



When Governance Matters: Board Quality, Family Control, and Firm Performance in Times of Crisis

Karen Watkins-Fassler^{1,2*}

¹ Tecnológico Nacional de México, Mexico

² UNIR, Spain

Research paper. Received: 28-01-2026; accepted: 18-05-2026

JEL CODE

G34, G32, L25, D22

KEYWORDS

Family firms; Board quality; Corporate governance; COVID-19; Firm performance; Emerging markets

Abstract. This study examines whether board quality moderates the impact of an exogenous shock on the financial performance of family firms. Using a panel of 83 Mexican listed companies over the period 2014-2023, the study analyzes firm performance during the COVID-19 crisis, focusing on the role of board institutional quality measured through an index capturing board independence, non-executive representation, CEO-chair separation, and gender diversity. Employing firm fixed-effects models with robust standard errors and two alternative performance measures (ROA and ROE), the study tests whether family ownership, board quality, and their interaction shape firms' ability to withstand the shock. The results show that, while family control per se does not generate a differential performance effect during the pandemic, leverage exerts a strong and robust negative impact. Board quality displays a positive and marginally significant association with return on equity, suggesting that governance structures may play a more relevant role in protecting shareholder returns than in improving asset efficiency during crisis periods. Overall, the findings highlight the contingent nature of the family firm advantage and underscore the importance of capital structure and board institutional quality in explaining firm performance under conditions of extreme uncertainty.

CÓDIGO JEL

G34, G32, L25, D22

PALABRAS CLAVE

Empresas familiares; Calidad del Consejo de Administración; Gobierno corporativo; COVID-19; Desempeño empresarial; Mercados emergentes

Cuando la Gobernanza Importa: Calidad del Consejo, Control Familiar y Desempeño Empresarial en Tiempos de Crisis

Resumen. Este estudio examina si la calidad del consejo de administración modera el impacto de un shock exógeno sobre el desempeño financiero de las empresas familiares. Utilizando un panel de 83 empresas mexicanas cotizadas durante el período 2014-2023, se analiza el desempeño empresarial durante la crisis de la COVID-19, prestando especial atención al papel de la calidad institucional del consejo, medida mediante un índice que incluye independencia, representación de consejeros no ejecutivos, separación de los cargos de CEO y presidente, y diversidad de género. Mediante modelos de efectos fijos con errores estándar robustos y dos medidas alternativas de desempeño (ROA y ROE), se examina si la propiedad familiar, la calidad del consejo y su interacción influyen en la capacidad de las empresas para afrontar el shock. Los resultados muestran que, aunque el control familiar per se no genera un efecto diferencial sobre el desempeño durante la pandemia, el apalancamiento ejerce un impacto negativo fuerte y robusto. Asimismo, la calidad del consejo presenta una asociación positiva y marginalmente significativa con la rentabilidad financiera, lo que sugiere que las estructuras de gobernanza desempeñan un papel más relevante en la protección de los retornos para los accionistas que en la mejora de la eficiencia de los activos durante períodos de crisis. En conjunto, los resultados destacan la naturaleza contingente de la ventaja de las empresas familiares y subrayan la importancia de la estructura de capital y de la calidad institucional del consejo para explicar el desempeño empresarial en contextos de extrema incertidumbre.

<http://doi.org/10.24310/ejfb.16.1.2026.23065>

Copyright Year: Karen Watkins-Fassler

European Journal of Family Business is a Diamond Open Access journal published in Malaga by UMA Editorial under the CC BY-NC-ND license. ISSN 2444-8788 ISSN-e 2444-877X

*Corresponding author:

E-mail: kwatkinsf@itsm.edu.mx

Km. 1.8 Carretera a Loma del Cojolite, C.P. 93850 Misantla, Veracruz, Mexico

1. Introduction

Family firms constitute the dominant organizational form worldwide and play a central role in employment generation, value creation, and long-term economic stability. A vast body of research has examined whether family involvement enhances or hinders firm performance, often reporting heterogeneous and context-dependent results (Anderson & Reeb, 2003; Villalonga & Amit, 2006). Recent work emphasizes that family-firm outcomes are heterogeneous and depend on governance arrangements rather than ownership status alone (Arteaga & Basco, 2023).

At the same time, the COVID-19 pandemic has provided a unique natural experiment to analyze how different ownership and governance arrangements perform under an abrupt and exogenous shock. The crisis simultaneously disrupted supply chains, demand conditions, and financial markets, creating an environment of extreme uncertainty in which firms' strategic flexibility, monitoring mechanisms, and access to resources became critical (Ding et al., 2021; Shen et al., 2020). For family firms, the pandemic renewed the long-standing debate on whether their distinctive features—such as long-term orientation, concentrated ownership, and socioemotional wealth considerations—translate into greater resilience or, alternatively, into rigidity and risk aversion that may hamper adaptation (Amore et al., 2022; Kraus et al., 2020).

While prior studies have explored the performance of family firms during crises, evidence remains mixed and often silent on the role of the board institutional quality as a conditioning factor. Boards differ substantially in their capacity to provide effective monitoring, strategic advice, and access to external resources, depending on their independence, leadership structure, and diversity (Adams et al., 2010; Post & Byron, 2015). In emerging markets, where ownership concentration and weaker investor protection are common, the board's institutional quality may be particularly relevant in shaping firm responses to shocks (Adams et al., 2010; Zona et al., 2017).

This study addresses this gap by investigating whether board quality moderates the impact of the COVID-19 shock on the financial performance of family firms. Focusing on publicly listed companies in Mexico, I construct a Board Quality Index (BQI) based on four widely used governance attributes: the proportion of independent directors, the share of non-executive directors, the separation of the CEO and chair positions, and gender diversity on the board. Using firm-level panel data for the period 2014–2023, I estimate fixed-effects models that allow to isolate within-firm changes in performance and to compare

family and non-family firms during the pandemic. This analysis contributes to the literature in three main ways. First, it provides new evidence on firm resilience during an exogenous shock in an emerging market context, showing that financial structure plays a more decisive role than ownership form in shaping performance under extreme uncertainty. Second, it explicitly integrates board institutional quality into the family firm-performance nexus, demonstrating that its effects are contingent on the performance metric considered and are more strongly reflected in shareholder returns than in operational efficiency. Third, by jointly examining ownership, governance, and financial structure, the study offers a more nuanced understanding of firm heterogeneity during crisis periods, moving beyond the traditional family versus non-family dichotomy.

