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Family Ownership and Tunneling and Propping Effect in Nonfinancial Firms: Moderating Role of Corporate Governance

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Keywords: Family Ownership, Tunneling, Propping, Corporate Governance, Minority Shareholders, Ownership Structure, Family Business Groups, Resource Allocation.

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Introduction

In the modern business environment, multicorporate group organizations, in particular family-owned business groups, continue to be an important

business organization form, especially in developing and emerging economies. These enterprises hold a pivotal position in shaping economic growth by mobilizing financial and human resources, generating employment opportunities, and enhancing overall



national productivity and income (Carney & Nason, 2018). Within such contexts, the ownership structure becomes a central determinant of how corporate strategies are shaped and how firms perform. Since family owners often occupy both managerial and ownership positions, they tend to make decisions that secure their personal wealth, which may sometimes conflict with the goals of minority shareholders (Anderson & Reeb, 2003; Miller & Le Breton Miller, 2021). This overlapping control can lead to two contrasting outcomes: tunneling, where controlling shareholders extract private benefits at the expense of others, and propping, where struggling group companies are supported to protect the overall reputation and continuity of the business group (Jiang, Lee & Yue, 2010; Masulis, Pham & Zein, 2011).

Effective corporate governance (CG) systems are therefore essential for protecting investor rights, lowering agency costs, and fostering greater transparency (Claessens & Yafeh, 2012; Ali, Qian & Wei, 2020). However, in countries like Pakistan—where governance institutions are still evolving—weak CG frameworks often amplify information gaps and create avenues for controlling families to shift or misuse firm resources (Javaira & Hassan, 2015; Rashid, 2022).

Regulatory frameworks in Pakistan, though evolving, still face challenges in enforcing minority shareholder protection and disclosure standards, thereby intensifying concerns over tunneling and opportunistic activities.

Recent studies emphasize that CG mechanisms, including board independence, audit committees, and shareholder rights, can act as moderating forces in mitigating the negative effects of concentrated family ownership (La Porta et al., 1999; Villalonga & Amit, 2006). At the same time, effective corporate governance can strengthen the constructive side of propping, ensuring that financial assistance within business groups supports sustainable growth and long-term value creation rather than self-serving or rent-seeking objectives. Although scholarly interest in this topic has increased in recent years, existing literature on family business groups remains fragmented. Much of the prior research has treated tunneling and propping as independent issues, with limited attention to how these practices may occur simultaneously and interact within the same organizational framework (Young et al., 2008; Tran & Pham, 2023).

In the context of Pakistan, where family-controlled enterprises dominate the corporate sector and governance institutions are still evolving, it is essential to explore how governance mechanisms

influence the interplay between family ownership, tunneling, and propping. To fill this gap, the current study investigates 326 family business groups listed on the Pakistan Stock Exchange (PSX) over the period 2012–2022. By integrating perspectives on ownership concentration and governance structures, this research contributes to the broader discussion on agency theory and corporate governance in emerging markets. The insights derived aim to guide policymakers, regulators, and investors in promoting greater transparency, accountability, and ethical management in family-run firms.

Literature Review

Family ownership has long been a defining trait of corporate organization in many emerging economies. In contrast to the dispersed ownership models more typical in developed markets, firms in developing settings are often dominated by single families or family groups. These families leverage pyramidal structures, dual-class shares, cross holdings, or other arrangements to gain control rights that exceed their cash flow rights, allowing them to guide firm strategy and decisions. In part, this structure arises because investor protection is weaker, legal enforcement more uneven, and minority shareholders have fewer effective channels to curb controlling shareholders' behavior. (La Porta et al., 1999; Young et al., 2008; Ali, Qian & Wei, 2020; see also more recent evidence in emerging markets).

On the positive side, concentrated family ownership is associated with several advantages. Family-controlled firms often think in the long term, care deeply about reputation and legacy, and show greater stability. These firms may resist short-term pressures to meet quarterly targets, instead emphasizing continuity, preserving value across generations, and maintaining strong business relationships. Empirical work has documented that such firms can outperform non-family firms in periods of uncertainty, in part because they often tolerate lower leverage, maintain more conservative investment policies, and emphasize resilience.

However, the concentrated control also brings risks. With control rights that exceed cash flow rights, controlling families may engage in practices that expropriate wealth from minority shareholders. These can include tunneling via related-party transactions, unfair transfer pricing, excessive compensation, or even diverting firm opportunities. Over time, such expropriation erodes minority shareholder trust, impairs firm valuation, and weakens the effectiveness of capital markets. (Johnson et al., 2000; Villalonga &

Amit, [2006](#); plus newer studies in emerging economies).

