using Indian panel data it was shown that CEO duality has negative effects on corporate performance, although board independence helps mitigate the consequences [3]. Although that there is of an audit committee has not gotten as much focus as the main board attributes, it is becoming more widely acknowledged as a management instrument that directly affects performances.

According to [18], independence of the audit committee is linked to fewer anomalous accruals, a finding which suggests higher-quality reporting of financial information. In an emerging market setting, [6] show a favorable correlation between auditor committee size and corporate performance. The standard basis for this parameter's included in our study comes from the OECD Principles of Corporate Governance [22], which require a standard audit committee with majority autonomous participation as a governing standard of excellence for mentioned corporations.

The Serbian Corporate Governance Context

Since the Companies Act (2011) and the Corporate Governance Code (2012, amended 2020) were approved, Serbia's statutory corporate governance structure has undergone substantial change. The Code, which was created in compliance with EU Directives and OECD Principles, lays forth guidelines for auditing committees, independent directors' roles, board composition, and accessibility requirements. The Securities Commission and the BSE's Prime Listing division mandate meeting some rules, even though the Code functions on a comply or clarify basis regarding listed businesses.

The practical ownership environment of Serbian listed businesses displays a number of structural characteristics that restrict the efficacy of formal governance frameworks, notwithstanding this statutory advancement [11]. Property is significantly concentrated: according to [24], the biggest shareholder in BSE-listed companies typically owns 52% of the stock, which greatly diminishes the significance of distributed-shareholder oversight. In the Prime Listing market, state control is still significant, with government

institutions controlling holdings in basic infrastructure, telecommunications, and energy companies. Considering the possibility of tunneling by the controlling shareholders, these fundamental characteristics create the board's oversight role both more politically constrained and even more crucial [28].

The implementation of the EU *acquis*, which includes the Corporate Sustainability Reporting Directive and the Shareholder Rights Directive II, will necessitate significant improvements to the governance framework of Serbian listed businesses, adding to the demand for reforms in governance brought about by the EU membership procedure. This makes the present article especially relevant: at a crucial point in Serbia's membership trajectory, recording the financial advantages of governance enhancements offers empirical support for reforming mobilization.

Data, Sample and Variables

Sample Construction

All companies listed on the Prime Listing and Standard Listing sectors of the Belgrade Stock Exchange (BSE) as of January 2019 are included in the original sample. We establish a number of exclusions requirements: (i) financial organizations (such as banks, insurance firms, and investment-type funds) are formerly removed from the main analysis due to specific sector regulatory requirements which renders governance frameworks incompatible, but are again incorporated in the sector-specific sub-case analyses in Section 5; (ii) firms with fewer than three years of ongoing public listing during the 2019–2024 duration are excluded to guarantee proper panel of coverage; (iii) firms with absence of regulatory data spanning more than three continuous years are removed. A total balancing panel analysis of 88 businesses over a 6-year period is produced using these criteria, yielding 528 firm-year records.

Annual reports, yearly brochures, and shareholders notification submitted to the Securities Commission of Serbia (SECSS) and the BSE were used to manually gather regulatory indicators. The yearly the accounting records databases of the Business Registers Agency of Serbia (APR)

provided standardized financial facts. The Statistical Office of the Republic of Serbia's (SORS) Consumer Price Index is used for deflating all financial variables to 2019 prices.

Dependent Variables

We use three business performance metrics. Accounting-based operational efficiency is captured by the return on assets (ROA), which is calculated by dividing the net profit by the average total assets. Shareholders returns are captured by Return on Equity (ROE), which is calculated by dividing the net profit by average book value of equities. The projected market performance and expansion expectations are captured by Tobin's Q, which is represented by the metric of market capitalization including overall debt to overall assets. [10]. In accordance with the existing literature [5], both bookkeeping and market standard measurements are used to prevent outcomes from being influenced by measuring artifacts unique to a particular performance aspect.

Independent Variables

The share of female directors on the board of directors is used to calculate board gender diversity (BGD). In order to enable direct financial understanding of the computed coefficient, we favor this continual measurement over the Blau heterogeneity index, in accordance with [13] and [9]. The proportion of non-executive directors who are independent is used to calculate board independence

(BIND). According to Article 68 of the Serbian Companies Act (2011), an independent director cannot be a major shareholder, have a substantial business association with the organization, or have been employed as an executive position of the firm within the past three years.