The remainder of the paper is organized as follows. Section 2 reviews the relevant literature and develops the hypotheses. Section 3 presents the data and methodology. Section 4 reports the empirical results for ROA and ROE. Section 5 discusses the findings considering existing research. Finally, Section 6 concludes and outlines implications for theory, practice, and future research.

2. Literature Review and Hypotheses

2.1. Family firms and performance under exogenous shocks

The relationship between family ownership and firm performance has been one of the most extensively studied topics in the family business literature. Early evidence for publicly listed firms suggested that family involvement may be associated with superior performance due to long-term orientation, reduced agency costs, and stronger monitoring by controlling shareholders (Anderson & Reeb, 2003; Villalonga & Amit, 2006). However, subsequent studies have emphasized that this “family firm advantage” is far from universal and strongly depends on contextual and governance-related factors (Chrisman et al., 2005; Kraus et al., 2020).

The COVID-19 pandemic has revived this debate by providing a natural experiment to examine whether family firms are more resilient than their non-family counterparts when facing an abrupt and exogenous shock. On the one hand, the literature on socioemotional wealth argues that family owners may prioritize survival and long-term continuity over short-term profitability, which could foster conservative financial policies and stronger stakeholder relationships, enhancing resilience in times of crisis (Amore et al., 2022; Gómez-Mejía et al., 2011). On the other hand, high ownership concentration and risk aversion may limit strategic flexibility and access

to external capital, potentially constraining performance during severe downturns (Kraus et al., 2020).

Recent contributions underline the heterogeneity of family firms and the central role of internal governance arrangements in shaping performance outcomes. Arteaga and Basco (2023) demonstrate that distinct configurations of family involvement and corporate governance are associated with different performance patterns, emphasizing that family ownership alone is insufficient to explain firm outcomes. Similarly, Torres-Rivera and Pedraza-Melo (2023) show that managerial and governance-related competencies are positively linked to organizational performance in family SMEs. Bettinelli et al. (2024); Corbetta and Salvato (2004); and Amore et al. (2022) document that board professionalism and monitoring capacity critically condition the value creation of family firms, particularly in turbulent environments. Recently, Calabrò et al. (2022) highlight that the effectiveness of family control is highly context-dependent and mediated by governance quality, especially under conditions of heightened uncertainty such as economic crises. Taken together, these findings suggest that any potential performance differential of family firms during an exogenous shock is contingent upon the institutional quality of their governance structures rather than on family ownership per se.

Given the mixed and often contradictory evidence on the performance of family firms during periods of crisis, the expected direction of the effect remains theoretically ambiguous. While some studies suggest that family firms may exhibit greater resilience due to long-term orientation and stakeholder commitment, others point to potential rigidity and constraints that may hinder adaptation. Accordingly, rather than formulating a directional prediction, this study adopts a non-directional hypothesis that allows for either a positive or negative differential effect.

Based on this discussion, I first examine whether family firms exhibit a differential performance response to the COVID-19 shock relative to non-family firms:

Hypothesis 1 (H1). Family firms experience a performance effect during the COVID-19 period that differs from that of non-family firms, without imposing an ex-ante directional expectation.

2.2. Board quality and firm performance

Boards of directors play a central role in monitoring management, providing strategic advice, and securing critical resources (Adams et al., 2010). A large body of corporate governance research links board characteristics such as independence, non-executive representation, leadership struc-

ture, and gender diversity to firm performance, although the direction and magnitude of these effects are often context-dependent (Adams et al., 2010; Post & Byron, 2015; Zona et al., 2017). Independence and a higher proportion of non-executive directors are commonly associated with stronger monitoring and reduced entrenchment, particularly in environments with concentrated ownership and weaker investor protection, as is typical of many emerging markets (Adams et al., 2010; Zona et al., 2017). The separation of the CEO and chair positions is expected to limit excessive concentration of power and enhance board effectiveness (Yu, 2022). Gender diversity has been shown, on average, to be positively related to accounting-based performance and board decision quality, especially in institutional contexts that value transparency and stakeholder orientation (Post & Byron, 2015).

Within the family business domain, recent studies highlight that board composition and professionalism become particularly relevant as firms grow and face complex strategic challenges. Arteaga and Basco (2023) emphasize that governance structures shape how family firms balance control and professionalism, while Torres-Rivera and Pedraza-Melo (2023) provide evidence that governance-related capabilities are positively associated with performance. Together, these studies suggest that board institutional quality may be a critical determinant of how firms navigate periods of extreme uncertainty.

Beyond their well-established association with firm performance, these board attributes may play distinct and complementary roles under conditions of extreme uncertainty such as the COVID-19 crisis. Board independence is expected to enhance objective monitoring and reduce managerial bias, which becomes particularly relevant when firms must rapidly reassess strategies under high information asymmetry. A higher proportion of non-executive directors may contribute to broader expertise and external perspectives, facilitating access to resources and alternative strategic responses during disruptions. The separation of CEO and chair positions can prevent excessive concentration of decision-making power, promoting more balanced and deliberative responses in turbulent environments. Finally, gender diversity has been associated with improved decision quality, risk assessment, and stakeholder sensitivity, all of which may be critical when firms face complex and rapidly evolving challenges.

Importantly, these governance mechanisms are likely to operate through different channels. On the one hand, they can influence operational decision making, affecting firms' ability to adapt processes, manage costs, and maintain efficiency under adverse conditions. On the other hand,

they may shape financial and strategic decisions, including capital allocation, risk management, and communication with investors, thereby contributing to the protection of shareholder value. Anticipating this distinction is particularly relevant for interpreting potential differences between accounting-based performance measures such as ROA and ROE in crisis contexts.