Tunneling and Propping in Family Business Groups

Tunneling refers to the process through which controlling shareholders extract or divert a firm's assets and profits for their personal benefit, often to the disadvantage of minority shareholders. This practice typically occurs in business groups where ownership and control are highly concentrated, allowing dominant families or insiders to influence company decisions. Common tunneling methods include related-party transactions, where assets or funds are transferred between firms under common ownership; manipulated transfer pricing, in which goods or services are exchanged at non-market prices to shift profits; and excessive managerial compensation or perks granted to insiders (Bertrand, Mehta & Mullainathan, [2002](#); Jiang, Lee & Yue, [2010](#)).

In essence, tunneling weakens firm value and erodes investor confidence because it enables controlling owners to capture private benefits at the expense of other shareholders. The issue becomes more serious in family-dominated business environments, such as those in emerging economies, where weak regulatory enforcement and limited transparency make it easier for controlling families to conceal such practices. Consequently, tunneling not only distorts resource allocation within business groups but also undermines the credibility of corporate governance systems designed to protect minority investors.

Conversely, propping refers to the injection of resources into financially distressed affiliates to maintain group reputation and safeguard longterm wealth (Friedman, Johnson & Mitton, [2003](#); Tran & Pham, 2023). In the Pakistani context, family business groups control a majority of listed firms, which increases the likelihood of both tunneling and propping activities, particularly when weak regulatory oversight exists (Javaira & Hassan, [2015](#); Rashid, 2022). Recent evidence suggests that while tunneling undermines firm value, propping may provide stability in times of economic downturns (Masulis, Pham & Zein, [2011](#); Chen, Chen & Ke, 2020).

Attributes and Performance Standards of Family Ownership

Family ownership can be evaluated in terms of attribute standards (e.g., shareholding proportion, board representation, CEO duality) and performance standards (e.g., firm profitability, growth orientation, and stewardship behavior). Higher ownership

concentration often strengthens families' incentives to engage in tunneling when external monitoring is weak (Claessens & Yafeh, [2012](#); Sadiq & Hussain, [2021](#)). On the other hand, families concerned about longterm firm performance may provide resources in the form of propping to prevent reputation loss and maintain investor confidence (Anderson & Reeb, 2003; Miller & Le BretonMiller, 2021). Empirical studies from Asian business groups demonstrate that both tunneling and propping coexist, depending on family incentives and institutional environment (Gao & Kling, [2022](#); Tran & Pham, 2023).

Moderating Role of Corporate Governance in Family Business Dynamics

Well-designed governance systems are generally believed to curb self-serving behavior among controlling families and safeguard the interests of minority investors (Gillan & Starks, [2007](#); Ali, Qian & Wei, 2020). Practices such as maintaining an independent board of directors, empowering audit committees, and ensuring transparent reporting enhance external oversight and reduce the potential for resource diversion through tunneling (McKnight & Weir, [2009](#); Villalonga & Amit, [2006](#)). At the same time, sound governance helps make propping activities more purposeful by channeling financial assistance toward firms with real growth prospects, rather than those used merely to secure family control (Garanina & Kaikova, 2016; Chen, 2021). However, in Pakistan, the implementation of governance principles often falls short due to weak institutional enforcement and limited regulatory consistency. These gaps enable powerful family owners to exploit information advantages and shape corporate outcomes to their favor (Najmul Sehar et al., [2013](#); Rashid, 2022). Contemporary studies further emphasize that the interaction between family ownership and governance mechanisms critically determines whether firms lean toward tunneling or propping, a concern that remains particularly relevant in emerging markets where monitoring frameworks are still maturing (Lin & Xu, 2020; Tran & Pham, 2023).

Overall, the reviewed literature suggests that family ownership is a powerful determinant of both tunneling and propping activities. However, the existence and strength of corporate governance mechanisms can significantly reshape this relationship either mitigating opportunistic behavior or channeling family influence toward more constructive, long-term objectives. However, empirical work in Pakistan remains scarce, particularly in exploring tunneling and propping simultaneously under the moderating role of governance. This study

addresses that gap using a large panel of family-owned business groups. Based on the above discussion, the study formulates the following hypotheses:

1. Family ownership (attribute standards) significantly affects tunneling and propping in family business groups of Pakistan.
2. Family ownership (performance standards) significantly affects tunneling and propping in family business groups of Pakistan.
3. Corporate governance moderates the link between attribute standards of family ownership and tunneling/propping.
4. Corporate governance moderates the link between performance standards of family ownership and tunneling/propping.

