**How do foreign and domestic institutional investors drive the market value? The Influence of family ownership**

**Abstract**

**Purpose:** This paper investigates and compares the value impacts of foreign and domestic institutional investors on the market value of family and non-family companies. Subsequently, examines how foreign and domestic institutional investors and their value impacts get influenced by different degrees of family ownership.

**Design/methodology/approach**: The sample of this study includes 339 non-financial firms from NIFTY-500 for 11 years from 2011 to 2020, which contains 128 family and 211 non-family companies. Both static (Fixed-effect model) and dynamic (two-step system GMM) models are employed to test the hypotheses.

**Findings**: Findings suggest that foreign institutional investors outshine domestic institutions in terms of value creation. Meanwhile, higher (>50%) family holdings are detrimental to the foreign institutional investors, while moderate holdings (26%-49%) improve domestic institutional investments. The favorable effect of foreign players gets diluted with the higher (>50%) family holdings, while the adverse effect of domestic players improves with the moderate (26%-49%) family holdings. Overall, partial family control is beneficial, while low and absolute family control is detrimental to market value. These findings clearly indicate that institutional investors are family control-dependent, where family control effect is not static.

**Originality/value:** This paper offers a novel perspective by addressing the effect of costs and benefits realized at three distinctive level of family holdings on foreign and domestic institutional investors, and their value impacts to witness differences caused by varying family control, which is not done earlier as per the best of our knowledge.

Keywords: Foreign institutions; Domestic institutions; Family ownership; Family companies; Emerging economy

**1. Introduction**

The remarkable upsurge in institutional shareholdings and their growing corporate engagement has fueled a debate on its consequences. In this context, researchers have examined their impact on market value, treating them as a homogeneous cluster. However, institutions are not identical, but rather have different characters, objectives, and investment prospects (Ferreira and Matos, 2008: Kim and Yi, 2015). By acknowledging the institutional heterogeneity, researchers began investigating the potential effect of foreign and domestic institutional investors on market value, yielding contradicting conclusions. One body of literature advocates that foreign institutions with global expertise in portfolio management are more active than domestic institutions in monitoring managerial opportunism, thereby improving value (Aggarwal *et al.,* 2011; Bena *et al.,* 2017). On the other hand, domestic institutions often maintain loyalty to management to strengthen business relationships and advance personal agendas, which can lead to a decrease in market value (Cornett et al., 2007; Singh *et al.,* 2022). Another stream of research contends that domestic institutions take more informed investment decisions due to their local advantages over foreign institutions (Hau, 2001; Lin and Fu, 2017; Ha and Hiep, 2019). Therefore, it remains unclear which investor, whether foreign or domestic, better explains the market value.

Nonetheless, as non-controlling owners, the institutional ownership engagement may get influenced in firms with controlling owners, such as family owners (La Porta *et al.,* 1999; Anderson and Reeb, 2003; Jara-Bertin *et al.,* 2008; Fernando *et al.,* 2014; Martin *et al.,* 2017). These owners, through their shareholdings and leadership positions, largely control the governance, strategy, and management decisions of family corporations (Anderson and Reeb, 2003; Maury, 2006). Such firms may experience cross-generational issues, managerial entrenchment, principal-principal conflict, and favoritism (Schulze *et al.,* 2001; Berrone *et al.,* 2012; Martin *et al.,* 2017), which diverge from non-family corporations (Chrisman *et al.,* 2004). Thus, the question of whether and how foreign and domestic institutions affect the value of family and non-family businesses remains an open debate, which received little attention from previous studies (Dau *et al.,* 2018; Koji *et al.,* 2020).

Moreover, family businesses are attached to certain costs and benefits caused by family dominance (Anderson and Reeb, 2003). The incidence of principal-principal conflict caused by the appropriation of wealth by controlling families at the cost of non-family shareholders leads to high agency cost and low-value creation (Villalonga and Amit, 2006; Gordon and Nicholson, 2010; Maury, 2006; Mazzola *et al.,* 2013). Similarly, Socioemotional wealth theory asserts that family owners also pursue non-financial benefits to satisfy their family needs, which affects the value and non-family shareholders adversely (Zellweger *et al.,* 2012; Gómez-Meja, *et al.,* 2018). These exploitations of economic and non-economic private benefits lead to an adverse effect on firm value (Villalonga and Amit, 2006) and non-family investors in family firms (Aguilera and Crespí-Cladera, 2012; Fernando *et al.,* 2014; Martin *et al.,* 2017).

On the contrary, family control condenses the agency cost that arises from principal-agent conflict through monitoring executive expropriation behavior, thereby improving firm value, which benefits non-family shareholders (Anderson and Reeb, 2003; Maury, 2006; Fernando *et al.,* 2014; Martin *et al.,* 2017). Besides, resource-based model posits that family owners are regarded as a pool of invaluable resources that bring social and human capital to firms (Habbershon and Williams, 1999; Sirmon and Hitt, 2003; Zellweger, 2007), benefiting the overall firm. Thus, these discussions confirm the costs and benefits emitted from family firms caused by family ownership influences the market value and institutional shareholders.

Ensuing this debate, we observe that extant literature (Maury, 2006; Silva and Majluf, 2008; Zellweger *et al.,* 2012; Shyu, 2011; Mazzola *et al., 2013*; Pindado *et al.,* 2014; Gómez-Meja *et al.,* 2018) argued that benefit of monitoring and cost of expropriation are realized at a different level of family ownership. From these findings, we infer that high power contestability exists within specific boundaries of family control, which either encourages them to monitor or weakens their expropriation (Jara-Bertin *et al.,* 2008). Concurrently, higher family control has low power contestability, which escalates family expropriation. Thus, we argue that monitoring benefits and expropriation detriments of family control prevail at different levels of holdings. However, the query of whether the control dynamics at different levels of family holdings affect the institutional investments and their relationships with market value remains under-researched despite a growing body of literature on family firms. Moreover, it would be intriguing to locate how the institutional investments and their value impact vary under differential family holdings.

To address the aforementioned research issues, we largely focus on three aspects. First, we assess the value impact of foreign and domestic institutions among family and non-family companies. Second, we investigate the influence of family owners at different levels of holdings such as low (10%-25%), moderate (26%-49%) and high (>50%) on the foreign and domestic institutions. Next, we examine the moderating role of different levels of family holdings on the relationship of foreign and domestic institutions with value. We chose India, a large emerging economy, for our empirical study as most of the family research has been done in developed economies. The regulatory environment, corporate governance culture, and market dynamics in India differ significantly from those in developed markets (Oehmichen, 2018). Moreover, the existence of family dominance (Ashwin *et al.,* 2015; Dau *et al.,* 2020) and institutional equity investment growth (Deb, 2018) in India make it an ideal setting for this investigation.

By utilizing NIFTY-500 companies during the period 2010–2020, we test our hypothesis through panel estimations. Our outcomes are robust to the exercise of alternate value measures and panel techniques, and show that foreign institutions outperform domestic counterparts in value creation and their effect does not differ between the family and non-family companies. Subsequently, we find that high family holdings (>50%) reduce the shareholdings of foreign institutions, while moderate family holdings (25%-49%) amplify the holdings of domestic institutions. Further findings suggest that moderate levels of family control (26–49%) boost the value impacts of foreign and domestic institutions. In contrast, high (>50%) level of family control adversely affects the value impacts of foreign institutions, whereas domestic institutional value impact remains negative with lower (10%-25%) family control. Overall, we notice that family companies with partial family control (26–49%) magnify value, while low (10–25%) and absolute (>50%) control diminishes market value.

This paper makes several contributions to the governance literature. First, theoretically, we assimilate the divergent predictions of agency, resource-based, and socioemotional theories to present the connection between family influence and institutional investors in an emerging market context. Second, we extend the contemporary ownership literature by investigating the value impact of foreign and domestic institutions in family versus non-family corporations. Though studies (Aggarwal *et al.,* 2011) have been carried out in this context earlier, they are mostly concentrated in developed economies while less visited in emerging markets. The corporate ownership and governance settings of emerging markets such as India are quite unique that follows both the market-based and bank-based governance systems (Dharmapala and Khanna, 2013; Hundal, 2017), which is different from developed markets. Besides, the rise of institutional investments in India due to its friendly business policies, economic growth and dilution of state control after its liberalization policy has led to many investigations on their impact on market value. However, the impact of foreign and domestic institutions on the value of family and non-family firms in India has received less attention.

Third, we offer a novel perspective by addressing the family control effect on institutional investors from the angle of principal-principal agency conflict. The Indian corporate landscape is overshadowed by family firms, where families dominate the decision-making of their firms (Singal and Singal, 2011). This may lead to a conflict of interest with other investors, such as institutions. Therefore, the impact of this conflict on institutional investors is a significant concern that has not been adequately addressed in previous family studies. Fourth, we concentrate on the moderating influence of family ownership dynamics on the value impact of institutional investors, thereby introducing a fresh point of view on family dominance. The adoption of three distinct levels of family holdings, based on power dynamics, provides an invaluable insight into the costs and benefits of family dominance at varying degrees of control. Despite numerous studies on the impact of family ownership, the examination of its influence at varying levels of control on institutions and their value impact has been less explored earlier. Therefore, this study's coverage of family dominance, institutional heterogeneity, and their impact on market value within the context of emerging markets enriches the emerging market literature.

The remnants of this paper progresses by following sections. Section-2 analyses the literature to propose hypotheses. Section-3 exhibits the sampling and research methods adopted. Section-4 interprets the empirical results. Section-5 discusses them. Next section provides conclusions and implications of our findings.

**2. Literature and hypothesis development**

*2.1. Foreign institutions and market value*

Prior literature has established the relationship between foreign institutions with market value based on monitoring, knowledge spillovers and information asymmetry hypotheses (Aggarwal *et al.,* 2011; Mukhopadhyay and Chakraborty, 2017; Bena *et al.,* 2017). Monitoring hypothesis advocated that foreign institutions have no ties with the management of local firms and possess globally diversified portfolios with proficiency in monitoring, unlike domestic institutions. Due to which, they effectively monitor the managers' opportunistic behavior and pursue them to focus on value-enhancing projects (Aggarwal *et al.,* 2011; Bena *et al.,* 2017). Precisely, Gillan and Starks (2003) contend that because of their independent positions and a lack of conflicts of interest, foreign institutions play a more important role in corporate governance than domestic players. This is supported by Aggarwal *et al.* (2011) in their study of 23 countries, where they opined that contrasting to domestic players, foreign institutions ensure the board independency and involve in the decision making of their investee companies through their voting to improve governance efficiency, which favors performance. In their 30-country study, Bena *et al.* (2017) found that foreign institutions actively use their voting rights in shareholders' meetings to improve firm's managerial decision making and operational efficiency. These studies sponsored the monitoring channel of foreign institutions, through which they enhance operational and governance efficiency, thus improving market value (Elyasiani and Jia, 2010; Ferreira and Matos, 2008; Lin and Fu 2017).