Accordingly, I posit that higher board quality is associated with better performance during the COVID-19 shock:

Hypothesis 2 (H2). *Board quality is positively associated with firm performance during the COVID-19 period.*

2.3 The moderating role of board quality in family firms

The interaction between family ownership and board quality is particularly relevant under crisis conditions. Family control may intensify agency conflicts between controlling and minority shareholders, but high-quality boards can mitigate such conflicts by strengthening monitoring and providing independent advice (Anderson & Reeb, 2004; Adams et al., 2010; Zona et al., 2017). Moreover, professional and diverse boards may help family firms overcome potential rigidities associated with socioemotional wealth preservation by facilitating more balanced strategic decision making (Gómez-Mejía et al., 2011; Corbetta & Salvato, 2004; Zona et al., 2017).

From this perspective, the effectiveness of family governance during the pandemic is likely to depend on the institutional quality of the board. A high-quality board may enhance the ability of family firms to transform their long-term orientation and relational capital into superior crisis management and protection of shareholder value.

Therefore, I formulate the following moderating hypothesis:

Hypothesis 3 (H3). *Board quality positively moderates the relationship between family ownership and firm performance during the COVID-19 period, such that family firms with higher board quality perform better than those with lower board quality.*

3. Methodology

3.1. Sample and data sources

The empirical analysis is based on an unbalanced panel of 83 publicly listed firms in Mexico over the period 2014–2023, yielding a total of 790 firm-year observations after applying a complete-case criterion, that is, retaining only those observations with non-missing values for all variables included in the econometric models. This approach ensures internal consistency of the estimations and avoids distortions arising from incomplete information in interaction terms and fixed-effects specifications.

Financial data were obtained from firms' annual reports and complemented with Refinitiv Eikon. Information on ownership structure and board characteristics was manually collected from corporate governance reports and filings submitted to the Mexican Stock Exchange (*Bolsa Mexicana de Valores*, BMV).

Approximately 37% of the sample corresponds to family firms, defined as companies in which an individual or a family group holds at least 50% of the ordinary voting shares. Family control was identified through surname matching and ownership disclosures, following established procedures in the literature (Watkins et al., 2024).

The sample includes the pre-pandemic period and the COVID-19 shock years (2020–2021), allowing to examine differential performance responses to an exogenous and systemic crisis. Descriptive statistics are reported in Table 1.

Table 1. Descriptive statistics

Variable	Mean	Median	Std. Dev.	Min	Max
ROA (%)	4.56	4.30	5.51	−13.80	21.68
ROE (%)	10.19	10.01	15.72	−54.08	60.97
Family firm (1 = yes)	0.37	0.00	0.48	0.00	1.00
Independent directors (%)	52.53	50.00	16.04	25.00	100.00
Non-executive directors (%)	11.78	11.61	5.96	0.50	28.82
CEO-Chair duality (1 = yes)	0.24	0.00	0.43	0.00	1.00
Women on board (%)	9.67	8.33	9.89	0.00	45.46
Firm size (ln assets)	7.51	7.57	1.53	3.22	11.43
Leverage (Debt/Assets)	0.58	0.54	0.32	0.00	5.67

ROA = return on assets; ROE = return on equity. All financial variables are winsorized at the 1st and 99th percentiles. Family firm is a dummy equal to 1 when a family owns at least 50% of voting shares. Board variables are expressed as percentages. Leverage is total debt divided by total assets. The panel is unbalanced and based on firm-year observations for 2014–2023.

3.2. Variables and indicator construction

3.2.1 Dependent variables

Firm performance is measured using two accounting-based indicators, both winsorized at the 1st and 99th percentiles to mitigate the influence of outliers:

- ROA_w: return on assets, defined as net income over total assets.
- ROE_w: return on equity, defined as net income over shareholders' equity.

Using both measures allows to assess robustness and to distinguish between efficiency in the use of assets and returns to shareholders.

3.2.2 Family ownership and exogenous shock

To capture the impact of the COVID-19 crisis, I define a dummy variable POST, equal to 1 for the years 2020-2021 and 0 otherwise. Family involvement is captured by the binary variable FAM, equal to 1 for family firms and 0 for non-family firms. Their interaction:

$$\text{POSTFAM}_{it} = \text{POST}_t \times \text{FAM}_i$$

identifies the differential performance of family firms during the pandemic period.

3.2.3. Board Quality Index (BQI)

Board institutional quality is measured through a composite index constructed from four widely used governance attributes, computed as firm-level averages over a pre-shock window 2017-2019:

1. Board independence (IND): percentage of independent directors.
2. Non-executive directors (NOEXEC): percentage of directors without executive roles. In this study, a distinction is made between independent and non-executive directors. Independent directors are those who do not maintain any material relationship with the firm beyond their board membership, including the absence of managerial, ownership, or significant commercial or financial ties. In contrast, non-executive directors refer to board members who do not hold executive positions within the firm but may have some form of affiliation or relationship with it (e.g., creditors, business partners, or representatives of significant stakeholders). Accordingly, non-executive directors include affiliated (or gray) directors but exclude both executive and independent directors.
3. Leadership structure (NODUAL): a dummy equal to 1 when the CEO and board chair positions are separated (1 – DUAL).

4. Gender diversity (WOM): percentage of women on the board.

Each variable is standardized into z-scores and aggregated into a simple average:

$$\text{BQI\_PRE}_i = \frac{1}{4} (z\text{IND}_i + z\text{NOEXEC}_i + z\text{NODUAL}_i + z\text{WOM}_i)$$

The use of an additive index is motivated by the objective of capturing the overall institutional quality of the board as a multidimensional construct, rather than isolating the effects of individual attributes. While prior research has shown that different board characteristics may operate through distinct channels and may not be equally effective across contexts (Bettinelli et al., 2024), aggregating them into a composite measure allows to reflect their joint and potentially complementary contribution to governance effectiveness. This approach is consistent with the view that board quality emerges from the combined presence of monitoring capacity, diversity, and balanced leadership structures, which together shape the board's ability to respond to complex and uncertain environments. At the same time, this specification favors parsimony and mitigates multicollinearity concerns that may arise when including highly correlated governance variables separately.

