



RESEARCH ARTICLE

Effect of Ownership Concentration on Firm Performance: Evidence From Sri Lankan Financial Sector

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Abstract: Concentrated ownership generally leads to concentration of power among few dominant shareholders and can result in increased agency costs and poor firm performance. However, some literature argues that owner-managers in firms with concentrated ownership have better incentives to enhance firm value. Given this conflict in empirical findings, this study investigates whether ownership concentration affects firm performance using data gathered from 2015 to 2019 from 66 firms listed under banks, diversified financials, and insurance sectors in the Colombo Stock Exchange (CSE). Herfindahl-Hirschman Index (HHI), calculated based on the proportion of shareholdings of the ten largest shareholders, was used to measure ownership concentration. Firm performance was measured using Tobin's Q. A fixed-effects panel regression was used to assess the effect of ownership concentration on the firm performance while controlling for firm size and leverage. In line with the predictions in stewardship theory, the findings of this study suggest that higher ownership concentration improves firm performance. Use of HHI to measure ownership concentration and a frequently excluded sector as a sample remains as the key contributions of this study.

Keywords: *Ownership Concentration, Firm Performance, Herfindahl-Hirschman Index, Tobin's Q.*


Introduction

Ownership concentration varies considerably across countries (LaPorta et al., 2000). Concentrated ownership is more widespread in Europe, Latin America, Asia, and Africa than in the United States and the United Kingdom, where it is less common. In most developing countries, ownership is highly concentrated (Wei & Geng, 2008). For example, in Sri Lanka, most of the listed firms' ownership is concentrated in the hands of one or a few large shareholders, who enjoy higher controlling rights (Mapitiya et al., 2015; Uduwalage, 2021).

Separation of ownership from control in modern firms has resulted in agency costs and poor firm performance as argued in agency theoretic literature. Ownership concentration refers to a situation where fewer shareholders possess a substantial portion of firms' shares while other shareholders hold only a small fraction of the firms' shares. When firm

ownership is concentrated, the controlling power usually vests on a few investors, making other investors mere bystanders. For example, larger shareholders can exercise undue power over management to secure benefits that are unfavourable to minority shareholders (Bhojraj & Sengupta, 2003; Earle et al., 2005). This polarisation of power can aggravate agency conflicts and create substantial downward pressures on firm performance (Faisal et al., 2020). Therefore, corporate governance literature, shaped mainly by agency theory, discourages ownership concentration because it is detrimental to good governance.

However, proponents of stewardship theory suggest that ownership concentration may improve performance by decreasing monitoring costs since larger shareholders, i.e., owner-managers, have stronger incentives to enhance firm value and to monitor the activities of the managers (Shleifer & Vishny, 1986; Short & Keasey, 1999). Moreover, as

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Dockey et al. (2000) argued when ownership is dispersed, each individual owner has lesser control over managers leaving the managers with more opportunities to exploit the firm's economic resources.

The differences in theoretical underpinnings and contradictory empirical evidence require corporate governance studies to be carried out using recent data on a more regional basis, paying attention to specific contextual settings (Hermalin & Weisbach, 2003). Moreover, Sri Lankan firms are often characterized by family ownership and concentrated ownership where controlling shareholders engage in the management (Hewa Wellalage & Locke, 2014; Manawaduge, 2012; Wijethilake et al., 2015). Further, being characterized by high leverage, ownership concentration in financial firms can play a crucial role in monitoring management and ensuring the rights of the depositors (Furfine, 2001).

Nevertheless, studies conducted on the effects of ownership concentration in Sri Lanka are limited. At the same time, the available fewer literature has also frequently excluded the financial firms given the uniqueness of their characteristics and regulatory provisions applicable to them compared to non-financial firms. Moreover, the findings are inconsistent even in the few available Sri Lankan studies. For example, Manawaduge and De Zoysa (2013) found a positive relationship between ownership concentration and performance. In contrast, Pathirawasam and Wickremasinghe (2012) and Pathirawasam (2013) have shown that ownership concentration does not directly affect financial performance.

Therefore, using all 69 firms listed under banks, diversified financials, and insurance sectors in the Colombo Stock Exchange (CSE), this study investigates whether ownership concentration can reduce firm performance as claimed by most corporate governance literature relying on market-based practices of Anglo-Saxon origin. Use of Herfindahl-Hirschman Index (HHI) to measure ownership concentration and taking frequently excluded sectors as the sample are the key contributions of this study.

Literature Review

Mainstream models of corporate governance are primarily based on the claims in agency theory (Berle & Means, 1932). The agency theory claims that, in modern corporations, separation of ownership and management leads to various costs associated with conflicts of interest between the agents and principals (Jensen & Meckling, 1976). These costs, which are

commonly known as agency costs, contribute to reducing the firm performance (Bozec & Bozec, 2007; Clark & Wójcik, 2005; Konečný & Částek, 2016). Jensen and Meckling (1976) claim that the principal can limit the interest misalignment between the principal and agent by setting incentive instruments and monitoring arrangements for the agent through incurring costs, i.e., *agency costs*. Nevertheless, the firm performance cannot be improved if appropriate incentives or monitoring mechanisms are not adequately deployed to restrain owner-managers from using their discretion to maximize their benefits.