Subsequently, it is witnessed that foreign institutions through knowledge spillover channel could facilitate knowledge dissemination and information exchange between local and international investors (Luong *et al.,* 2017). They can act as a channel among top executives, investors, and stakeholders of local and international companies through their global networks to expedite the flow of resources for the improvement of the overall efficiency of the investee companies (Wang *et al.,* 2024). The information asymmetry hypothesis explains that foreign institutions reduce the information gap between the insiders and market players that helps in reduction of cost of capital (Mukhopadhyay and Chakraborty, 2017). On the other hand, Kang and Stulz (1997), based on the ‘home bias’ proposition, argued that foreign investors may have informational disadvantages in foreign nations. Due to which, they focus on companies with better informational climate and demand for conservative reporting to lessen the information asymmetries (Khalil *et al.,* 2020). Further, Aggarwal *et al.* (2011) indicated that foreign institutions use the exit channel if the management of the investee firms are poorly performing, which creates a pressure over the executives to improve their firm performance. Several empirical studies such as Ferreira and Matos (2008) in 27 non-US enterprises, Huang and Shiu (2009) in Taiwan, Ng (2015) in Malaysia, Lin and Fu (2017) in China, and Hussain *et al.* (2022) in Pakistan have found foreign institutions increase market value.

In recent times, the growth of foreign institutional investments as well as their activism is widely witnessed in the emerging markets, which is quite evident from India since its economy was liberalized in 1991 (Douma *et al.,* 2006). This has aided foreign institutions in exercising their monitoring authority over the large shareholders such as family owners in decision-making to pursue operational efficiency, long-term growth and diversifications, thereby enhancing the corporate value (Douma *et al.,* 2006; Mukhopadhyay and Chakraborty, 2017). Khanna and Palepu (2000) initiated the discussion in India where they inferred that foreign institutions have a positive value effect. Later, Douma *et al.* (2006) concluded, using 1005 listed companies, that foreign players have a favorable impact on the corporate value. Similarly, Mukhopadhyay and Chakraborty (2017) and Singh *et al.* (2022) documented the incremental value effect of foreign institutions in their research on Indian listed companies. Established upon these conceptions, we offer the below hypothesis:

**H1:** *Foreign institutions has a positive bearing on market value.*

*2.2. Domestic Institutions and Market Value*

There has been a debate on the differential performance impact between domestic and foreign institutions based on country origin in the literature (Ferreira and Matos, 2008; Aggarwal *et al.,* 2011; Kim and Yi, 2015). In which, they opined that the investment philosophy and activism of domestic players are quite different from foreign players. In this context, scholars found that domestic institutional ownership tend to align with either the "conflict of interest" or "strategic alliance" hypotheses (Pound, 1988). The studies of Douma *et al.* (2006), Cornett *et al.* (2007) and Aggarwal *et al*. (2011) found that domestic institutions hold a business relationship with their investee firms, which coerced them to approve the incompetent decisions of the management through voting. Because, voting against the management decision may lead to end their profitable trade associations. Similarly, domestic players may align with the interest of the insiders to extract benefit by expropriating the company resources. Both of these situations based on the aforementioned hypotheses confirm the detrimental effect of domestic institutions.

Many domestic institutions in emerging markets like India are federally owned banks or insurance companies or mutual funds companies (Douma *et al.,* 2006; Pant and Pattanayak, 2010; Singh *et al.,* 2022). These government institutional investment decisions are politically motivated rather than business-oriented, while the investment companies have a business alliance. Similarly, it is evident that the local banks would cooperate with the concerned management to hedge against their interest. Moreover, Indian firms are dominated by founding families or promoters, where they have large controlling stakes. Through which, they can coerce the domestic institutions to favor their decisions. In such circumstances, the monitoring from domestic institutions would reduce. On the other hand, home bias approach argued that domestic institutions have informational advantage in their home country, which aid them to monitor the management and decision making of investee firms effectively (Douma *et al.,* 2006; Lin and Fu, 2017; Ha and Hiep, 2019), which diminishes agency issues.

However, empirical findings (Khanna and Palepu, 2000; Douma *et al.,* 2006) from India found that domestic institutions' business relationships with local companies prevent them from monitoring managerial entrenchment and expropriation of large owners, which lowers firm value. Similarly, Pant and Pattanayak (2010) found that most of the domestic institutional players in India are developmental financial institutions, which are managed by the state government bodies. Due to which they have minimal operational or monitoring goals, even nominee directors perform an insignificant role in board meetings. This reduces their position in decision-making and monitoring of large owners such as family owners, which diminishes business efficiency. The recent study of Singh *et al.* (2022) also confirmed the deleterious association amongst domestic institutions and company performance in the Indian context. With these prior perspectives and findings, we construct the following hypothesis:

**H2:** *Domestic institutions leads to a negative effect on the market value.*

***2.3.*** *Family ownership, institutional investors and market value*

Agency theorists convey that the conflict of interest amongst the owners and managers is commonly recognized as a Type-I agency problem, an age-old challenge for every business organization. These conflicting situations result in the owners bearing the agency cost, which affects business performance (Jensen and Meckling, 1976). These costs, however, would be lower for family businesses because families have the potential inducement to monitor managerial misconduct to reduce their opportunism (Schulze *et al.,* 2001), which is of particular importance to family owners because family wealth is tied to corporate value (Burkart *et al.,* 2003; Andres, 2008). Moreover, the involvement of families in management makes the alignment of interest between principal and agent, which reduces monitoring costs (Villalonga and Amit, 2006). In addition, families ensure good governance functioning to restore and improve the investors’ confidence in their firms (Su and Lee, 2013; Briano-Turrent and Poletti-Hughes, 2017). As a consequence, the monitoring role and responsible governance actions of family owners becomes useful in creating value (Maury, 2006), which benefits other shareholders.

Finance researchers have also linked the foundations of the resource-based view (RBV) to explain the competitive edge of family corporations (Habbershon *et al.,* 2003; Habbershon and Williams, 1999). This theory articulates that family corporations have a competitive edge over non-family corporations as family owners are able to create unique, valuable, and intangible resources for their firms (Habbershon and Williams, 1999). Correspondingly, Sirmon and Hitt (2003) observed that family owners successfully bring social and human capital, which makes their businesses more resourceful. It is also evident that families often have a sound relationship with the stakeholders through their long association, which results in cost-effectiveness, trust, and loyalty among employees (Chen and Hsu 2009). Moreover, family shareholders invest their capital in their firm for a longer period, which gives the family business long-term stability.

Building on the theoretical lens of Agency and RBV, previous investigations (Anderson and Reeb, 2003; Maury, 2006; Zellweger, 2007; Sharma, 2008; Pindado *et al.,* 2014; Poutziouris *et al.,* 2015) substantiated the beneficial effect of family shareholders on the value efficiency of the family corporations. Therefore, family owners as effective monitors and better resource mobilizers make the family firm a superior performer (Schulze *et al.,* 2001; Anderson and Reeb, 2003; Teixeira *et al.,* 2020). Better performance and governance of family corporations would also benefit the other owners such as institutional investors in realizing better returns on their investments. Thus, family firms would draw more investments from institutional investors. Consequently, the increased institutional investment in family firms would enable institutions to participate in key decisions and monitor managers efficiently. Moreover, family shareholders would also encourage the institutional shareholders’ engagement to improve the managerial efficiency, governance and informational disclosure. In such eventualities, the family's interaction as an internal monitor and institutions as an external monitor would improve the market value.

Within the agency framework, principal-principal conflict is witnessed, which is more prevalent in family corporations (Martin *et al.,* 2017; Villalonga and Amit, 2006). Family owners tend to occupy controlling positions and can therefore exercise authority to obtain private welfare at the cost of non-family investors in countries with lower investor protection (Shleifer and Vishny, 1997). Another strand of agency literature argues that families are also involved in the actions of nepotism and altruism, which reduces the management efficiency of the family business and adversely affects the non-family shareholders (Schulze *et al.,* 2003). Moreover, family owners are the insiders with all private information that can influence the management's decision-making towards their end (Maury, 2006; Sarkar, 2010). Prior empirical evidence (Anderson and Reeb, 2003; Maury, 2006; Shyu, 2011; De Massis *et al.,* 2013; Poutziouris *et al.,* 2015; Poletti-Hughes and Williams, 2019; Isakov and Weisskopf, 2014) opined that family opportunism escalates afterward a threshold point of family holdings, which affect the firm value adversely. The risk of expropriation faced by non-family shareholders becomes higher with higher shareholdings of family owners and vice-versa (Maury and Pajuste, 2005; Jara-Bertin *et al.,* 2008).

Although agency theory has been a very effective setting for addressing the principal-agent conflict, it has a relatively limited approach that solely considers economic gains. Several theorists have argued that owners, particularly families, seek both economic and non-economic rewards to maximize their utility (Schulze *et al.,* 2001; Chrisman *et al.,* 2004; Gómez-Meja *et al.,* 2007; Stevens and Thevaranjan, 2010). The theoretical foundations based on non-economic benefits are theorized into Socioemotional wealth theory by Gómez-Mejia *et al.* (2007). Since then, this theory has been used as a foundation for understanding family corporations' non-financial intentions towards the accumulation of socioemotional wealth to satisfy the controlling family's identity, power exercisability, and dynasty extension (Gómez-Meja *et al.,* 2007; Zellweger *et al.,* 2012; Gómez-Meja *et al.,* 2018). The SEW theory underpins that families are more concerned with and pursue non-economical motives over financial benefits, which differs from non-family shareholders' motives of economic returns, such as institutional investors (La Porta *et al.,* 1999; Berrone *et al.,* 2012). More often than not, family owners make strategic decisions for socioemotional benefits that result in financial losses (Berrone *et al.,* 2012), which are detrimental to both the value and institutional sentiments (Cruz *et al.,* 2012; Fernando *et al.,* 2014; Ng *et al.,* 2019).