The index is subsequently mean-centered (BQI_PRE_C) to facilitate interpretation of interaction terms. Higher values of BQI reflect higher board institutional quality, consistent with the corporate governance literature emphasizing independence, separation of powers, and diversity as mechanisms that enhance monitoring and strategic oversight (Adams et al., 2010; Post & Byron, 2015; Yu, 2022).

To analyze how governance quality shapes crisis performance, I define:

$$\text{POSTBQI}_{it} = \text{POST}_t \times \text{BQI\_PRE\_C}_i$$

and the triple interaction:

$$\text{POSTFAM\_BQI}_{it} = \text{POST}_t \times \text{FAM}_i \times \text{BQI\_PRE\_C}_i$$

which captures whether board quality moderates the effect of family ownership during the shock.

3.2.4. Control variables

I include two standard firm-level controls:

- Firm size (Size): natural logarithm of total assets.
- Leverage (Lev): total debt to total assets.

3.3. Econometric specification

I estimate firm fixed-effects models to control unobserved time-invariant heterogeneity (e.g.,

organizational culture, industry positioning, long-term strategic orientation). The baseline specification is:

$$\text{Performance}_{it} = \alpha + \beta_1 \text{POSTFAM}_{it} + \beta_2 \text{POSTBQI}_{it} + \beta_3 \text{POSTFAM\_BQI}_{it} + \gamma_1 \text{SIZE}_{it} + \gamma_2 \text{LEV}_{it} + \mu_i + \varepsilon_{it}$$

where μ_i denotes firm fixed effects and ε_{it} is the idiosyncratic error term.

All estimations are conducted using White cross-section robust standard errors to correct for heteroskedasticity and within-firm correlation. While clustering standard errors at the firm level was considered, White cross-section robust errors are appropriate in this context given the panel structure and the inclusion of firm fixed effects, which already account for time-invariant unobserved heterogeneity.

3.4. Validity and potential endogeneity

The relationship between governance and performance may be affected by dynamic endogeneity, as past performance can influence board structure and vice versa. I mitigate these concerns by: (i) employing firm fixed effects; (ii) constructing

the BQI from pre-shock data; and (iii) using an exogenous macroeconomic shock (COVID-19) as a quasi-experimental setting.

Nevertheless, I acknowledge that a fully dynamic treatment using system-GMM (Wintoki et al., 2012) could further address simultaneity and persistence in performance. This constitutes an avenue for future research.

4. Results

4.1. Model fit and diagnostic statistics

Table 2 reports the fixed-effects estimates for firm performance measured by ROA_w, while Table 3 presents the corresponding results using ROE_w as the dependent variable. All models include firm fixed effects and White cross-section robust standard errors.

Table 2. Fixed-effects regression results (Dependent variable: ROA_w)

Variable	Coefficient	Std. Error	t-Statistic	p-value
Constant	1.230	2.948	4.173	0.000
POSTFAM	0.171	0.559	0.306	0.760
POSTBQI	1.607	1.282	1.254	0.210
POSTFAM_BQI	-0.574	2.420	-0.237	0.813
SIZE	-0.635	0.453	-1.402	0.161
LEV	-5.359	0.712	-7.525	0.000

Model statistics:

Observations = 790; Firms = 83; $R^2 = 0.573$; Adjusted $R^2 = 0.521$; F-statistic (p-value) = 0.000; Durbin-Watson = 1.50

Notes: Firm fixed effects included. White cross-section robust standard errors. ROA winsorized at 1% and 99%.

Table 3. Fixed-effects regression results (Dependent variable: ROE_w)

Variable	Coefficient	Std. Error	t-Statistic	p-value
Constant	-9.841	1.108	-0.888	0.375
POSTFAM	-0.623	1.832	-0.340	0.734
POSTBQI	7.254	4.260	1.703	0.089
POSTFAM_BQI	-4.242	7.912	-0.536	0.592
SIZE	6.066	1.924	3.153	0.002
LEV	-3.984	6.955	-5.728	0.000

Model statistics:

Observations = 790; Firms = 83; $R^2 = 0.561$; Adjusted $R^2 = 0.507$; F-statistic (p-value) = 0.000; Durbin-Watson = 1.48

Notes: Firm fixed effects included. White cross-section robust standard errors. ROE winsorized at 1% and 99%.

For the ROA specification, the model exhibits satisfactory explanatory power, with an R^2 of 0.573 and an adjusted R^2 of 0.521. The joint significance of the regressors is confirmed by a highly significant F-statistic ($p < 0.001$). The Durbin-Watson statistic (≈ 1.50) indicates moderate positive serial correlation, which is addressed using robust standard errors.

The ROE specification displays a similar overall fit (see Table 3), with the F-statistic also significant at the 1% level, supporting the adequacy of the empirical model.

4.2. Effects on return on assets (ROA_w)

The coefficient on POSTFAM, capturing the differential effect of the COVID-19 period on fam-

ily firms, is positive but statistically insignificant ($\beta = 0.171$; $p = 0.760$). This result suggests that, once firm fixed effects and financial controls are considered, family ownership per se does not lead to a significantly different ROA response to the pandemic shock relative to non-family firms. The interaction between the COVID period and board quality, POSTBQI, is also positive but not statistically significant ($\beta = 1.607$; $p = 0.210$). Although the sign is consistent with the view that higher board institutional quality may help firms better withstand adverse conditions, the evidence does not support a robust association in terms of asset-based profitability.

The triple interaction term, POSTFAM_BQI, which tests whether board quality moderates the crisis performance of family firms, is negative and far from significant ($\beta = -0.574$; $p = 0.813$). Hence, no differential moderating effect of board quality on family firms' ROA during the pandemic can be statistically established.

Regarding control variables, firm size (size) does not display a significant association with ROA ($\gamma = -0.635$; $p = 0.161$). In contrast, leverage (lev) exerts a strong and highly significant negative effect ($\gamma = -5.359$; $p < 0.001$), indicating that more indebted firms experienced substantially lower asset profitability during the sample period, including the years of the COVID-19 shock. In economic terms, this coefficient implies that an increase of 0.10 in the leverage ratio (i.e., a 10 percentage points increase in debt relative to assets) is associated with a reduction of approximately 0.54 percentage points in return on assets. This magnitude highlights the substantial sensitivity of asset profitability to financial structure, particularly under conditions of heightened uncertainty.