The basic logarithm of the total amount of board members is used to calculate board size (BS). CEO duality (DUAL) is a binary metric that is equal to one when the same person holds the positions of board chair and chief executive officer. If the business is establishing a formally defined auditing committee with specified conditions of a reference, the audit committee (AC) binary indicator is the same as one.

Control Variables

We correct for corporate size (natural logarithm of total assets), financial leverage (the total amount of debt divide by total assets), and growth in revenue (year-over-year change in percentage in operating income) in accordance with the existing literature [29, 5]. All models incorporate industry fixed consequences determined by a five-sector classification system (manufacturing, retail and trade, ICT and technology, energy and utilities, and financial services) and year fixed impact effects to account for macroeconomic factors (the 2019–2024 period includes the COVID-19 pandemic crisis (2020–2021), recovery after the pandemic, and the inflation increase caused by the conflict in Ukraine (2022–2023). Descriptive statistical data for every variable are shown in Table 1.

Table 1. Descriptive statistics (N = 528, 88 firms, 2019–2024)

Variable	Obs.	Mean	Std. Dev.	Min	Max
ROA (Return on Assets, %)	528	4.82	7.13	-18.42	31.65
ROE (Return on Equity, %)	528	8.14	14.22	-41.30	62.18
Tobin's Q	528	1.23	0.54	0.41	4.87
Board size (no. of members)	528	6.84	2.10	3	13
Board gender diversity (% women)	528	18.73	12.45	0	60
Board independence (% ind. members)	528	29.61	18.32	0	75
CEO duality (1 = yes)	528	0.31	0.46	0	1
Audit committee (1 = yes)	528	0.74	0.44	0	1
Firm size (ln total assets)	528	18.42	1.87	14.21	22.61
Leverage (total debt / assets, %)	528	38.16	21.44	0.12	89.33
Revenue growth (YoY, %)	528	6.43	15.82	-42.10	78.45

Note: The 2019 constant prices (CPI, SORS) are used to deflate all financial parameters. Standard yearly reports and BSE statements are the sources of governance factors. The first and 99th percentiles are used to winsorize performance indicators.

Empirical Methodology

The following is how the fundamental econometric assumption links board governance traits to business performance metrics:

$$\text{PERFit} = \alpha + \beta_1\text{BGDit} + \beta_2\text{BINDit} + \beta_3\text{BSit} + \beta_4\text{DUALit} + \beta_5\text{ACit} + \gamma'\text{Xit} + \mu_i + \lambda_t + \varepsilon_{it} \quad [1]$$

in which BGDit, BINDit, BSit, DUALit, and ACit are the governance-related parameters discussed in Section 3; Xit is a vector consisting of company-level controlling variables (firm size, leverage, revenue growth); μ_i indicates company fixed deterministic effects; λ_t indicates year fixed deterministic effects; and ε_{it} is the characteristic idiosyncratic error metric value. PERFit represents one of the three performance indicators (ROA, ROE, or Tobin's Q) for company i in year-specific t .

Endogeneity is the main analytical problem in calculating equation [1]: organizations that operate better may draw more competent directors, especially more women and autonomous directors, resulting in an opposite causal relationship between performance and governance. Furthermore, neglected firm-level attributes (such as corporate culture and founder caliber) may concurrently influence governance decisions and financial results, creating erroneous correlations. We use four complementary strategies to overcome these issues.

In order to account for within-company the serial correlation, we first evaluate pooled OLS as a starting point and cluster standard errors at the organization level [23]. Second, we evaluate a fixed-effects (FE) model that exclusively takes advantage of within-firm fluctuation over

an extended period, therefore eliminating time-invariant unnoticed heterogeneity. Third, to ascertain if RE or FE is the proper specification, we calculate a random effects (RE) model and use the [16] test. Fourth, and perhaps most crucially, we use lagged degrees and discrepancies of the governance parameters as tools to estimate a two-stage system based GMM estimator [7] for tackling dynamical endogeneity. The Arellano-Bond AR(2) test for second-order serial correlations in the differenced residuals analysis and the Sargan test of overly recognizing limitations are used to test the correctness of the GMM tools; satisfactory outcomes (non-rejection of AR(2) null and non-rejection of Sargan null) verify tool legitimacy. The correlation matrix is shown in Table 2, and the primary regression analysis findings are shown in Table 3.