Thus, the detrimental role of high family control may refrain institutional shareholders from capitalizing the family corporations (Gordon and Nicholson, 2010; Fernando *et al.,* 2014), which leads to lower institutional investments. Consequently, institutional investors become vulnerable and weak in their monitoring due to lesser holdings in family companies. Moreover, the dominance and control of large family owners over decision-making in family organizations may further deteriorate the interest and incentives of institutional investors. These situations ultimately pressurize the institutions to either exit the firm or to align their behavior with family motives. In either of these cases, there will be a negative effect on the market value. Stemmed from these views from the agency and socioemotional theory, we formulate the below hypotheses:

**H3a:** *Family ownership has a significant effect on the institutional investments.*

**H3b:** *Family ownership has a significant effect on the institutional ownership relationship with market value.*

**3. Empirical methods**

*3.1. Sampling approach*

The sample for this study is based on the companies listed on the National Stock Exchange in India, which is the one of the largest stock exchange of the globe. The study period comprises of eleven years, from FY 2010 to FY 2020. Due to the corporate turmoil caused by the COVID-19 pandemic, our study period does not extend beyond FY 2020. Initially, we consider all listed companies from NIFTY-500 index, which covers the top 500 companies in India. Subsequently, we utilize the following criteria to construct the final sample. First, we exclude financial companies such as insurance, banks and asset management companies in order to avoid the high regulation effect. Second, we exclude companies that lack information on ownership holdings, governance, and financial information. Following that, we find certain companies which are having either very low or high values for the variables, so we remove these outliers from our sample. The stemming sample consist of 339 non-financial listed companies for 11 years, covering a balanced panel dataset of 3729 firm-year observations.

Following that, we divide the sample into two groups, such as family and non-family corporations, to make a comparison among them. Based on former studies (Anderson and Reeb, 2003; Maury, 2006; Villalonga and Amit, 2006; Singal and Singal, 2011; Yeh and Liao, 2019), we define a company as a family company based on the degree of family holdings and their presence in the board. Here, we consider the 10% threshold (Maury, 2006), meaning that if the average ownership holdings of the founding family members exceed 10% of the total ownership then the company is specified as a family company. Subsequently, by following the second criterion of board membership, we define a company as a family company if at least one member of the board belongs to the founding family or its descendants. After applying these criteria, we find 128 family companies with 1408 panel observations, and 211 non-family companies with 2321 panel observations from the whole sample.

In this study, we use data related to the ownership holdings, board members, and financials of the listed companies. The data related to ownership and financials are extracted from Prowess, while board membership data is collected manually from annual reports and company websites. Prowess is a database that supplies comprehensive accounting, ownership, and market-related data for the Indian companies. Earlier many governance studies from India (Pant and Pattanayak, 2007; Singal and Singal, 2011; Ashwin *et al.,* 2015; Dau *et al.,* 2020) have used this database frequently.

*3.2. Measurement of variable*

*3.2.1. Dependent variable*

We consider Tobin’s Q (TQ) as our dependent variable to capture the market value. TQ, as a forward-looking measure, indicates the investors’ viewpoints on the future cash flows and value performance. We estimate TQ by taking the summation of the total market capitalization and long term debt over the total assets (Silva and Majluf, 2008: Lin and Fu, 2017).

*3.2.2. Independent variables*

With the purpose of measuring value impact of institutional investors, we select two distinctive institutions based on geographic origins, such as domestic and foreign institutions, as our two independent variables. We define a domestic institution as an institution that originated in India and the fraction of shareholdings of these institutions on the financial year end are termed as domestic institutional ownership (Aggarwal *et al.,* 2011). Meanwhile, foreign institutional ownership, is computed by taking the fraction of shareholdings controlled by institutions from foreign countries on the financial year end (Aggarwal *et al.,* 2011; Hussain *et al.,* 2022). `

*3.2.3. Moderating variable*

We use family control as a moderating variable, which is constructed as a dummy variable based on the degree of family ownership (Croci *et al.,* 2012). Subsequently, we categorize the family ownership dummy (FD) into three levels of holdings such as low control (FD1), moderate control (FD2) and full control (FD3) on the basis of power contestability (Jara-Bertin *et al.,* 2008). Low control denotes family ownership from 10% to 25%; within this range, it is assigned as one, otherwise zero. Families with low ownership may have higher power contestability within the firm as their ownership is too low to dominate all decisions. Moderate control denotes family ownership from 26% to 49%; within this range, it is assigned as one, otherwise zero. Moderate level of family holdings gives them partial control and has medium power contestability. Full control is styled as family ownership with equal and above 50%, which is specified as one, otherwise zero. Families above 50% holdings lead to either very low or absence of power contestability, which wields them absolute power to execute every decision.

*3.2.4. Control variables*

Driven by the prevailing literature on the determining factors of market value, we consider certain control variables such as leverage, age, size, growth, research & development intensity and profitability to gauge their potential effect. Leverage (LEV) is estimated by taking the book value of total outsiders’ liability scaled by the book value of total assets (Lin and Fu, 2017), which controls managerial opportunism. Age (FA) indicates the number of years of existence from the company’s incorporation (Douma *et al.,* 2006). Size (FS) is measured through the natural logarithm of total assets (Villalonga and Amit, 2006). Growth (FG) is calculated by taking the current year-end revenue divided by the previous year-end revenue minus one (Buchanan *et al.,* 2018), which indicates the firm’s growth. Research & development intensity (RDI) is estimated by selecting the R&D expenses scaled by the total assets (Aggarwal *et al.,* 2011). Profitability (PR) is assessed through the earnings before interest and tax divided by the book value of total assets (Buchanan *et al.,* 2018).

*3.3. Econometric approach*

We employ two panel estimation techniques such as static and dynamic models simultaneously to ensure the sensitivity of our results. Within static panel models, we utilize the fixed-effect (FE) and random-effect (RE) models. To find the better-fit model amongst them, we apply the Hausman test. In which, the test results with significant p values indicate that the FE is a better fit over the RE or vice-versa. Previously, we observe the possible endogeneity issue with the ownership variable in relation to market value, which caused due to the omitted variable, unobserved heterogeneity, and simultaneity (Wintoki *et al.,* 2012). The existence of endogeneity issue in the model may produce inconsistent outputs and lead to erroneous inferences. To reduce the biases and inconsistencies, Arellano and Bond (1991) proposed the generalized method of moments (GMM) method as a better model over static panel models. GMM estimator establishes a dynamic process, in which it uses the lagged dependent and independent variables as internal instruments to control the endogeneity issues (Roodman, 2009). Two GMM estimators, such as differenced GMM and system GMM model, are popularly exercised. Of these, system GMM is suggested to be more efficient than difference GMM by Blundell and Bond (1998). Following which, we apply the two-step system GMM estimator to deal with endogeneity.

Subject to caveats, the reliability of System GMM (SGMM) models depends largely upon two specific conditions such as the validity of internal instruments and the nonexistence of serial correlations. The authenticity of the internal instruments is often tested through the Sargan test. This test statistic produces the p values for each SGMM estimation, whereby the insignificant p values certify the legitimacy of the used instruments. Thus, the SGMM estimations can be relied on only if the instruments are valid. In this study, we use two year lagged dependent variables as internal instruments. Serial correlation is measured through the autoregressive terms (AR) of first- and second-order serial correlation values of the Arellano and Bond test (Arellano and Bond, 1991). Specifically, the insignificant p values of autoregressive terms from the second-order serial correlation indicate that model has no serial correlations issues. In addition, Wald test statistics are provided, which measures the efficiency of the SGMM models. The highly significant Wald test signifies the fitness of the model.

*3.3.1. Model specifications*

We divide our empirical research into three phases based on our hypotheses. First, we test the effect of ownership engagement by foreign and domestic institutions on market value by following our hypotheses 1 and 2. For which, we design the following research model building upon previous studies (Aggarwal *et al.,* 2011; Lin and Fu, 2017; Hussain *et al.,* 2022).

MVit = α + γMVit-1 + β1 FORit + β2 DOMit + β3 LEVit + β4 FAit + β5 FSit + β6 FGit + β7 RDIit + β8 PRit + μit …………… (1)

where, MVit and MVit-1 represent the market value and one-year lag of market value, respectively. We have applied TQ as a measure for market value. FOR and DOM symbolize foreign and domestic institutional ownership, respectively, which are the independent variables. Control variables include Leverage (Lev), firm age (FA), firm size (FS), firm growth (FG), research and development intensity (RDI) and profitability (PR). Furthermore, i, t, and μ represent the company id, time, and error term, respectively.

In second phase, we investigate the influence of family holdings on foreign and domestic institutions by following our hypotheses 3 (a) and 4 (a). For which, following research model is designed built upon the previous study of (Fernando *et al.,* 2014).

(FOR/DOM)it = α + γ (FOR/DOM)it-1 + β1 FDit + β2 LEVit + β3 FAit + β4 FSit + β5 FGit + β6 RDIit + β7 PRit + μit …………… (2)

Where, FOR and DOM are the dependent variable. FD represents the family control dummy, which is the independent variable. We segregate family control into three dummy variables based on the degree of family ownership such as low (FD1), moderate (FD2) and high (FD3), which is explained in the previous section (3.2.3). Control variables are explained in equation-1.

In third phase, we examine the moderating effect of the family ownership on the relationship between foreign and domestic institutional ownership with market value based on our hypotheses 3(b) and 4(b). Motivated by the prior evidence (Croci *et al.,* 2012; Teng *et al.,* 2021; Jara-Bertin *et al.,* 2008), we represent the following research model:

MVit = α + γ MVit-1 + β1 FORit + β2 DOMit + β3 FDit + β4 (FORit\*FDit) + β5 (DOMit\*FDit) + β6 LEVit + β7 FAit + β8 FSit + β9 FGit + β10 RDIit + β11 PRit + μit ……... (3)

where, FOR and DOM are the independent variables. FD is the moderating variable, where three dummy variables are used. Control variables are explained in the equation-1. Using the above equations (3), we determine whether family control improves or worsens the value impact of foreign and domestic institutions. The description of the variables used in the above equations are presented in Table 1.

 [Table 1 here]

**4. Empirical results**

*4.1. Summary statistics and Correlation analysis*

Table-2 summarizes the descriptive statistics of all variables employed in this study. In which, panel A presents the statistics of total sample (339 companies). Panel B presents the family sample (128 companies), which is the 38% of the total selected companies. Panel C presents the non-family sample (211 companies), which is the 62% of the total sample.