4.3. Effects on return on equity (ROE_w)

The results for ROE_w reveal both similarities and notable differences. The coefficient on POSTFAM remains statistically insignificant ($\beta = -0.623$; $p = 0.734$), confirming that family control alone does not generate a distinct performance pattern in terms of shareholder returns during the crisis.

In contrast to the ROA model, the coefficient on POSTBQI is positive and marginally significant ($\beta = 7.254$; $p = 0.089$). In terms of economic magnitude, this estimate indicates that a one standard deviation increase in pre-crisis board quality is associated with a non-negligible improvement in return on equity during the pandemic period. Given that the Board Quality Index is constructed from standardized components, this effect can be interpreted as reflecting a shift from an average to a relatively higher-quality governance structure. Although the estimate is only marginally significant, its magnitude points to economi-

cally meaningful implications for shareholder returns under conditions of extreme uncertainty, suggesting that firms with higher pre-crisis board quality were better positioned to preserve or enhance returns to equity holders during the pandemic, even if such advantages did not translate into higher efficiency in the use of total assets.

The triple interaction POSTFAM_BQI remains negative and statistically insignificant ($\beta = -4.242$; $p = 0.592$), providing no evidence that board quality systematically moderates the crisis performance of family firms relative to non-family firms when performance is measured by ROE.

Among the control variables, firm size becomes positive and statistically significant in the ROE model ($\gamma = 6.066$; $p = 0.002$), indicating that larger firms were more successful in sustaining shareholder returns even during the pandemic. Leverage again shows a negative and highly significant effect ($\gamma = -3.984$; $p < 0.001$), corroborating the robust adverse role of financial indebtedness for equity profitability.

4.4. Comparison between ROA and ROE

Taken together, the two specifications highlight three main patterns. First, the absence of a significant POSTFAM effect across both ROA and ROE indicates that family ownership, by itself, does not confer a systematic performance advantage or disadvantage during the COVID-19 shock once firm-specific heterogeneity is controlled for.

Second, the role of board quality appears to be performance-metric dependent. While its effect is not statistically discernible for ROA, it is positive and marginally significant for ROE, suggesting that board institutional quality may be more closely related to the protection of shareholder value than to improvements in overall asset efficiency in crisis contexts.

Third, the negative impact of leverage is highly robust across both measures of performance, underscoring the central role of capital structure in shaping firms' vulnerability to exogenous shocks. Overall, these results do not provide support for Hypothesis 1 and Hypothesis 3, while offering partial support for Hypothesis 2 when firm performance is measured in terms of return on equity.

4.5. Joint effects of COVID-19 and board quality: Wald tests

Because the empirical specification includes interaction terms between the COVID-19 period, family ownership, and board quality, the marginal impact of the shock cannot be fully assessed by inspecting individual coefficients in isolation. Instead, the total effect must be evaluated as linear combinations of the estimated parameters. For non-family firms ($FAM = 0$), the COVID ef-

fect is captured by the coefficient on POSTBQI. For family firms (FAM = 1), the total COVID effect corresponds to the sum of the coefficients on POSTFAM, POSTBQI, and POSTFAM_BQI. Accordingly, I conduct Wald tests on the following linear restrictions:

$$H_0: \beta_{\text{POSTFAM}} + \beta_{\text{POSTBQI}} + \beta_{\text{POSTFAM\_BQI}} = 0$$

to assess whether the overall COVID-19 effect for family firms differs from zero, and

$$H_0: \beta_{\text{POSTBQI}} = 0$$

to test the corresponding effect for non-family firms. In addition, I test

$$H_0: \beta_{\text{POSTFAM}} + \beta_{\text{POSTFAM\_BQI}} = 0$$

to examine whether the COVID-19 impact differs statistically between family and non-family firms once board quality is considered.

Table 4 reports the results of these Wald tests for both ROA_w and ROE_w. Consistent with the coefficient-level evidence presented in Tables 2 and 3, none of the joint restrictions is statistically significant at conventional levels. Specifically, the null hypothesis that the total COVID-19 effect for family firms equals zero cannot be rejected for either ROA or ROE, and the differential effect between family and non-family firms is also statistically indistinguishable from zero.

Table 4. Wald tests of total COVID-19 effects (evaluated at BQI_PRE_C = 1)

Dependent variable	Test	Linear restriction	Wald x ²	p-value
ROA_w	Family total COVID effect	POSTFAM + POSTBQI + POSTFAM_BQI = 0	1.261	0.261
ROA_w	Non-family COVID effect	POSTBQI = 0	0.740	0.390
ROA_w	Family – non-family	POSTFAM + POSTFAM_BQI = 0	0.002	0.961
ROE_w	Family total COVID effect	POSTFAM + POSTBQI + POSTFAM_BQI = 0	0.247	0.619
ROE_w	Non-family COVID effect	POSTBQI = 0	2.272	0.132
ROE_w	Family – non-family	POSTFAM + POSTFAM_BQI = 0	0.823	0.364

Note: Wald tests account for the full variance-covariance matrix of the estimated coefficients. Accordingly, the reported x² statistics do not correspond to the numerical sum of coefficients but to the quadratic form implied by the estimated covariance structure.

These results confirm that the absence of a significant POSTFAM and POSTFAM_BQI coefficient is not due to offsetting effects across interaction terms. Rather, even when the total marginal effect of the pandemic is evaluated through joint hypothesis testing, family firms do not exhibit a performance response that is statistically different from that of non-family firms, once board institutional quality and financial controls are considered. Consequently, the conclusions drawn in Sections 4.2–4.4 remain unchanged: the COVID-19 shock does not generate a distinctive performance pattern for family firms, whereas leverage emerges as the most robust determinant of performance in both ROA and ROE specifications, and board quality shows only a marginal association with shareholder returns.