Results

Main Regression Results

With ROA as the variable that is dependent, Table 3 presents the predicted coefficients from the four specifications. The results we obtained are robust, as evidenced by the data' remarkable consistency across estimation methods. In all four model types, the coefficient for board gender diversity (BGD) is positive as well as statistically significant ($\beta = 0.131$ – 0.156 , significant at the 5% range). The economic magnitude suggests that, ceteris paribus, a ten percentage point rise in the proportion of female directors is linked to a about 1.31–1.56 percentage point increase in ROA. The resource dependence based approach is in line with this effect: diverse boards contribute a greater variety of human resources, external connections, and decision-

Table 2. Pairwise correlation matrix

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) ROA	1.000							
(2) ROE	0.718*	1.000						
(3) Board size	0.142*	0.108*	1.000					
(4) Gender diversity	0.213*	0.187*	0.092	1.000				
(5) Independence	0.231*	0.196*	0.074	0.143*	1.000			
(6) CEO duality	-0.188*	-0.162*	-0.031	-0.109*	-0.214*	1.000		
(7) Audit committee	0.178*	0.154*	0.201*	0.132*	0.310*	-0.184*	1.000	
(8) Firm size	0.312*	0.241*	0.418*	0.096	0.187*	-0.072	0.231*	1.000

Note: * indicates importance at the 5% range. The entire sample (N = 528) is used to calculate correlations. The lack of multicollinearity is confirmed by VIF testing (all VIF < 3.2).

making viewpoints that improve the firm's ability to adapt and operate efficiently.

Board independence (BIND) exhibits a more robust and accurate positive correlation with ROA ($\beta = 0.172-0.201$, relevant at the 1% level across all parameters). A 1.72–2.01 percent growth in ROA is correlated with a 10% rise in the proportion of independent directors. This result is consistent with the hypothesis of agency theory, which states that independent oversight lessens managerial opportunism and brings managerial choices closer to the value of shareholders. The observation premium related to independent directors is particularly significant in the Serbian setting, where property is centralized and the risk of tunneling by shareholder control is not straightforward.

In all specifications, there is no statistically important association between board dimension and ROA ($\beta \approx 0.058-0.071$, $p > 0.1$). This is in line with the meta-analysis based results of [11], who indicate that the relationship between board size as well as performance is highly contextually dependent and frequently insignificant in European standardized environments. Across all of the models, CEO duality (DUAL) is negative and highly important ($\beta = -0.198$ to -0.228 , $p < 0.01$), meaning that combining the CEO and chair jobs is linked to a ROA that is about two percentage points lower. This outcome supports the

agency theory's predictions that centralised executive authority reduces the efficacy of supervision. The presence of an audit committee (AC) is linked to a considerably better return on assets (ROA) ($\beta \approx 0.151-0.174$, $p < 0.05$), indicating that formal supervision mechanisms enhance the integrity of reporting on finances and limit the potential for financial manipulation.

With only slight variations in coefficient extent, the results for ROE and Tobin's Q (available upon request) are fundamentally equal in sign and significance. The gender diversity impact is greater for Tobin's Q ($\beta = 0.241$ in the FE parameter specification, $p < 0.01$), which is in line with the theory that marketplace investors give better-governed companies a premium. Additionally, Tobin's Q exhibits a more substantial a dual chief executive officer penalty ($\beta \approx -0.312$, $p < 0.01$), indicating that capital markets typically specifically discount the agency risks related to centralized authority.