[Table 2 here]

The mean value of TQ for family companies is 2.591, while the mean value of TQ for non-family companies is 2.392. This clearly indicates that family companies command greater market value in comparison to non-family companies, which is uniform with the views of Anderson and Reeb (2003). The average ownership holdings of foreign institutions in family sample is 11.641%, while in non-family sample is 12.442%. The average holdings of the domestic institutions for family sample is 7.508%, while for non-family sample is 11.001%. From these statistics, it can be observed that both domestic and foreign institutional shareholdings is lesser in family sample than in non-family sample. The lower holdings of institutions may be caused by the potential agency issues that occur in family companies, as suggested by Bhaumik and Gregoriou (2010) and Fernando *et al.* (2014).

Subsequently, we find that average age and size of family companies are lower than the corresponding values of non-family companies. However, average values of leverage, growth, research intensity, and profitability of family companies are greater than non-family companies, indicating that family owners have a greater appetite for debt and research. Moreover, the higher profitability of family companies strongly suggests that family owners are efficient at maintaining their firms’ productivity and cost-effectiveness. Overall, family companies are performing better than non-family companies in terms of creating market value and generating profit, which corroborates the views of Anderson and Reeb (2003).

Table-3 depicts the year-wise mean distribution of the market value (TQ) and ownership measures (FOR and DOM) for all (Panel-A), family (Panel-B) and non-family (Panel-C) companies respectively. Figure-1 depicts company group-wise yearly mean distributions of the market value (TQ) and ownership measures (FOR and DOM). Subsequently, we present variable-wise (TQ, FOR and DOM) yearly mean distributions in figure-2. From these statistics, it can be witnessed that family companies’ year-wise mean values differ from the non-family companies. The year-wise average FOR remains higher over DOM and exhibits an increasing trend, while DOM is inconsistent for family companies. The trend of DOM is not consistent for non-family companies. Overall, the average market value has an increasing trend for both types of firms; nonetheless, those remain high for family companies in India.

[Table 3 here]

[Figures 1 and 2 here]

Subsequently, we apply t-test to determine whether the mean values of all the variables of the family companies are significantly different from those of the non-family companies, which is reported in Table 4. These results show that market value (TQ), ownership measures (FOR; DOM), age (FA), growth (FG), research and development intensity (RDI), and profitability (PR) of family sample are statistically different from non-family sample.

 [Table 4 here]

Table 5 reports the correlation analysis and variance inflation factor (VIF) values for family (Panel A) and non-family (Panel B), respectively. From the correlation matrix, we do not witness any high collinearity, as indicated by the fact that the correlation coefficient values of all variables are inside the tolerance point of 0.8. Similarly, we do not detect any multicollinearity, as shown by the fact that the VIF values for all the variables are less than 5. From the correlation results of family sample, we find that foreign institutions have a positive correlation, whereas domestic institutions have a negative correlation with market value. This is also similar for the non-family sample.

[Table 5 here]

*4.2. Panel estimations*

Table 6 presents the results (FE and SGMM) of the impact of foreign (FOR) and domestic (DOM) institutional ownership on market value for all (Panel A), family (Panel B), and non-family (Panel C) companies based on equation-1.

[Table 6 here]

From table 6, it is observed from the FE and SGMM estimations for all companies (Panel A), family companies (Panel B) and non-family companies (Panel C) that the coefficient values of FOR are positive (β1>0) and statistically significant (p<0.01). The beta values indicate that an increase in foreign institutional ownership leads to higher market value in India, which is also economically significant. Subsequently, we find that the coefficients of DOM are negative (β2<0) and significant (p<0.01) for all the three panels, which are confirmed by the SGMM estimations. The beta values imply that increase in domestic institutional ownership results in a decline in market value of Indian companies, which also demonstrates the economic significance.

From the estimations of panel-A, B, and C, we infer that irrespective of different firm-level governance, foreign institutions enhance the market value in India through their active monitoring role, which supports our hypothesis H1. This advocates that they use their effective monitoring skills to supervise the decision making to lead long-term value creation by reducing the managerial entrenchment. Besides, firms with the presence of foreign institutions would receive invaluable resources and expertise through their global networks. Moreover, foreign institutions would reduce the expropriating nature of blockholders such as founding family members in India to improve operational efficiency, thereby improving value. Subsequently, we observe that domestic institutions have an adverse effect on the market value of Indian firms, which supports hypothesis H2. The negative impact of domestic institutions on family firms can be explained by the fact that these players form alliances with the family owners and support their decisions without much interference, leading to non-optimal decisions and reduced firm efficiency. Among firm-specific factors, we only consider the variables that are significant in SGMM estimations from all the panels. Profitability (PR) is the only firm-specific factor consistent with the value of all, family and non-family companies, which is steady with the previous findings of Buchanan *et al.* (2017). Thus it explains that profitable firms in India command better market value.

[Table 7 here]

Table 7 documents the panel estimations (FE and SGMM) of influence of family ownership on the foreign and domestic institutional investors based on equation-2. From Panel A of the table 7, FE and SGMM estimations indicate that FD3 is negative (β3<0) and significant (p<0.1) with FOR. Subsequently, the FE and SGMM results from Panel B reveal that only FD2 is significant (p<0.1) and positive (β2>0) with DOM. These outcomes imply that family owners with high holdings (>50%) has an adverse effect on foreign institution, which means families with absolute control leads to a principal-principal conflict that discourages foreign institutions. On the other hand, family owners at moderate level of holdings (26%-49%) improves the holdings of domestic institutions, which signifies that families at this level minimizes the principal-principal conflict that improves the investments from domestic institutions. Overall, these findings clearly indicate that family ownership has a significant effect on institutional investors, which corroborates with our hypothesis 3(a).

[Table 8 here]

Table 8 reports the panel estimations (FE and SGMM) for the moderating effect of family ownership on the value effect of the institutional investors (FOR and DOM), as stated in equation-3. From Table 8, we notice from FE (columns- 1, 3 & 5) and SGMM (columns- 2, 4 & 6) estimations that FOR remain positive (β1>0) and significant (P<0.01), while DOM is statistically significant (P<0.01) and negative (β2<0) for TQ. These are consistent with our previous results. Notably, our coefficient of interest is the interaction term between foreign institutional ownership (FOR) and family holdings (FD). For this we employ three interaction terms. Second (FOR\*FD2) interaction term indicates a positive (β>0) and significant (P<0.1) effect on market value, which is confirmed from the FE (columns – 1 & 3) and SGMM (columns – 2 & 4) estimations. However, third interaction term (FOR\*FD3) conveys a significant (P<0.1) and negative (β<0) effect on market value, which is substantiated from the SGMM estimations (columns – 4). In sum, the significant effect of family ownership on the relationship between foreign institutions and market value endorses our hypothesis 3(b).

These outcomes imply that a moderate (26–49%) level of family ownership strengthens the connection amongst foreign institutions and market value. This can be interpreted as the monitoring and optimum resource utilization of family owners being realized at this level of holdings (Silva and Majluf, 2008; Pindado *et al.,* 2014), which aligns with the monitoring by foreign players. This supports our hypothesis H3 (b). However, family control at a higher or absolute control (50%>) adversely impacts the association amid foreign institutions and market value, which suggests the expropriation of minor shareholders by families realized at this level of holding (Shyu, 2011; Mazzola *et al.,* 2013) due to lower power contestability. That leads to principal-principal conflict, which reduces the monitoring role of foreign players. This finding validates and corroborates the expropriation effect of family control.

Subsequently, we focus on the interaction terms between family control (FD) and domestic institutions (DOM), which are of particular interest. From the FE (columns – 1 & 5) and SGMM (columns – 2 & 6) estimations, we find that the coefficient value of the first interaction term (DOM\*FD1) shows a negative (β2<0) and significant (P < 0.01) effect. This lends support to hypothesis H3 (b). In contrast, the coefficients of the second interaction term (DOM\*FD2) show a positive (β2>0) and significant effect (P < 0.01), which is supported by the FE (columns – 5) SGMM (columns – 2 & 6) estimates. This supports our hypothesis H4 (b). The third interaction term's (DOM\*FCD3) FE (column – 1 & 5) and SGMM (columns – 2 & 6) results show a non-significant (P > 0.01) effect, indicating that there is no interaction effect on value. Largely, these findings indicate a significant influence of family ownership on the connection between the domestic institutions and market value that advocates our hypothesis 3(b).

The negative impact of the first interaction term implies that families at low control (10%-25%) aligns with domestic institutions to expropriate the firm wealth, which adversely impacts the market value. Otherwise, when family holdings are low then they have less power to monitor the expropriation by the alliance between managers and domestic institutions, which reduce the value. The positive effect of the second interaction term explains that the monitoring benefit, cost-effectiveness, and efficient resource utilization of the families are realized at moderate or partial holdings (Silva and Majluf, 2008; Shyu, 2011). Additionally, when the founding family members have partial control, they are less likely to expropriate small shareholders due to power contestability which reduces principal-principal conflict (Martin *et al.,* 2017). However, absolute family control has no significant linkage with domestic institutions.

Subsequently, we analyze the impact of family control (FD1, FD2, and FD3) on market value. We can see from the FE (columns – 3 & 5) SGMM (column – 6) estimations that the coefficients of lower (FD1) family holdings (10–25%) have a negative (β<0) and significant (P < 0.05) effect on market value. Similarly, we find from the SGMM (columns – 4 & 6) estimations that family holdings at higher (FD3:50%>) level have a significant (P < 0.01) adverse effect. However, the coefficient of moderate (FD2) level of family holdings (26–49%) has a positive (β > 0) and significant (P < 0.01) effect on market value, which is confirmed by the FE (columns – 1, 3 & 5) and SGMM (columns – 2, 4 & 6) estimations. From these estimations, we infer that family companies with lower family holdings are weak in monitoring the managerial inactions. Due to which, high principal-agency conflict is evident in those companies that resulted into lower market value. Further, family firms with moderate family holdings leads to the realization of monitoring benefits from family shareholders that improves the market value. Conversely, family companies with higher family holdings leads to detriments of expropriation by family shareholders that diminish the market value.

*4.3. Additional tests*

Supplementary results relating to alternative measures of market value with an alternative estimation technique are reported based on our hypotheses to provide greater robustness and sensitivity. We use the enterprise value (EV) as an alternative measure of market value to capture the cumulative wealth creation by the companies (Pandey *et al.,* 2022). Next, we employ the two-stage least squares (2SLS) model as an alternative methodology to our previous models to address the endogenous nature of ownership measures (Demsetz and Villalonga, 2001). For 2SLS, we need to identify few exogenous variables that can serve as instrument variables, which show correlations with the ownership variables, but not with the error terms in the main regression. Finding such instruments often requires careful theoretical and empirical considerations. Previous empirical studies have utilized certain firm-specific factors (Wei *et al.,* 2005; Charfeddine and Elmarzougui, 2010; Musallam, 2020), industry-median factors (Erhemjamts and Huang, 2019), lagged values of ownership and regulation (Demsetz and Villalonga, 2001; Ferris and Park, 2005; Minetti *et al.,* 2015) as instruments for different ownership measures. Additional studies on determinants of ownership structure (La Porta *et al.,* 1998; Reichter and Weiss, 2013) have inferred that regulatory and legal environments significantly affect concentrated ownership.