5. Discussion

This study sets out to examine whether family ownership and board institutional quality shaped firms' performance during an exogenous and systemic shock, using the COVID-19 pandemic as a quasi-natural experiment. The results provide a nuanced picture that contributes to ongoing debates on the resilience of family firms and the contingent role of corporate governance in crisis contexts.

First, the absence of a statistically significant POSTFAM effect in both ROA and ROE specifications indicates that, once unobserved firm heterogeneity and financial structure are controlled for, family ownership per se did not lead to a systematically different performance response to the pandemic. This finding aligns with recent evidence suggesting that the “family firm advantage” is highly context-dependent and not universal (Amore et al., 2022; Arteaga & Basco, 2023; Kraus et al., 2020). In contrast to studies reporting superior crisis resilience of family firms in some institutional settings, the current results for a large emerging market point to a more neutral effect, supporting the view that socioemotional wealth considerations and long-term orientation do not automatically translate into superior short-term financial outcomes under extreme uncertainty.

Second, the role of board quality appears to be contingent on the performance metric considered. While board institutional quality does not show a statistically significant association with ROA during the COVID-19 period, it is positive and marginally significant when performance is measured by ROE. This pattern suggests that governance structures may be more closely related to the protection of shareholder returns than to improvements in overall asset efficiency during

crisis periods. One possible interpretation is that high-quality boards—characterized by greater independence, non-executive representation, separation of leadership roles, and gender diversity—may be more effective in financial policy decisions, capital allocation, and communication with investors, thereby supporting equity performance even when operational efficiency is severely disrupted. This interpretation is consistent with the literature emphasizing the monitoring and advisory roles of boards under conditions of heightened risk and information asymmetry (Adams et al., 2010; Bettinelli et al., 2024; Corbetta & Salvato, 2004; Calabrò et al., 2022).

Third, the interaction between family ownership and board quality does not yield statistically significant effects in either performance measure. The non-significance of POSTFAM_BQI and of the corresponding Wald tests for the total COVID effect in family firms indicate that higher board institutional quality did not systematically amplify or mitigate the crisis performance of family firms relative to non-family firms. This finding resonates with recent contributions highlighting the heterogeneity of governance configurations and their context-specific effectiveness (Arteaga & Basco, 2023; Torres-Rivera & Pedraza-Melo, 2023). It suggests that, in the Mexican listed-firm context, professionalization of the board, while relevant for shareholder value in general, does not necessarily translate into a differential crisis response for family-controlled firms.

Finally, the most robust and economically meaningful result across all specifications is the strong negative effect of leverage on both ROA and ROE. This finding underscores the central role of capital structure in shaping firms' vulnerability to exogenous shocks and is consistent with recent international evidence on the adverse impact of indebtedness during the COVID-19 crisis (Amore et al., 2022; Ding et al., 2021). In this sense, financial constraints and risk exposure appear to dominate ownership and governance characteristics in explaining short-term performance during periods of extreme disruption.

Taken together, the results support a contingent view of family firm performance. Neither family control nor board quality exerts a uniform effect during crises; instead, their influence depends on the institutional environment, the dimension of performance considered, and, critically, the firm's financial structure. The marginal role of board quality for ROE but not for ROA further suggests that governance mechanisms may operate primarily through channels related to investor confidence and financial policy rather than through immediate operational efficiency.

6. Conclusions and Implications

This study examined whether family ownership and board institutional quality shaped firms' financial performance during an exogenous and systemic shock, using the COVID-19 pandemic as a quasi-natural experiment in the context of Mexican listed companies. By combining firm fixed-effects models, interaction terms, and Wald tests of total marginal effects, the analysis provides a rigorous assessment of both individual and joint governance effects on performance measured by ROA and ROE.

6.1. Main conclusions

Three main conclusions emerge. First, family ownership per se does not generate a statistically significant differential performance response during the COVID-19 period. Once unobserved firm heterogeneity and financial controls are considered, family firms do not appear to be either more resilient or more vulnerable than non-family firms in terms of accounting profitability or shareholder returns. This finding supports a contingent view of the "family firm advantage" and is consistent with recent evidence highlighting the context-dependent nature of family involvement in value creation.

Second, board institutional quality plays a limited but non-negligible role. While it is not significantly associated with asset-based performance (ROA), it exhibits a positive and marginally significant relationship with equity-based performance (ROE) during the crisis. This suggests that high-quality boards—characterized by greater independence, non-executive representation, separation of leadership roles, and gender diversity—may contribute more to the protection of shareholder value and financial policy decisions than to short-term operational efficiency in periods of extreme uncertainty.

Third, the interaction between family ownership and board quality does not yield significant moderating effects. Joint Wald tests confirm that the total COVID-19 impact for family firms, once board quality is accounted for, is not statistically different from zero and does not differ from that of non-family firms. Hence, professional board structures, while relevant in general, do not appear to systematically amplify or mitigate crisis performance in family-controlled firms in the studied context.

Across all specifications, leverage emerges as the most robust and economically meaningful determinant of performance. The consistently negative and significant effect of indebtedness on both ROA and ROE underscores the central role of capital structure in explaining firms' vulnerability to exogenous shocks, outweighing owner-

ship and governance characteristics in the short run. Taken together, these findings highlight that financial structure plays a more decisive role than ownership form in shaping firm resilience under extreme uncertainty, while the effects of board quality are contingent on the performance dimension considered and are more strongly reflected in shareholder returns than in operational efficiency. This reinforces the importance of moving beyond ownership-based explanations and adopting a more integrated perspective on governance and financial discipline when analyzing firm behavior during crisis periods.

6.2 Theoretical implications

From a theoretical perspective, the findings of this study contribute to core debates in the family business literature by speaking directly to the concepts of *familiness*, *socioemotional wealth* (SEW), and the contingent value of governance mechanisms under conditions of extreme uncertainty.

First, the absence of a systematic performance differential between family and non-family firms during the COVID-19 shock challenges a universalistic interpretation of *familiness* as a source of automatic competitive advantage. While the resource-based view of family firms emphasizes idiosyncratic bundles of resources arising from the interaction between family, ownership, and business systems (Habbershon & Williams, 1999), the results suggest that such resources do not necessarily translate into superior short-term financial performance when firms are confronted with an abrupt and systemic disruption. Instead, the value of *familiness* appears to be highly context-dependent and conditioned by financial structure and governance arrangements, supporting a situational rather than an inherent advantage perspective.