Sector Heterogeneity Analysis

Using the fixed implications criteria, Table 4 presents the calculated residual impacts associated with each governance parameter on ROA for all of the five industry categories. There are several notable variations. The ICT

Table 3. Board diversity and firm performance: Panel regression results (Dependent variable: ROA)

Variable	Model 1 (Pooled OLS)	Model 2 (Fixed Effects)	Model 3 (Random Effects)	Model 4 (System GMM)
Board gender diversity	0.142** (0.062)	0.131** (0.058)	0.138** (0.060)	0.156** (0.071)
Board independence	0.187*** (0.044)	0.172*** (0.041)	0.180*** (0.043)	0.201*** (0.052)
Board size	0.063 (0.081)	0.058 (0.077)	0.061 (0.079)	0.071 (0.088)
CEO duality	-0.214*** (0.071)	-0.198*** (0.067)	-0.207*** (0.069)	-0.228*** (0.081)
Audit committee	0.163** (0.073)	0.151** (0.069)	0.158** (0.071)	0.174** (0.083)
Firm size (ln assets)	0.421*** (0.094)	0.389*** (0.089)	0.406*** (0.091)	0.447*** (0.103)
Leverage	-0.312*** (0.082)	-0.288*** (0.078)	-0.301*** (0.080)	-0.331*** (0.091)
Revenue growth	0.084* (0.048)	0.077* (0.046)	0.081* (0.047)	0.089* (0.053)
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Observations	528	528	528	528
R ² (Within)	0.312	0.341	0.329	—
F-statistic / Wald χ^2	18.43***	21.07***	19.61***	24.38***
Hausman test (p-value)	—	—	0.031	—
Arellano-Bond AR(2)	—	—	—	0.412
Sargan test (p-value)	—	—	—	0.284

Note: The firm-level robust standard mistakes are grouped in parenthesis. * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. Year and sector fixed impacts are included in all analyses. Lagged levels (t-2 to t-4) and lagging discrepancies (t-1) of governance parameters are system GMM tools. At the first and 99th percentiles, variables related to performance are winsorized. Method GMM is recommended for inferring causality, whereas FE is the preferable estimating method for the inside-sample evaluation, as confirmed by the Hausman test's rejection of the RE description ($p = 0.031$).

and technology business has the highest output premium resulting from gender diversity ($\beta = 0.261$, $p < 0.01$). This is in line with the hypothesis that the intellectual diversity brought by gender-diverse boards converts most directly toward strategic adaptability in highly knowledgeable, rapidly changing contexts. Additionally, financial services generally have a comparatively high gender diversity coefficient ($\beta = 0.187$, $p < 0.05$), which reflects the intricacy of risk management choices where different viewpoints are very helpful.

All five industries show a substantial and beneficial effect from board independence ($p < 0.01$), with energy and utilities showing the least impact ($\beta = 0.144$, $p < 0.05$). The fact that Serbian energy businesses are primarily under state control, which restricts the effective authority of autonomous directors whatever their official number, provides a plausible explanation for this. CEO duality is consistently detrimental and large in every sector, demonstrating the results costs are imposed by this governance failing regardless of the industry environment. Especially in the energy and utilities field ($\beta = 0.143$, $p > 0.1$) is the audit committee's influence negligible, which is again in line with the dominant position of political influence over commercial governance aspects in that industry.

Discussion and Implications

The study's findings have important ramifications for Serbia's governance of companies guidelines, especially in light of the country's EU membership effort. The Corporate Governance Code of Serbia (2020) was right to reinforce the suggestions on autonomous director representation,

as evidenced by the steady and strong positive correlation among board independence and business success. The proof, however, indicates that the compliance or explanation mechanism might not be adequate. Given the significant financial advantages of independence (roughly 1.7–2.0 % points of ROA per 10% increase in independent status), mandatory minimum requirement, as implemented in various member states of the EU, might be justified for Prime Listing corporations.

The discovery that gender diversity has a positive relationship with performance, regardless of adjusting for endogeneity using a standard GMM, contributes Serbian findings to the expanding global agreement that gender diversity on boards is a corporate enhancement mechanism rather than just a diversity and inclusion goal. Gender equality in corporate boards is covered by both the EU's Corporate Sustainability Reporting Directive and the suggested Corporate Governance Directive. The current research supports the idea that Serbian listed enterprises might gain financially from voluntarily adopting such norms before formal joining the EU responsibilities.