Methodology of the Study

This section explains the nature of the study, the types of variables used, population and sampling, the conceptual framework, and the econometric model applied.

Nature of the Study

The study is quantitative in nature and relies on secondary data from family business groups listed on the Pakistan Stock Exchange (PSX). Data were collected for a period of 2012 to 2022 from the official websites of firms, PSX, State Bank of Pakistan publications, company annual reports, and Business Recorder. The study focuses on identifying the relationship between family ownership, tunneling, and propping, while also testing the moderating role of corporate governance.

Variables of the Study

Independent Variables

Family Ownership

Family ownership is treated as the primary independent variable and is divided into two dimensions:

1. Attribute standards (i-e shareholding structure, voting rights, and ownership concentration).
2. Performance standards (i-e return on assets, profitability, and firm performance measures).

Family ownership is measured using the proportion of family held shares relative to total outstanding shares of the firm.

Dependent Variables:

Tunneling and Propping

Tunneling describes the process by which controlling shareholders extract value from a company for their personal or group benefit, often at the expense of minority investors. This practice erodes a collective sense of accountability, and also detracts from the success of the firm, of which the focus was a focus on the wealth of shareholders through the diversions of company assets or earnings to other entities that exist within the same group, be they commercial, noncommercial, or not for-profit. In the pragmatic studies, the strategy of tunneling can be mostly identified by the approaches where the resources of the company are misallocated in favor of controlling shareholders. These include related party transactions, intragroup loans, adverse asset transfers and arbitrary pricing strategies driven by family interest rather than the interest of the firm for its own good. Conversely, propping represents the opposite behavior by which relatives of controlling families sponsor weaker or financially constrained subsidiaries in order to maintain the reputation and the stability of the whole group. This can take the form of capital injections, loan guarantees, subsidised intragroup loans or other preferential measures that facilitate struggling firms solving short-term crises. Unlike tunneling which is characterised by critics as an exploitative and selfish behavior, propping is usually framed as the price that entrepreneurs must pay in order to stabilize their firms and practise what the Sharpe example depicts as the family commitment for the continuity of the business and the investors and stakeholders trust.

Moderator Variable:

Corporate Governance

In the present study, corporate governance (CG) is used as a moderator that influences the relationship between family ownership, tunneling and propping activities. Governance practices are measured across a number of different dimensions including the percentage of independent board members, the total number of board members, separation of the CEO and chairperson roles, and the operation of the audit committee. In sum, these measures allow capturing the value going to governing structures that are activated throughout the internal organizations of the family owned organizations to make better management choices, less conflict of interest and more transparency and responsibility. Strong governance structures are expected to limit opportunistic practices such as tunneling by increasing oversight and transparency, while at the

same time enhancing the constructive aspects of propping, where resources are used to stabilize and support distressed group firms for long-term sustainability.

Control Variables

To strengthen the reliability of the findings, several control variables are incorporated into the model. These include firm size (measured as the natural logarithm of total assets), leverage (debt-to-equity ratio), growth (measured through changes in total assets or sales), profitability (captured by return on assets or equity), and firm age. Including these variables helps account for inherent structural and financial differences among firms that could otherwise distort the observed relationship between family ownership, corporate governance, and the behaviors of tunneling and propping. By controlling for these characteristics, the analysis ensures that the estimated effects more accurately reflect the true dynamics among the core variables under study.

Population and Sampling

The population of the study has all the family owned groups of business listed on the Pakistan Stock Exchange (PSX). A total of 326 family business groups were selected for scrutiny through a database which includes member firms of all the listed and family business groups. The selection was done on the basis of availability and reliability of financial information covering the time period 2012-2022. An inductive (judgmental) sampling approach was taken that

directed attention to firms that were controlled by family ownership throughout the study period. This form of adjustment was used to see that ownership characteristics did not change enough to affect the results due to changes in control or restructuring. The selected firms, thus, could provide a decent representation of the major family-owned business groups of Pakistan and constitute a decent empirical foundation to research the mechanism of family ownership, corporate governance, tunneling, and propping in the context of an emerging economy.