An additional explanation for the absence of a systematic family firm effect may lie in the institutional characteristics of the Mexican context. High ownership concentration and relatively weaker investor protection, which are common in emerging markets, may reduce the effective differences between family and non-family firms in terms of control and monitoring. In such environments, even non-family firms often exhibit concentrated ownership structures, potentially limiting the extent to which family control generates distinct governance or performance outcomes during periods of crisis. This interpretation is also consistent with evidence from other emerging and civil-law contexts, where concentrated ownership structures and institutional settings tend to blur governance distinctions across firms, thereby limiting the external differentiation typically observed in more dispersed owner-

ship environments (Calabrò et al., 2022).

Second, the findings refine the implications of the *socioemotional wealth* framework. SEW theory posits that family owners prioritize the preservation of non-economic utilities such as control, identity, and transgenerational continuity, particularly under threat (Gómez-Mejía et al., 2007). While such priorities may foster conservative financial policies and long-term orientation, our evidence indicates that they do not, by themselves, generate superior accounting or market-based performance during a crisis. The lack of a significant POSTFAM effect, even when board quality is considered, suggests that SEW preservation motives may lead to risk-mitigating behavior aimed at survival rather than at short-term value creation, thereby producing performance outcomes that are statistically indistinguishable from those of non-family firms. This interpretation is consistent with the logic of SEW preservation, whereby family owners may prioritize the continuity of control, stability, and long-term survival over the maximization of short-term financial performance (Gómez-Mejía et al., 2011). In this sense, the absence of a differential performance effect during the COVID-19 shock may reflect a strategic orientation toward risk containment and organizational preservation, rather than toward the pursuit of superior returns under conditions of extreme uncertainty.

Third, the limited moderating role of board quality in family firms informs the debate on governance as a SEW-preserving and professionalizing device. Prior studies argue that independent and diverse boards can help reconcile economic and socioemotional goals by constraining entrenchment, reducing bifurcation bias, and facilitating more balanced strategic decision making (Corbetta & Salvato, 2004; Calabrò et al., 2022; Gómez-Mejía et al., 2007; Verbeke & Kano, 2012). In this view, the presence of external and diverse directors is expected to temper the dominance of family-centric logics and to professionalize decision processes, particularly when firms face complex strategic challenges.

However, the non-significance of the POSTFAM_BQI interaction and of the corresponding Wald tests suggests that, in the context of an exogenous systemic shock, high-quality boards do not fundamentally alter the short-term performance response of family firms relative to non-family firms. This finding is consistent with a *contingent governance* perspective, according to which the effectiveness of board monitoring and advising depends on environmental turbulence and on the relative salience of financial constraints, which may override ownership-specific behavioral logics and socioemotional priorities (Calabrò et al., 2022; Pfeffer & Salancik, 2003; Zona et al.,

2017). Under such conditions, even highly professionalized boards may have limited scope to translate their monitoring and advisory roles into immediate performance differentials, as strategic discretion becomes constrained by liquidity pressures, debt obligations, and macroeconomic uncertainty.

Finally, the stronger association between board quality and ROE than with ROA points to a theoretical distinction between operational and financial channels. From an agency-stewardship perspective, high-quality boards may primarily operate as mechanisms that protect minority shareholders and enhance financial credibility, rather than as drivers of immediate operational efficiency. This interpretation suggests that, under crisis conditions, governance structures may contribute more to the stabilization of investor expectations and capital market relations than to the exploitation of familiness-based operational advantages.

Overall, the study supports an integrated view in which familiness and SEW constitute important latent resources, but their performance implications are conditional upon financial structure, governance quality, and the nature of the external shock. Rather than confirming a universal family firm resilience effect, the results reinforce a context-sensitive, multi-theoretical understanding of family enterprise behavior under extreme uncertainty.

6.3 Practical implications

The results also carry relevant implications for practitioners. For family owners and top managers, the evidence highlights that resilience during crises is driven more by prudent financial structure than by ownership form alone. Maintaining sustainable leverage levels appears crucial for preserving both profitability and shareholder returns under extreme uncertainty. From a practical perspective, these findings suggest that crisis preparedness may depend more critically on maintaining prudent capital structure and financial flexibility than on board composition reforms alone, at least in the short term. While governance quality remains relevant, particularly for shareholder value, financial discipline appears to play a more decisive role in shaping firms' resilience under extreme uncertainty. For boards of directors, the findings suggest that institutional quality—independence, diversity, and separation of powers—can contribute to protecting equity value, even if such mechanisms do not immediately translate into higher operating performance. For regulators and policymakers in emerging markets, strengthening governance standards may enhance market confidence and investor protection, but should be complemented

by policies that facilitate access to stable financing and reduce excessive leverage.

6.4 Limitations and avenues for future research

This study is subject to several limitations that open avenues for future research. First, the analysis focuses on listed firms in a single emerging economy, which may limit the generalizability of the results. Cross-country studies could examine whether similar patterns hold in different institutional environments. Second, although firm fixed effects and the use of an exogenous shock mitigate endogeneity concerns, dynamic relationships between performance and governance structures may still be present. Future research could employ dynamic panel techniques, such as system-GMM, to further address simultaneity and persistence. Third, board quality is captured through a composite index; disaggregating its components and exploring non-linear effects may provide additional insights into which specific governance mechanisms are most effective in crisis contexts. Fourth, although governance variables were carefully hand-collected from official reports and disclosures, the possibility of measurement error cannot be entirely ruled out, particularly in the classification of board characteristics.

Overall, the evidence suggests that neither family control nor board quality guarantees superior crisis performance. Instead, their effects are contingent, performance-metric dependent, and dominated in the short run by firms' financial structure. This reinforces the need for a more nuanced and context-sensitive understanding of governance and ownership in times of extreme uncertainty.

Author contribution statement

This article was written by a single author.

Conflict of interest statement

The author declares no conflict of interest.