Following this extant literature, we identify three variables, such as current ratio, stock turnover ratio, and alpha stock returns, as suitable instruments for foreign and domestic institutional ownership. Further, we identify the legal environment, regulatory quality, and lagged family control as the suitable instruments for the family control variables. The endogenous nature of these independent variables is confirmed by the Durbin-Wu-Hausman test (DWH), where the significant p values reject the null hypothesis of exogenous nature. Subsequently, we have used two post-estimation tests, such as the Cragg-Donald F (CDF) statistics and the Sargan test, to validate the results of the 2SLS estimations. The CDF statistic measures the instrument's strength by comparing the value of this statistic to the critical value (Stock and Yogo, 2005). If it exceeds the critical value, the instruments are considered strong. We use the Sargan test to determine the validity of the instruments, with insignificant p values indicating their validity. We report the 2SLS results in Table 9, where the CDF statistics are higher than the critical value and the p values of the Sargan test remain insignificant across all estimations. Thus, these tests confirm that the instruments used are strong and valid.

 [Table 9 here]

Columns 1, 2, and 3 of Table 9 report the effect of FOR and DOM on EV for all, family and non-family companies, respectively. We confirm that the coefficients of FOR exhibit a positive and significant relationship with EV across all three clusters, whereas the coefficients of DOM show a negative and significant relationship for both family and all firms. Although the effect of DOM is negative for non-family firms, it is not statistically significant like our previous findings. These results validate our findings reported in Table 6. Subsequently, columns 4 and 5 present the effect of family ownership on FOR and DOM, respectively. These results indicate that low family holdings (FD1) have a positive effect, while high family holdings (FD3) have a negative effect on FOR. On the other hand, moderate family holdings (FD2) have a positive effect on DOM. Compared to our earlier findings, we did not observe a significant effect of moderate family holdings (FD2) on FOR, but their impact was still positive. Overall, these results are similar to the findings reported in Table 7. Further, column 6 shows the moderating effect of family holdings on the value impact of FOR. This finding indicates that the coefficient of the first interaction (FOR\*FD1) is positive and the third interaction term (FOR\*FD3) has a significant negative influence on EV. Then, Column 7 details the impact of family holdings on the connection between DOM and EV. This suggests that the second interaction term (DOM\*FD2) is significant and positive, mirroring the findings in Table 8. The effect of control variables remains similar to earlier findings when tested against EV. The qualitative similarity of the results reported in Table 9 for the alternative value measure and specifications validates the reliability of our overall findings.

**5. Discussions**

This study broadly discusses the value effect of institutional investors, and the influence of family owners on institutional investors and their value impact in Indian context. Many Indian corporations founded by families contribute significantly to the Indian economy by establishing the country’s business consistency and expansion, accounting for 79 percent of the gross domestic production and the world's third-largest number of family businesses (Sood, 2022). Accordingly, the spectacular growth of the Indian capital market since its liberalization has garnered a lot of investments from both domestic and foreign institutions (Mukhopadhyay and Chakraborty, 2017; Deb, 2018), where cultural, informational, and geographic differences prevail among them. Thus, the coexistence of family control and institutional players in Indian corporates has led us to investigate the institutional effect on market value and how its outcome is affected by family control, which is of significant economic importance.

Based on institutional heterogeneity, we consider two distinct institutional investors, such as foreign and domestic institutions, to test their impact on the market value of family and non-family firms in India. Our finding reveals that foreign institutions have a favorable impact on value regardless of company-level ownership and governance changes, which aligns with our hypothesis (H1) based on efficient monitoring, resource spillovers, and information asymmetry (Mukhopadhyay and Chakraborty, 2017; Luong *et al.,* 2017). Through the monitoring channel, we confirm that foreign institutions discipline managerial entrenchment to promote high-growth-oriented projects for better returns. Specifically, in Indian enterprises, promoters or founding families have prominent managerial positions. Their actions are primarily driven by their non-financial personal benefits, which can negatively impact the efficiency of operations and investments (Purkayastha *et al.,* 2019). Through monitoring and exit channels, the foreign institutions may have successfully reduced this, leading to a better market value (Aggarwal *et al.,* 2011; Mukhopadhyay and Chakraborty, 2017). Subsequently, their direct engagement with management in decision-making to improve firm-level governance, transparency, and information flow would have favored value creation. Moreover, through their global networks, they would offer invaluable resources, expertise, knowledge and capital to improve operational and investment efficiencies. Our finding corroborates with these channels through which foreign institutions have generated value for Indian firms, which aligns with the previous perspectives of Douma *et al.* (2006), Lin and Fu (2017), Mukhopadhyay and Chakraborty (2017), Bena *et al.* (2017), and Singh *et al.* (2022) from both India and developed economies.

Following which, we focus on the value impact of domestic intuitions. In contrast to foreign institutions, domestic players adversely affect the market value in India, explicitly conveying evidence of their opportunistic behavior (Bushee, 1998). This finding is consistent with our hypothesis (H2), which is founded on the strategic alignment and conflict of interest conjecture. This can be explained further. Unlike foreign institutions, domestic institutions are not independent and are believed to have a relationship with the insiders of their investee companies. Their associations prevent them from voting against the management decision, as it may hamper their profitable business relations (Douma *et al.,* 2006; Aggarwal *et al*., 2011). Particularly, family owners in India have large control and have the ability to influence local institutions to align with their interests. Moreover, it is quite evident that local institutions may establish a nexus with the family owners to leverage the company resources and decisions for their business benefits. Aside from that, most domestic institutions, such as banks and insurance companies, are state-owned in India, where their investment decisions are more bureaucratic and politically motivated. Thus, they often do not engage with the management decision making of their investee firms directly or indirectly to discipline them (Pant and Pattanayak, 2010; Singh *et al.,* 2022). Due to these nature of domestic institutions, their monitoring over managerial discrepancies reduces. This has led to a negative effect of domestic institutions on market value in India, which is uniform with the previous notions of Douma *et al.* (2006), Hussain *et al.* (2022), and Singh *et al.* (2022).

These findings evidently advance our conception about the impact of foreign and domestic institutions in the Indian market, where foreign players outperform domestic ones. Their differential value impact indicate that they are not identical and have different characters, objectives and investment prospects, which corroborate with the notions of previous studies (Ferreira and Matos, 2008; Aggarwal *et al.,* 2011). We confirm that foreign institutions are not restricted to capital market operations alone but also actively influence the decision making, operational efficiency and disclosure policies of Indian companies. Their activism corroborates their growing presence in the Indian market, given highly concentrated ownership and low investor protection. However, domestic institutions fail to tune the operational efficiency and governance to improve value despite their substantial investments, demonstrating their limited role in management decision making and governance. Thus the evidence of the differences between foreign and domestic institutions in their recent activism and behavior is of utmost importance for the Indian economy.

Ensuing Agency model, our study documents the connection of family control with institutional investors, which confirms our Hypothesis 3(a). From which, we identify that high family control has a detrimental effect on foreign institutional investments, while moderate level improves the investments from domestic institutions. The adverse effect of higher family holdings (>50%) can be explained that principal-principal conflict becomes higher as families attain absolute control. Families with absolute control would dominate the decision making process to realize their benefits that impedes the interest of other investors (Martin *et al.,* 2017; Schulze *et al.,* 2003), specifically foreign institutions. Consequently, foreign institutions avoid or lessen their investment from such family corporations. On the other hand, moderate family holdings (26%-49%) reduces the principal-principal conflict that facilitate better investments from domestic institutions.

Drawing from the Agency, resource based and socioemotional theories, our study furnishes insights into the influence of family control on institutional value impact within Indian family-governed companies. The significant influence of family control over the connection between institutional investors and market value aligns with our hypothesis 3 (b). Our detections reveal that monitoring benefits for family owners are evident within the 49% family holdings range, where families retain partial control and have power contestability, thereby refraining from actions that could harm institutional interests and consequently improving overall value (Anderson and Reeb, 2003; Pindado *et al.,* 2014; Silva and Majluf, 2008). However, the cost of potential expropriation increases significantly when family owners hold an equal or greater than 50% controlling stake, leading to adverse effects on the foreign institutional value impact. This highlights the potential for outright family control to be used for resource and opportunity exploitation within family firms (Maury, 2006; Shyu, 2011; Mazzola *et al.,* 2013) as well as limiting foreign institutions' monitoring (Gordon and Nicholson, 2010; Fernando *et al.,* 2014), resulting in a detrimental impact on market value.

Concerning family dominance on domestic institutions in India, our findings suggest that family holding between 26% and 49% has a positive bearing. This fosters our belief that moderate family control focuses on effective monitoring rather than expropriation (Maury, 2006; Silva and Majluf, 2008; Shyu, 2011; Poutziouris *et al.,* 2015), which reduces the principal-principal conflict thereby creating value for their firms. Moreover, families at partial control might be prompt in decision-making and utilize the invaluable resources efficiently to benefit firms (Anderson and Reeb, 2003; Miller and Le Breton-Miller, 2005; Chen and Hsu 2009). On the contrary, findings advocate that a low level of family control harms the domestic institutional value effect. This conveys that family holdings at a low level (<25%) might privately engage with domestic institutions to confiscate the wealth, thereby reducing value.

The favorable impact of moderate family control on institutional ownership engagement and market value implies that family owners monitor management efficiently, reduce principal-principal issues and supply valuable resources to create value, when they have partial control (Anderson and Reeb, 2003; Miller and Le Breton-Miller, 2005; Chen and Hsu 2009). Further, the detrimental impact of high family control on their business performance and institutional engagements signifies that absolute family control leads to principal-principal agency issues in family companies. Even though family businesses outperform non-family businesses in India, however high concentration of family control is detrimental. Thus, a reduction in the value of family firms and foreign institutional investments due to high family control would affect the Indian economy adversely. Thus, these narratives have significant implications for the Indian economy.