Analytical Model and Conceptual Foundation

This paper generates an analytical framework that connects family ownership and two different behaviors - tunneling and propping - and examines the moderating effect of corporate governance on the relationships. But most importantly to clarify how governance structures can facilitate sober governance (i.e. minimize self-serving behavior) or, on the other hand, can do favour (i.e. facilitate supportive behavior to enhance stability of family firms). To study these empirical relationships, the paper uses panel data regression techniques which allows both firm level characteristics and time-varying effects during the period that the panel data are observed. This type of methodological approach is more likely to produce consistent and more accurate results by allowing for variations across firms and over time. The gross specification of the baseline econometric model used for this analysis is given below:

$$TP_{it} = \beta_0 + \beta_1 FO_{it} + \beta_2 CG_{it} + \beta_3 (FO \times CG)_{it} + \epsilon_{it}$$

TP_{it} = Tunneling/Propping activities of firm i at time t

FO_{it} = Family ownership (attribute and performance standards)

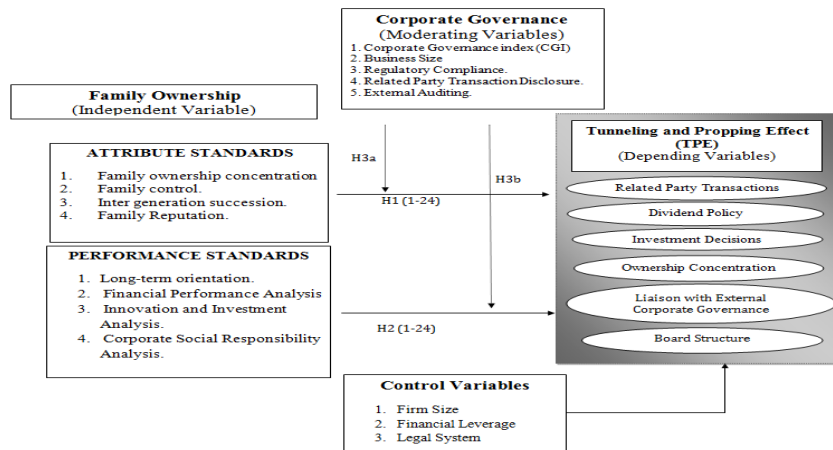
CG_{it} = Corporate governance measures

$FO \times CG$ = Moderating effect of governance

ϵ_{it} = Error term

Conceptual Framework

Figure 3



Empirical Findings and Interpretation

In this part, the empirical results from the panel data regression analysis, which establishes the relationship between family ownership which is measured in terms of both attributional and performance dimensions and different tunneling and propping actions of family business groups, are given under Pakistani context. Further, the moderating role of corporate governance (CG) for influencing these relationships is also revealed by the findings. The analysis shows that both dimensions of family ownership have robust impact on tunneling and propping activities of the family-controlled firms. Many scholars believe in support of agency theory, and thus controlling ownership increases the risk of appropriated resource diversion as the ownership is in the hands of controlling families, who are granted with both power and incentives to savour personal benefice. Other results, in line with socio-emotional wealth (SEW) theory, demonstrate that the family owner is frequently financially helping or strategically aiding such failed affiliates for the sake of the maintenance of family reputation, legacy and the perpetuation of the group.

Moreover, the moderation analysis provides additional clarity by showing which comprehensive corporate governance mechanisms (independent boards, separation of CEO and chairperson, and audit control) have the potential to dramatically reduce tunneling behavior while maintaining a positive and stability-based function of propping. These findings are in line with both agency and institutional theories, which emphasize that effective governance frameworks enhance transparency, limit opportunistic behavior, and strengthen investor confidence.

Overall, the study demonstrates that family ownership plays a dual role; it can generate both value-extractive and value-preserving outcomes depending on the quality of governance structures in place. By highlighting how governance moderates these effects, the research contributes to the ongoing debate on family firm behavior in emerging economies like Pakistan and underscores the pressing need for robust governance reforms to protect minority shareholders and enhance accountability in family-owned enterprises.

Table 1

Regression Results

Coefficient	t-ratio	p-value
Const	1452.37	0.0367
FO-Attribute	2.634	0.0097
FO-Performance	2.987	0.0031
Control Variables (Size, Leverage, Growth)	Significant	<0.05

Model Fitness:

- *R-squared* = 0.5124
- *F-statistic* = 5.219 ($p < 0.01$)
- *Log-likelihood* = -1542.76

Table 1 shows that both attribute and performance standards of family ownership have a positive and significant impact on tunneling and propping. The t-values (2.634 and 2.987) with p-values less than 0.05 confirm their significance. This indicates that

concentrated family ownership enables controlling shareholders to exercise influence over related-party transactions, resource shifting, and financial support within the group.