The most clear conclusion of this study is the persistently negative correlation among CEO duality and company performance, which has the most immediate legal implications. For businesses included on the BSE Prime Listing section, a mix of the CEO and chair positions ought to be forbidden or subject to required approval from shareholders with extraordinary criteria. As Table 1 demonstrates, 31% of firm-year data in our sample feature CEO duality, which seems high considering the clear performance consequences it indicates. This indicates that the present Code provision—a gentle suggestion toward duality—is clearly inadequate to influence behavior.

Table 4. Sector-level analysis: Marginal effects on ROA (Fixed Effects specification)

Industry Sector	Gender Diversity → ROA	Independence → ROA	CEO Duality → ROA	Audit Committee → ROA	N (firms)
Manufacturing	0.171** (0.074)	0.208*** (0.051)	-0.241*** (0.082)	0.189** (0.085)	28
Retail & Trade	0.134* (0.071)	0.163*** (0.049)	-0.198*** (0.079)	0.152** (0.082)	14
ICT & Technology	0.261*** (0.089)	0.241*** (0.062)	-0.187** (0.093)	0.221** (0.101)	11
Energy & Utilities	0.098 (0.101)	0.144** (0.071)	-0.221** (0.107)	0.143 (0.114)	8
Financial Services	0.187** (0.082)	0.214*** (0.059)	-0.177** (0.087)	0.204** (0.094)	12
Other sectors	0.121* (0.069)	0.158*** (0.048)	-0.196*** (0.076)	0.141* (0.080)	15
Full sample (FE)	0.131** (0.058)	0.172*** (0.041)	-0.198*** (0.067)	0.151** (0.069)	88

Note: Robust typical errors enclosed in parenthesis. * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. Year fixed consequences and the whole set of firm-level factors (firm size, leverage, revenue growth) are included in all industry-level simulations. The National Classification of Activities (SKD 2010) is the basis for sector categorization.

The current study has a number of limitations that should be noted. First, even though the hand-collected governing dataset is extensive, it depends on data from yearly standardized reports, that may not always represent a precise representation of generally accepted board dynamics. Second, organizations that delisted or were new listed between 2019 and 2024 must be excluded in order to create a balanced committee, which may introduce survivorship bias. Third, the proxy for Tobin's Q calculation utilized here is an accounting-based approximations; market capitalization data may provide a more precise numerator for dynamic markets, but BSE volumes of trading are inadequate for trustworthy daily price-driven estimations for numerous listed organizations.

Fourth, the qualitative component of board procedures—deliberation level of quality, sharing of information among directors, and board culture—may be just as significant for performance results as structural arrangement, but it is not captured by the governance factors taken into consideration here.

Conclusion

Using a panel of 88 businesses from 2019 to 2024, this study offers the first thorough post-reform statistical investigation of the connection between board diversity and business performance for firms listed on the Belgrade Stock Exchange. We provide substantial proof that audit committee formation, independence of boards, and gender equality are linked to substantially better financial outcomes, whereas CEO duality is linked to significantly poorer performance, using system GMM estimates for addressing endogeneity issues.

Every nation should strive to offer the strongest corporate management arrangements that enable sustained long-term performance, safeguard minority interests, and generate substantial value for shareholders [20]. In comparison to the present sample mean of 4.82%, quantified projections indicate that enhancing corporate governance in line with the dimensions defined in this paper—that is, removing CEO duality and raising board independence by 10 % points—could raise the average

ROA of BSE-listed firms by roughly two to four percentage points. This improvement is economically significant.

Aligning corporate governance norms with EU guidelines is both a legal need and a business option as Serbia moves forward with its EU membership goal. The results of this study offer empirical evidence for a number of particular governance improvements, including the requirement of audit committees with a high proportion of independent members, the introduction of minimum board autonomy thresholds for Prime Listing corporations, and the ban on CEO duality within large companies that are listed. Further studies should extend the analysis to unlisted enterprises, which make up the bulk of Serbia's corporate industry, and examine the methods through which gender diversity produces performance improvements—whether that is through higher-quality monitoring, wider external relationships, or better decision making performance.

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