**6. Conclusion and Implications**

This is one of the few empirical studies investigating the value impact of institutional investors, family influence over institutional investors and their value impact. This study provides very interesting findings with regard to the effect of different level of family holdings in a large emerging market like India, where family dominance and low investor protection prevail. We witness the variation in the investments from foreign and domestic institutions and their value impacts under the influence of different degrees of family control. Though foreign institutional investors have a positive effect on market value of family companies, however it contradicts with absolute family control influence. Similarly, the adverse impact of domestic institutions on market value gets improved by partial family control. On the other hand, high family control diminishes the investments from foreign institutions, while partial control improves the domestic institutional investments. Subsequently, low and high family control has a detrimental effect on market value, while partial control has a favorable effect on market value. These findings clearly indicate that institutional investors are family control-dependent, where family control effect differs from one level of holdings to another that is not static. Thus, this study effectively raises the curtain on the effect of power dynamics of family holdings at different levels, which confer invaluable insights in this context.

This study's intriguing findings have potential implications for policymakers, investors and researchers from emerging markets. Policymakers should monitor family dominance closely and consider a threshold limit that does not result in absolute control, which would be detrimental to overall economy. Foreign investors should raise concern over the absolute family control to bring better governance practices. As the favorable value effect of foreign institutions has surfaced, it is indispensable for policy makers to promulgate their investments. Similarly, policy makers should focus on domestic institutions to engage them in more proactive monitoring. Retail investors should follow the stocks where foreign institutions invest and cautiously evaluate the degree of family control while investing in family businesses. Moreover, academic researchers would find this study extremely useful, as it encompasses the literature on institutions, family firms, and market value. Our study also provides potential avenues for future research. Indeed, future studies could concentrate on other untapped emerging markets to conduct a comparative analysis. Despite the fact that this study focuses on family influence within the family companies in a large emerging market, it can be expanded by conducting additional research on other block holders in the context of non-family companies to capture their dominance effect.

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**List of Tables**

Table-1: Specifications of variables

|  |  |  |
| --- | --- | --- |
| Variables | Symbol | Measurements |
| Dependent variables |  |  |
| Tobin's Q | TQ | (Total market capitalization + Total book value of debt) / Book value of total assets |
| Independent variables |  |  |
| Domestic institutional ownership | DOM | Fraction of shareholdings of domestic institutions |
| Foreign institutional ownership | FOR | Fraction of shareholdings of foreign institutions |
| Moderating variables |  |  |
| Low family control | FD1 | Fraction of family holdings between 10%-25%; within this range it is assigned as 1, otherwise 0 |
| Moderate family control | FD2 | Fraction of family holdings from 26% to 50%; within this range it is assigned as 1, otherwise 0 |
| High family control | FD3 | Fraction of family holdings above 50%, which is specified as 1, otherwise 0 |
| Control variables |  |  |
| Leverage | LEV | Book value of total outsiders’ liability / Book value of total assets |
| Firm age | FA | Number of years of existence from the company’s incorporation  |
| Firm size | FS | Natural logarithm of total assets  |
| Firm growth | FG | (Salest - Salest-1) / Salest-1 |
| Research and development intensity | RDI | Annual research and development expenses / Book value of total assets  |
| Profitability | PR | Earnings before interest and tax / Book value of total assets |

Note: Compiled by authors

Table-2: Descriptive statistics

|  |
| --- |
| Panel-A |
| Variables | Mean | Median | SD | Min | Max | N |
| TQ | 2.467 | 1.501 | 3.158 | 0.080 | 69.64 | 3729 |
| FOR | 12.139 | 9.491 | 11.159 | 0.010 | 79.65 | 3729 |
| DOM | 9.682 | 7.892 | 7.944 | 0.000 | 45.000 | 3729 |
| LEV | 0.216 | 0.160 | 0.261 | 0.012 | 4.556 | 3729 |
| FA | 3.441 | 3.470 | 0.711 | 0.000 | 5.06 | 3729 |
| FS | 10.444 | 10.305 | 1.721 | 0.690 | 16.09 | 3729 |
| FG | 0.252 | 0.106 | 2.078 | -1.021 | 72.05 | 3729 |
| RDI | 0.011 | 0.010 | 0.063 | 0.000 | 0.63 | 3729 |
| PR | 8.196 | 6.781 | 9.810 | -38.020 | 131.04 | 3729 |
| Panel-B |   |   |   |   |   |   |
| Variables | Mean | Median | SD | Min | Max | N |
| TQ | 2.591 | 1.695 | 3.445 | 0.020 | 69.640 | 1408 |
| FOR | 11.641 | 9.585 | 10.287 | 0.000 | 49.470 | 1408 |
| DOM | 7.508 | 6.155 | 6.686 | 0.000 | 40.060 | 1408 |
| LEV | 0.222 | 0.185 | 0.312 | 0.025 | 4.556 | 1408 |
| FA | 3.238 | 3.260 | 0.598 | 0.000 | 4.440 | 1408 |
| FS | 9.994 | 9.860 | 1.692 | 0.690 | 16.090 | 1408 |
| FG | 0.304 | 0.134 | 2.051 | -1.511 | 51.340 | 1408 |
| RDI | 0.021 | 0.013 | 0.101 | 0.001 | 0.630 | 1408 |
| PR | 9.124 | 8.445 | 10.130 | -24.180 | 65.200 | 1408 |
| Panel-C |   |   |   |   |   |   |
| Variables | Mean | Median | SD | Min | Max | N |
| TQ | 2.392 | 1.410 | 2.951 | 0.080 | 34.970 | 2321 |
| FOR | 12.442 | 9.360 | 11.642 | 0.010 | 79.650 | 2321 |
| DOM | 11.001 | 9.220 | 8.308 | 0.000 | 45.000 | 2321 |
| LEV | 0.212 | 0.150 | 0.225 | 0.000 | 1.390 | 2321 |
| FA | 3.564 | 3.330 | 0.744 | 0.000 | 5.060 | 2321 |
| FS | 10.718 | 10.600 | 1.679 | 2.290 | 15.930 | 2321 |
| FG | 0.221 | 0.090 | 2.094 | -1.021 | 72.050 | 2321 |
| RDI | 0.004 | 0.001 | 0.012 | 0.000 | 0.170 | 2321 |
| PR | 7.633 | 6.120 | 9.569 | -38.020 | 131.040 | 2321 |

Note: This table presents the mean, median, standard deviation (SD) and firm year observations (N) for all variables. Panel A, B and C represents the total sample, family and non-family companies respectively. TQ, FOR, DOM, LEV, FA, FS, FG, RDI and PR represent the Tobin’s Q, foreign institutional ownership, domestic institutional ownership, leverage, age, size, growth, research intensity and profitability, respectively.

Table-3: Year-wise mean distribution

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   | Panel-A |   | Panel-B |   | Panel-C |
| Year | TQ | FOR | DOM |  | TQ | FOR | DOM |  | TQ | FOR | DOM |
| 2010 | 1.896 | 8.909 | 9.416 |  | 1.691 | 7.896 | 7.002 |  | 2.021 | 9.525 | 10.880 |
| 2011 | 1.826 | 9.964 | 8.802 |  | 1.594 | 8.515 | 6.499 |  | 1.967 | 10.844 | 10.200 |
| 2012 | 1.819 | 10.271 | 8.764 |  | 1.567 | 8.902 | 6.542 |  | 1.972 | 11.102 | 10.113 |
| 2013 | 1.694 | 11.405 | 8.354 |  | 1.561 | 10.079 | 6.407 |  | 1.775 | 12.210 | 9.536 |
| 2014 | 1.932 | 12.631 | 7.730 |  | 1.978 | 11.796 | 5.451 |  | 1.905 | 13.138 | 9.113 |
| 2015 | 3.001 | 12.677 | 8.851 |  | 3.418 | 12.111 | 6.723 |  | 2.749 | 13.022 | 10.142 |
| 2016 | 2.699 | 13.179 | 9.658 |  | 3.028 | 13.071 | 7.318 |  | 2.499 | 13.244 | 11.078 |
| 2017 | 3.253 | 13.755 | 9.897 |  | 3.679 | 13.843 | 7.777 |  | 2.995 | 13.701 | 11.184 |
| 2018 | 3.464 | 13.888 | 10.947 |  | 4.031 | 14.311 | 8.724 |  | 3.121 | 13.633 | 12.297 |
| 2019 | 3.157 | 13.741 | 11.414 |  | 3.454 | 14.113 | 9.341 |  | 2.977 | 13.514 | 12.672 |
| 2020 | 2.399 | 13.113 | 12.668 |  | 2.495 | 13.418 | 10.811 |  | 2.341 | 12.929 | 13.796 |

Note: This table presents year-wise mean distribution of Tobin’s Q (TQ), foreign institutional ownership (FIO) and domestic institutional ownership (DIO) for all (Panel-A), family (Panel-B) and non-family companies (Panel-C).

Table-4: Difference between the family and non-family companies

|  |  |  |  |
| --- | --- | --- | --- |
| Variables | Mean difference | Median difference | t-statistics |
| TQ | 0.168 | 0.057 | 1.597\*\* |
| FOR | 1.273 | 0.890 | -2.222\*\*\* |
| DOM | 3.200 | 2.800 | -13.475\*\*\* |
| LEV | 0.003 | 0.025 | 0.363 |
| FA | 0.307 | 0.350 | -14.757\*\*\* |
| FS | 0.720 | 0.740 | -13.249\*\*\* |
| FG | 1.018 | 0.195 | 1.482\* |
| RDI | 0.006 | 0.020 | 5.534\*\*\* |
| PR | 1.522 | 2.412 | 4.729\*\*\* |

Note: This table reports the t-test statistics between family and non-family companies; \*, \*\*, \*\*\* represents 10%, 5% and 1% level of significance respectively.