Table 2

Moderation Results (Corporate Governance)

Coefficient	t-ratio	p-value
FO-Attribute × CG	2.821	0.0056
FO-Performance × CG	2.993	0.0030

Model Fitness:

- *R-squared* = 0.5891

- *F-statistic* = 6.432 ($p < 0.01$)

- *Log-likelihood* = -1535.11

Table 2 examines the moderating effect of corporate governance. The interaction terms (FO × CG) are negative and significant, suggesting that strong governance reduces tunneling incentives and constrains excessive propping practices. Moreover, the higher R-squared value (0.5891) compared to the regression without moderation confirms that governance improves the explanatory power of the model.

Conclusion

The results provide strong evidence that family ownership significantly drives tunneling and propping in Pakistani business groups. However, corporate governance serves as a corrective mechanism that moderates this relationship by limiting the opportunistic behaviors of controlling shareholders. The results of this study have important implications for policy makers and the overseers, especially in developing countries such as Pakistan. The findings indicate that governance structures must be strengthened to provide more protection to minority shareholders and to ensure more accountability in family firms. Strengthening disclosure requirements, enhancing board independence, and improving oversight of related-party transactions can help mitigate the risks associated with concentrated family ownership.

In addition to having policy implications, this research points to the behavioral dynamics at play in the case of family ownership, tunneling, and propping among Pakistan's family groups. The results of the panel data regression reveal that both attribute-based dimensions of family ownership, such as equity concentration, generational involvement, and ownership continuity as well as performance-based

measures like profitability and operational efficiency, have a significant and positive association with tunneling and propping behaviors. As confirmed by the corresponding t-values and p-values reported in the Table 1, statistical evidence suggests that higher sizes of family control help the dominant shareholders to increase the ability to extract and prospect within intragroup financial movements that realized the linked-party transactions.

These outcomes align with previous research suggesting that concentrated family ownership not only provides the means and motivation for tunneling through practices such as asset diversion and resource expropriation but also encourages propping behavior. In the latter case, financially stronger firms within the group extend assistance to weaker affiliates in order to safeguard the family's reputation, ensure business continuity, and preserve socio-emotional wealth (Johnson et al., 2000; Young et al., 2008). Thus, family ownership emerges as a double-edged construct capable of driving both opportunistic and stabilizing actions depending on how effectively governance mechanisms are implemented and enforced.

Thus, in the Pakistani context where family business groups dominate the corporate landscape, family ownership continues to be a critical determinant of both tunneling and propping behavior.

The results further demonstrate that control variables such as firm size, leverage, and growth also have significant effects, highlighting that firm-specific financial characteristics matter in shaping ownership-related outcomes. Larger firms and those with higher growth opportunities are more likely to be exposed to tunneling and propping incentives, while leverage enhances the dependence on group resources,

thereby facilitating intra-group transactions. The overall model fit, with an R-squared of 0.5124 and a significant F-statistic, confirms that the independent variables together explain a substantial portion of the variation in tunneling and propping.

Importantly, the study emphasizes the moderating role of corporate governance mechanisms. As shown in Table 2, the interaction terms of family ownership with governance variables (FO $\times$ CG) are statistically significant and negatively associated with tunneling and propping. This indicates that effective governance structures such as independent boards, separation of CEO and chair roles, active audit committees, and transparent disclosure practices mitigate the opportunistic behavior of controlling shareholders. Strong governance weakens the ability of families to exploit minority shareholders through tunneling and simultaneously discourages excessive propping that may distort firm value in the long run. Moreover, the increase in the explanatory power of the model (R-squared rising from 0.5124 to 0.5891 after including governance) reinforces the conclusion that corporate governance acts as a corrective institutional force in family business groups.

Overall, the study concludes that family ownership is a double-edged sword for emerging markets like Pakistan. On one hand, it provides stability and long-term commitment to firms; on the

other hand, it increases the risk of expropriation through tunneling. However, when robust governance mechanisms are in place, these risks can be mitigated, and the benefits of family ownership can be better aligned with the interests of all shareholders. This has important policy implications: regulators and policymakers should strengthen corporate governance frameworks, enforce compliance with governance codes, and encourage transparency in related-party transactions. Strengthening monitoring institutions and ensuring the independence of boards will be crucial in safeguarding minority investors and improving market efficiency. Finally, the study acknowledges its limitations. It is focused on family-owned firms within the Pakistani textile sector, which may limit the generalizability of findings across other industries and emerging economies. Future research can extend the analysis by including multiple industries, examining cross-country comparisons, or incorporating additional governance mechanisms such as ownership of institutional investors and shareholder activism. In sum, the study contributes to the literature by empirically establishing that while family ownership significantly drives tunneling and propping in Pakistan, strong corporate governance mechanisms act as an effective moderator that constrains opportunism and improves firm accountability.

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