Ethical statement

This study relies exclusively on secondary data obtained from publicly available corporate, financial, and governance information on listed companies. No human participants were involved, and the research did not include interviews, surveys, experiments, interventions, or the collection of personal or sensitive data. Therefore, ethical approval was not required.

Declaration on the use of generative AI in the writing process

During the preparation of this work, the author used ChatGPT to assist with language editing, stylistic improvement, and refinement of the academic writing. After using this tool, the author carefully reviewed and edited the content as necessary and takes full responsibility for the content of the publication.

Funding

The author received no financial support for the research, authorship, and/or publication of this article.

Data availability statement

The data supporting the findings of this study are available from the author upon reasonable request.

References

- Adams, R. B., Hermalin, B. E., & Weisbach, M. S. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature*, 48(1), 58-107. <https://doi.org/10.1257/jel.48.1.58>
- Amore, M. D., Pelucco, V., & Quarato, F. (2022). Family ownership during the COVID-19 pandemic. *Journal of Banking & Finance*, 135, 106385. <https://doi.org/10.1016/j.jbankfin.2021.106385>
- Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 58(3), 1301-1328. <https://doi.org/10.1111/1540-6261.00567>
- Anderson, R. C., & Reeb, D. M. (2004). Board composition: Balancing family influence in S&P 500 firms. *Administrative Science Quarterly*, 49(2), 209-237. <https://doi.org/10.2307/4131472>
- Arteaga, R., & Basco, R. (2023). Disentangling family firm heterogeneity: Evidence from a cross-country analysis. *European Journal of Family Business*, 13(2), 162-181. <https://doi.org/10.24310/ejfb.13.2.2023.17638>
- Bettinelli, C., Sangermano, A., Bergamaschi, M., & Bennedsen, M. (2024). Family firms' boards: A systematic review and research agenda. *Corporate Governance: An International Review*, 33(1), 926-945. <https://doi.org/10.1111/corg.12631>
- Calabrò, A., Chrisman, J. J., & Kano, L. (2022). Family-owned multinational enterprises in the post-pandemic global economy. *Journal of International Business Studies*, 53, 920-935. <https://doi.org/10.1057/s41267-022-00508-8>
- Chrisman, J. J., Chua, J. H., & Sharma, P. (2005). Trends and directions in the development of a strategic management theory of the family firm. *Entrepreneurship Theory and Practice*, 29(5), 555-576. <https://doi.org/10.1111/j.1540-6520.2005.00098.x>
- Corbetta, G., & Salvato, C. (2004). Board of directors in family firms: One size fits all? *Family Business Review*, 17(2), 119-134. <https://doi.org/10.1111/j.1741-6248.2004.00008.x>
- Ding, W., Levine, R., Lin, C., & Xie, W. (2021). Corporate immunity to the COVID-19 pandemic. *Journal of Financial Economics*, 141(2), 802-830. <https://doi.org/10.1016/j.jfineco.2021.03.005>
- Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly*, 52(1), 106-137. <https://doi.org/10.2189/asqu.52.1.106>
- Gómez-Mejía, L. R., Cruz, C., Berrone, P., & De Castro, J. (2011). The bind that ties: Socioemotional wealth preservation in family firms. *Academy of Management Annals*, 5(1), 653-707. <https://doi.org/10.5465/19416520.2011.593320>
- Habbershon, T. G., & Williams, M. L. (1999). A resource-based framework for assessing the strategic advantages of family firms. *Family Business Review*, 12(1), 1-25. <https://doi.org/10.1111/j.1741-6248.1999.00001.x>
- Kraus, S., Clauss, T., Breier, M., Gast, J., Zardini, A., & Tiberius, V. (2020). The economics of COVID-19: Initial empirical evidence on how family firms in five European countries cope with the corona crisis. *International Journal of Entrepreneurial Behavior & Research*, 26(5), 1067-1092. <https://doi.org/10.1108/IJEBR-04-2020-0214>
- Pfeffer, J., & Salancik, G. R. (2003). *The external control of organizations: A resource dependence perspective* (2nd ed.). Stanford University Press.
- Post, C., & Byron, K. (2015). Women on boards and firm financial performance: A meta-analysis. *Academy of Management Journal*, 58(5), 1546-1571. <https://doi.org/10.5465/amj.2013.0319>
- Shen, H., Fu, M., Pan, H., Yu, Z., & Chen, Y. (2020). The impact of the COVID-19 pandemic on firm performance. *Emerging Markets Finance and Trade*, 56(10), 2213-2230. <https://doi.org/10.1080/1540496X.2020.1785863>
- Torres-Rivera, M. P., & Pedraza-Melo, N. A. (2023). Management competencies and their relationship with organizational performance in small and medium-sized family businesses. *European Journal of Family Business*, 13(2), 220-233. <https://doi.org/10.24310/ejfb.13.2.2023.16616>
- Verbeke, A. & Kano, L. (2012). The transaction cost economics theory of the family firm: Family-based human asset specificity and the bifurcation bias. *Entrepreneurship Theory and Practice*, 36(6), 1183-1205. <https://doi.org/10.1111/j.1540-6520.2012.00545.x>
- Villalonga, B., & Amit, R. (2006). How do family ownership, control, and management affect firm value? *Journal of Financial Economics*, 80(2), 385-417. <https://doi.org/10.1016/j.jfineco.2004.12.005>
- Watkins, K., Rodríguez, L., Fernández, V., & Briano, G. C. (2024). Interlocking directorates and family firm performance: An emerging markets perspective. *Journal of Family Business Management*, 14(1), 45-63. <https://doi.org/10.1108/JFBM-02-2023-0018>

- Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics*, 105(3), 581-606. <https://doi.org/10.1016/j.jfineco.2012.03.005>
- Yu, M. (2022). CEO duality and firm performance: A systematic review and research agenda. *European Management Review*, 20(2), 346-358. <https://doi.org/10.1111/emre.12522>
- Zona, F., Zattoni, A., & Minichilli, A. (2017). Boards of directors and firm innovation: Toward a contingency perspective on board effectiveness. *Academy of Management*, 2010(1), 1-6. <https://doi.org/10.5465/ambpp.2010.54499471>