Table-5: Pearson correlation matrix and VIF

|  |
| --- |
| Panel-A  |
| Variables | VIF | TQ | FOR | DOM | LEV | FA | FS | FG | RDI | PR |
| TQ | 1.26 | 1.000 |  |  |  |  |  |  |  |  |
| FOR | 1.19 | **0.141** | 1.000 |  |  |  |  |  |  |  |
| DOM | 1.10 | -0.052 | **0.173** | 1.000 |  |  |  |  |  |  |
| LEV | 1.55 | **-0.121** | **-0.121** | **-0.115** | 1 |  |  |  |  |  |
| FA | 1.20 | -0.203 | **0.069** | **0.172** | **-0.108** | 1.000 |  |  |  |  |
| FS | 1.37 | 0.011 | **0.338** | **0.197** | **-0.105** | **0.328** | 1.000 |  |  |  |
| FG | 1.01 | -0.023 | -0.024 | -0.053 | -0.016 | -0.065 | -0.013 | 1.000 |  |  |
| RDI | 1.60 | **0.477** | 0.044 | -0.026 | -0.057 | **-0.141** | **-.109** | -0.011 | 1.000 |  |
| PR | 1.57 | 0.035 | **0.114** | 0.056 | **-0.422** | **0.055** | 0.021 | 0.037 | **-0.307** | 1.000 |

|  |
| --- |
| Panel-B  |
| Variables | VIF | TQ | FOR | DOM | LEV | FA | FS | FG | RDI | PR |
| TQ | 1.31 | 1 |  |  |  |  |  |  |  |  |
| FOR | 1.17 | **0.045** | 1 |  |  |  |  |  |  |  |
| DOM | 1.16 | **-0.092** | **0.144** | 1 |  |  |  |  |  |  |
| LEV | 1.44 | **-0.196** | **0.087** | **-0.072** | 1 |  |  |  |  |  |
| FA | 1.11 | **0.057** | **-0.065** | **0.241** | **-0.105** | 1 |  |  |  |  |
| FS | 1.18 | **-0.071** | **0.249** | **0.231** | **0.128** | **0.136** | 1 |  |  |  |
| FG | 1.01 | -0.011 | -0.018 | -0.024 | 0.024 | -0.011 | -0.022 | 1 |  |  |
| RDI | 1.04 | **0.089** | 0.047 | -0.032 | **-0.111** | **-0.056** | **-0.125** | -0.007 | 1 |  |
| PR | 1.43 | **0.447** | **0.057** | 0.016 | **-0.495** | **0.039** | -0.038 | -0.012 | **0.127** | 1 |

Note: This table represents the test results of Pearson correlation matrix and variation inflation factor (VIF) for family (Panel-A) and non-family companies (Panel-B). Correlation coefficients given in bold are significant at 5% level of significance.

Table-6: Effect of foreign and domestic institutional investors on market value

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   |  Panel-A |   |  Panel-B |   |  Panel-C |
| DV | TQ | TQ |  | TQ | TQ |  | TQ | TQ |
| Models | FE | SGMM |  | FE | SGMM |  | FE | SGMM |
|   | (1) | (2) |   | (3) | (4) |   | (5) | (6) |
| Con | -5.749 | -1.316 |  | -9.189 | -1.351 |  | -4.646 | 1.824 |
|  | (0.679)\*\*\* | (1.045) |  | (1.089)\*\*\* | (1.366) |  | (0.818)\*\*\* | (1.248) |
| TQit-1 |  | 0.514 |  |  | 0.252 |  |  | 0.726 |
|  |  | (0.162)\*\*\* |  |  | (0.106)\*\* |  |  | (0.051)\*\*\* |
| FOR | 0.031 | 0.022 |  | 0.046 | 0.041 |  | 0.026 | 0.016 |
|  | (0.007)\*\*\* | (0.009)\*\* |  | (0.011)\*\*\* | (0.026)\*\* |  | (0.008)\*\*\* | (0.006)\*\* |
| DOM | -0.024 | -0.029 |  | -0.031 | -0.049 |  | -0.025 | -0.022 |
|  | (0.009)\*\*\* | (0.009)\*\*\* |  | (0.014)\*\* | (0.016)\*\*\* |  | (0.001)\*\*\* | (0.008)\*\* |
| LEV | -1.259 | -2.503 |  | 1.531 | -0.722 |  | -0.481 | -1.199 |
|  | (0.304)\*\*\* | (1.591) |  | (0.273)\*\*\* | (0.781) |  | (0.335) | (0.556)\*\* |
| FA | 1.526 | 0.335 |  | 1.273 | 0.801 |  | 1.915 | 0.151 |
|  | (0.221)\*\*\* | (0.321) |  | (0.438)\*\*\* | (0.565) |  | (0.268)\*\*\* | (0.291) |
| FS | 0.223 | -0.110 |  | 0.548 | -0.122 |  | -0.017 | -0.131 |
|  | (0.066)\*\* | (0.102) |  | (0.123)\*\*\* | (0.151) |  | (0.089) | (0.156) |
| FG | -0.001 | 0.001 |  | -0.051 | -0.089 |  | 0.001 | 0.007 |
|  | (0.001) | (0.001) |  | (0.029)\* | (0.055)\* |  | (0.001) | (0.026) |
| RDI | 19.602 | 9.141 |  | 25.396 | 21.102 |  | 1.965 | -0.821 |
|  | (1.771)\*\*\* | (7.534)\* |  | (2.307)\*\*\* | (8.671)\*\* |  | (3.413) | (3.867) |
| PR | 0.065 | 0.029 |  | 0.112 | 0.123 |  | 0.058 | 0.021 |
|  | (0.005)\*\*\* | (0.018)\*\* |  | (0.011)\*\*\* | (0.054)\*\* |  | (0.001)\*\*\* | (0.034)\* |
| Z | 72.99\*\*\* | 733.34\*\*\* |  | 42.80\*\*\* | 461.32\*\*\* |  | 31.81\*\*\* | 814.55\*\*\* |
| R Square | 0.147 |  |  | 0.209 |  |  | 0.108 |  |
| Hausman test | 72.50\*\*\* |  |  | 55.70\*\*\* |  |  | 136.83\*\*\* |  |
| ABT-1 (p) |  | 0.036 |  |  | 0.014 |  |  | 0.005 |
| ABT-2 (p) |  | 0.618 |  |  | 0.364 |  |  | 0.512 |
| ST (p) |  | 0.246 |  |  | 0.179 |  |  | 0.208 |
| TI |  | 35 |  |  | 35 |  |  | 35 |
| TC | 339 | 339 |   | 128 | 128 |   | 211 | 211 |

Note: DV and Con denote the dependent variable and constant terms respectively; All variables are explained in table-1. Z reports the F statistics and Wald test of joint level of significance; ABT-1 (p) and ABT-2 (p) represents the p values of the Arellano-bond test of serial correlations. ST (p) specifies the p values of Sargan test statistics. TI denotes the total instruments used. TC represents the total number of companies. Standard errors are given in brackets. \*, \*\*, \*\*\* represents 10%, 5% and 1% level of significance respectively.

Table-7: Influence of family ownership on foreign and domestic institutional investors

|  |  |  |  |
| --- | --- | --- | --- |
|   | Panel-A |   | Panel-B |
| DV | FOR | FOR |   | DOM | DOM |
| Models | FE | SGMM |  | FE | SGMM |
|   | (1) | (2) |   | (3) | (4) |
| Con | 18.861 | 1.579 |  | 8.608 | 9.741 |
|  | (2.636)\*\*\* | (1.924) |  | (2.102)\*\*\* | (2.936)\*\*\* |
| FORt-1 |  | 0.843 |  |  |  |
|  |  | (0.022)\*\*\* |  |  |  |
| DOMt-1 |  |  |  |  | 0.667 |
|  |  |  |  |  | (0.037)z\*\*\* |
| FD1 | 0.365 | 0.991 |  | -0.567 | -0.498 |
|  | (0.949) | (0.795) |  | (0.757) | (0.621) |
| FD2 | 0.216 | 2.104 |  | 0.772 | 0.061 |
|  | (1.042)\* | (0.889) |  | (0.831)\*\* | (0.901)\* |
| FD3 | -1.711 | -0.499 |  | 0.069 | 0.552 |
|  | (1.071)\*\* | (1.097)\*\* |  | (0.853) | (1.189) |
| LEV | 0.185 | 0.079 |  | -0.527 | -0.614 |
|  | (0.642) | (0.271) |  | (0.512) | (0.481) |
| FA | 5.344 | -0.471 |  | 3.084 | 3.614 |
|  | (1.013)\*\*\* | (0.589) |  | (0.808)\*\*\* | (0.926)\*\*\* |
| FS | 1.284 | 0.018 |  | 0.620 | 0.059 |
|  | (0.285)\*\*\* | (0.179) |  | (0.227)\*\*\* | (0.179) |
| FG | -0.145 | 0.024 |  | -0.057 | -0.071 |
|  | (0.071)\*\* | (0.055) |  | (0.056) | (0.016) |
| RDI | 6.335 | 9.216 |  | 1.750 | 0.011 |
|  | (5.424) | (2.267)\*\*\* |  | (4.325) | (2.996) |
| PR | 0.066 | 0.091 |  | 0.004 | 0.031 |
|  | (0.025)\*\* | (0.023)\*\*\* |  | (0.021) | (0.013)\* |
| Z | 22.21\*\*\* | 2048.32\*\*\* |  | 19.42\*\*\* | 367.96\*\*\* |
| R Square | 0.134 |  |  | 0.066 |  |
| Hausman test | 48.361\*\*\* |  |  | 52.141\*\*\* |  |
| ABT-1 (p) |  | 0.005 |  |  | 0.006 |
| ABT-2 (p) |  | 0.235 |  |  | 0.125 |
| ST (p) |  | 0.164 |  |  | 0.182 |
| TI |  | 36 |  |  | 36 |
| TF |   | 128 |   |   | 128 |

Note: DV and Con denote the dependent variable and constant terms respectively; All variables are explained in table-1; Z reports the F statistics and Wald test of joint level of significance; ABT-1 (p) and ABT-2 (p) represents the p values of the Arellano-bond test of serial correlations. ST (p) specifies the p values of Sargan test statistics. TI denotes the total instruments used. TC represents the total number of companies. Standard errors are given in brackets. \*, \*\*, \*\*\* represents 10%, 5% and 1% level of significance respectively.

Table-8: Moderating effect of family control on foreign and domestic institutional value impact

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| DV | TQ | TQ | TQ | TQ | TQ | TQ |
| Models | FE | SGMM | FE | SGMM | FE | SGMM |
|   | (1) | (2) | (3) | (4) | (5) | (6) |
| Con | -10.456 | -1.673 | -9.897 | -2.089 | -10.842 | -0.905 |
|  | (0.589)\*\*\* | (0.239)\*\*\* | (0.555)\*\*\* | (1.391) | (0.567)\*\*\* | (0.342)\*\*\* |
| TQit-1 |  | 0.771 |  | 0.764 |  | 0.831 |
|  |  | (0.012)\*\*\* |  | (0.064)\*\*\* |  | (0.019)\*\*\* |
| FOR | 0.024 | 0.017 | 0.025 | 0.107 |  |  |
|  | (0.016)\* | (0.004)\* | (0.016)\*\* | (0.061)\*\* |  |  |
| DOM | -0.073 | -0.028 |  |  | -0.059 | -0.021 |
|  | (0.023)\* | (0.006) |  |  | (0.022)\*\* | (0.024)\* |
| FD1 | -1.135 | -0.874 | -0.527 | -1.449 | -0.956 | -0.807 |
|  | (0.331) | (0.185) | (0.286)\* | (0.859) | (0.264)\*\* | (0.218)\* |
| FD2 | 1.022 | 0.690 | 0.525 | 1.438 | 1.029 | 0.807 |
|  | (0.335)\*\* | (0.153)\*\* | (0.293)\*\*\* | (0.837)\*\* | (0.267)\*\* | (0.218)\*\* |
| FD3 | 0.881 | -0.217 | 0.442 | -1.349 | 0.775 | -0.042 |
|  | (0.337) | (0.116) | (0.297) | (0.808)\* | (0.275) | (0.199)\* |
| FOR\*FD1 | 0.007 | 0.009 | 0.012 | 0.086 |  |  |
|  | (0.017) | (0.005) | (0.017)\* | (0.056) |  |  |
| FOR\*FD2 | 0.044 | 0.011 | 0.005 | 0.095 |  |  |
|  | (0.017)\* | (0.005)\* | (0.019)\*\* | (0.062)\* |  |  |
| FOR\*FD3 | -0.012 | -0.013 | -0.002 | -0.092 |  |  |
|  | (0.018) | (0.003) | (0.018) | (0.064)\* |  |  |
| DOM\*FD1 | -0.082 | -0.064 |  |  | -0.073 | -0.034 |
|  | (0.023)\*\* | (0.008)\* |  |  | (0.023)\*\*\* | (0.021)\*\* |
| DOM\*FD2 | 0.072 | 0.053 |  |  | 0.064 | 0.011 |
|  | (0.023) | (0.008)\* |  |  | (0.024)\* | (0.025)\* |
| DOM\*FD3 | 0.056 | 0.003 |  |  | 0.042 | 0.046 |
|  | (0.025) | (0.007) |  |  | (0.026) | (0.024) |
| LEV | 0.657 | -0.168 | 0.684 | -0.291 | 0.665 | -0.309 |
|  | (0.127)\*\*\* | (0.093)\* | (0.127)\*\*\* | (0.476) | (0.127)\*\*\* | (0.171)\* |
| FA | 1.363 | 0.161 | 1.396 | 0.041 | 1.516 | 0.038 |
|  | (0.202)\*\*\* | (0.049)\*\*\* | (0.201)\*\*\* | (0.431)\*\* | (0.201)\*\* | (0.104) |
| FS | 0.452 | 0.061 | 0.441 | 0.046 | 0.478 | 0.063 |
|  | (0.056)\*\*\* | (0.013)\*\*\* | (0.056)\*\*\* | (0.136)\*\* | (0.056)\*\*\* | (0.026)\* |
| FG | -0.008 | -0.025 | -0.009 | -0.013 | -0.013 | -0.012 |
|  | (0.013) | (0.011) | (0.014) | (0.051) | (0.018) | (0.019) |
| RDI | 1.257 | 1.996 | 1.497 | 1.431 | 1.292 | 1.689 |
|  | (1.072) | (0.241) | (1.071) | (1.543) | (1.074) | (0.305)\*\* |
| PR | 0.037 | 0.015 | 0.038 | 0.012 | 0.039 | 0.008 |
|  | (0.005)\*\*\* | (0.002)\*\*\* | (0.052)\*\*\* | (0.015)\*\* | (0.006)\*\*\* | (0.003)\*\* |
| Z | 31.50\*\*\* | 4517.67\*\*\* | 39.64\*\*\* | 3258.83\*\*\* | 39.05\*\*\* | 4488.78\*\*\* |
| R Square | 0.293 |  | 0.285 |  | 0.282 |  |
| Hausman test | 81.25\*\*\* |  | 86.18\*\*\* |  | 74.38\*\*\* |  |
| ABT-1 (p) |  | 0.000 |  | 0.000 |  | 0.000 |
| ABT-2 (p) |  | 0.192 |  | 0.185 |  | 0.214 |
| ST (p) |  | 0.127 |  | 0.201 |  | 0.237 |
| TI |  | 44 |  | 40 |  | 40 |
| TC | 128 | 128 | 128 | 128 | 128 | 128 |

Note: DV and Con denote the dependent variable and constant term respectively; All variables are explained in table-1; Z reports the F statistics and Wald test of joint level of significance; ABT-1 (p) and ABT-2 (p) represents the p values of the Arellano-bond test of serial correlations. ST (p) specifies the p values of Sargan test statistics. TI denotes the total instruments used. TC represents the total number of companies. Standard errors are given in brackets. \*, \*\*, \*\*\* represents 10%, 5% and 1% level of significance respectively.

Table-9: Supplementary results

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| DV | EV | EV | EV | EV | EV | EV | EV |
| Models | 2SLS | 2SLS | 2SLS | 2SLS | 2SLS | 2SLS | 2SLS |
|   | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Con | -7.469 | -9.652 | -4.307 | 2.922 | 0.067 | -28.805 | -14.153 |
|  | (0.920)\*\*\* | (1.801)\*\*\* | (0.991)\*\*\* | (2.777) | (1.912) | (8.029)\*\*\* | (3.733)\* |
| FOR | 0.474 | 0.370 | 0.373 |  |  | 1.740 |  |
|  | (0.057)\*\*\* | (0.098)\*\*\* | (0.055)\*\*\* |  |  | (0.720)\*\* |  |
| DOM | -0.372 | -0.903 | -0.131 |  |  |  | -1.400 |
|  | (0.071)\*\* | (0.152)\*\*\* | (0.091) |  |  |  | (0.411)\*\*\* |
| FD1 |  |  |  | 3.348 | -0.189 | 21.046 | 10.428 |
|  |  |  |  | (2.350)\* | (1.618) | (8.304) | (3.348) |
| FD2 |  |  |  | 4.898 | 1.619 | 19.205 | 11.972 |
|  |  |  |  | (2.254) | (1.552)\* | (8.414)\*\* | (3.367)\* |
| FD3 |  |  |  | -9.388 | 1.782 | -18.064 | -13.902 |
|  |  |  |  | (2.338)\*\* | (1.610) | (8.414)\*\* | (3.465)\* |
| FOR\*FD1 |  |  |  |  |  | 1.693 |  |
|  |  |  |  |  |  | (0.712)\* |  |
| FOR\*FD2 |  |  |  |  |  | 1.641 |  |
|  |  |  |  |  |  | (0.713) |  |
| FOR\*FD3 |  |  |  |  |  | -1.561 |  |
|  |  |  |  |  |  | (0.718)\* |  |
| DOM\*FD1 |  |  |  |  |  |  | -1.286 |
|  |  |  |  |  |  |  | (0.397)\*\* |
| DOM\*FD2 |  |  |  |  |  |  | 1.304 |
|  |  |  |  |  |  |  | (0.397)\* |
| DOM\*FD3 |  |  |  |  |  |  | 1.453 |
|  |  |  |  |  |  |  | (0.410) |
| LEV | -3.292 | -2.611 | -3.101 | 0.455 | -1.495 | -2.568 | -0.991 |
|  | (0.558)\*\*\* | (0.788)\*\*\* | (0.939)\*\*\* | (0.913) | (0.629)\*\*\* | (0.701)\*\*\* | (0.545)\* |
| FA | 3.496 | 3.954 | 2.541 | -1.123 | 0.765 | 2.768 | 2.661 |
|  | (0.240)\*\*\* | (0.416)\*\*\* | (0.263)\*\*\* | (0.451)\*\*\* | (0.311)\*\* | (0.314)\*\*\* | (0.261)\*\*\* |
| FS | 0.381 | 0.798 | 0.295 | 2.296 | 0.629 | 0.754 | 1.033 |
|  | (0.129)\*\*\* | (0.231)\*\*\* | (0.126)\*\* | (0.157)\*\*\* | (0.108)\*\*\* | (0.101)\*\*\* | (0.094)\*\*\* |
| FG | -0.113 | -0.226 | -0.105 | -0.183 | -0.156 | -0.124 | -0.161 |
|  | (0.052)\*\*\* | (0.103)\*\*\* | (0.052)\*\* | (0.121) | (0.083) | (0.085) | (0.071)\* |
| RDI | 0.813 | 4.885 | -8.488 | 10.304 | -0.783 | 6.867 | 7.488 |
|  | (1.951) | (2.542)\* | (10.790) | (2.745)\*\*\* | (1.890) | (1.096)\*\* | (1.587)\*\*\* |
| PR | -0.027 | 0.015 | -0.004 | 0.164 | 0.021 | 0.043 | 0.062 |
|  | (0.015)\* | (0.027) | (0.016) | (0.029)\*\*\* | (0.020) | (0.019)\* | (0.016)\*\* |
| WCS Test | 618.47\*\*\* | 247.79\*\*\* | 373.52\*\*\* | 335.62\*\*\* | 106.74\*\*\* | 627.21\*\*\* | 498.30\*\*\* |
| DWH Test (P value) | 0.000 | 0.000 | 0.000 | 0.011 | 0.014 | 0.000 | 0.000 |
| S Test (P Value) | 0.337 | 0.261 | 0.567 | 0.102 | 0.110 | 0.671 | 0.462 |
| CGF Stat | 36.122 | 21.658 | 14.367 | 87.325 | 87.325 | 16.238 | 18.624 |
| CV | 11.04 | 11.04 | 11.04 | 9.53 | 9.53 | 13.91 | 13.91 |
| TC | 339 | 128 | 211 | 128 | 128 | 128 | 128 |

Note: DV and EV denote the dependent variable and enterprise value respectively. All variables are explained in table-1. WCS test indicates Wald Chi-Square test. DWH test represents the Durbin-Wu–Hausman test, p values are reported. S Test denotes the Sargan test, p values are reported. CGF test represents the Cragg Donald F Statistics. CV presents the critical value. TC denotes the total companies. Standard errors are given in brackets. \*, \*\*, \*\*\* represents 10%, 5% and 1% level of significance respectively.

**List of Figures**

Figure-1: Company group-wise yearly mean distributions



Note: TQ, FOR and DOM represents Tobin’s q, foreign and domestic institutional shareholdings.

Figure-2: Yearly mean distribution of dependent and independent variables



Note: TQ, FOR and DOM represents Tobin’s q, foreign and domestic institutional shareholdings.