In this context, the concentration of ownership can aggravate agency costs because shareholders with substantial shareholdings can influence the board of directors and disrupt the policies of the governing body (Waheed & Malik, 2019). These large shareholders can enjoy undue powers by being continually elected to the director board. This undue power and incentives mainly result from the ability of owner-managers to hide critical information from dispersed owners with marginalized access to the firm's internal information (Lubatkin, 2007). As a result, these larger shareholders tend to have more avenues to exploit firm resources at the expense of minority shareholders, creating another conflict of interest between larger shareholders and minority shareholders (Friedland, 2003). For example, larger shareholders with decision-making power can expropriate a firm's economic resources, especially when they are also creditors, managers, or customers (Gibson, 2003; Waheed & Malik, 2019). In this situation, they can extract economic rents in the form of various private benefits through capitalizing on these relationships. Also, they may divert the firm's resources towards unprofitable projects (Lemmon & Lins, 2003). This diversion can result in reduced firm performance. For example, banks with more concentrated ownership are associated with poor performance due to higher operating costs (Riewasathirathorn et al., 2011).

In contrast, as the proponents of stewardship theory claim, ownership concentration can act as an internal governance mechanism in which owner-managers have stronger incentives and capacities to get actively involved in the management (AlQadasi & Abidin, 2018). Therefore, compared to minority shareholders, it is more cost-effective for major controlling shareholders to actively engage in the management of the firm or to influence the management (Shleifer & Vishny, 1986). For example, they have the power to monitor management actions through more access to information and discipline management by making effective hiring and firing decisions (Burkart et al.,

1997; Campbell & Mínguez-Vera, 2008; Grossman & Hart, 1982). Concurrently, Ghaleb et al. (2020) highlight that firms with higher family ownership concentration have less tendency for earnings management.

In the financial sector as well, Azoury et al. (2018), Ozili and Uadiale (2017), and Huang (2020) found that banks with high ownership concentration have a higher return on assets, higher net interest margin, and higher recurring earning power. Moreover, Iannotta et al. (2007) claimed that even though ownership concentration does not affect bank profitability, high ownership concentration is associated with better loan quality, lower asset risk, and lower insolvency risk, thereby improving bank performance. Therefore, it can be argued that concentrated ownership can mitigate conflict of interest and reduce management opportunism, thereby enhancing firm performance (Lee, 2008; Morck et al., 1988; Thomsen & Pedersen, 2000; Iwasaki & Mizobata, 2019).

Concurrently, some literature has observed a reverse U-shaped relationship between ownership concentration and firm performance, suggesting the presence of an optimal level of ownership concentration that can maximize firm performance (Arosa et al., 2010; Lee, 2008; Thomsen & Pedersen, 2000). For example, along with increased ownership concentration, agency costs gradually decrease due to the increased alignment of interests of owners and managers. However, when the ownership concentration reaches extreme levels, these positive effects disappear because very high levels of ownership concentration allow controlling shareholders to dominate the decision-making process and expropriate wealth from the minority shareholders (Caixe & Krauter, 2014).

Nevertheless, some studies deny a significant association between ownership concentration and firm performance. For example, Iannotta et al. (2007), Machek and Kubiček (2018), and Sánchez-Ballesta and García-Meca (2007) have not found any association between ownership concentration and firm performance in non-financial firms. Similarly, Zouari and Taktak (2014) did not find any association between ownership concentration and bank performance.

The literature reviewed here set forth three important implications. First, the relationship between ownership concentration and firm performance is not straightforward. Second, the role of ownership concentration in ensuring good corporate governance is still largely unknown. Third, the empirical

evidence suggests that the relationship between the two concepts is highly contextual.

Methods

This study investigates whether ownership concentration reduces the firm performance using a panel dataset collected over the five years from 2015 to 2019 from all 69 firms listed under banks, diversified financials, and insurance sectors in the CSE. Three firms were excluded from the sample. Among these three firms, two did not have data over the entire sample period, and the other one has been under the control of the Central Bank of Sri Lanka since 2018 due to some firm-specific irregularities. Moreover, one firm did not have data for 2015. As a result, the dataset of this study contains 329 firm-year observations. Nevertheless, the years after 2019 were not considered for this study because the performance of these firms was severely affected by the Covid-19 pandemic and exceptional policies implemented to cope with the pandemic, such as the debt moratorium and interest rate controls. The data were collected from the published annual reports of the selected firms.

Accounting-based measures of firm performance like return on assets and return on equity reflect a short-term perspective, while market-based measures like Tobin's Q reflect a long-term perspective (Al-Matari et al., 2014). Tobin's Q has recently attracted widespread attention as a forward-looking performance measure since it reflects the investors' expectations as well. Therefore, following Eluyela et al. (2018), this study measures firm performance using Tobin's Q. On this aspect, this study differs substantially from some of the previous Sri Lankan studies on corporate governance such as Manawaduge and De Zoysa (2013), and Pathirawasam (2013).

Concurrently, the ownership concentration was measured using the Herfindahl-Hirschman Index (HHI), similar to Konečný and Částek (2016). HHI is equal to the sum of squared proportions of shareholdings of each investor. Theoretically, HHI can vary between zero and 10,000, where 10,000 indicates a situation characterized by individual ownership while zero indicates a perfectly diffused ownership indicating each investor is holding a negligible portion of the total shareholdings. Horizontal Merger Guidelines issued by the Department of Justice and the Federal Trade Commission (2010), regarding market concentration, classify markets based on HHI into three categories. An HHI below 1500 is considered unconcentrated,

while an HHI between 1500 and 2500 is considered moderately concentrated. Moreover, an HHI above 2500 is considered highly concentrated. However, such classification of HHI concerning ownership concentration could not be found.

The HHI is ideally calculated based on the proportion of shareholdings of all shareholders or more commonly based on the shareholdings of the 50 largest shareholders. Nevertheless, in this study, the HHI was calculated by summing the squared proportions of shareholdings of the ten largest shareholders of each firm for two main reasons. First, none of the firms in the sample had disclosed information about the 50 largest shareholders in their annual reports. Second, preliminary analysis based on the sample data suggested that shareholdings of the

shareholders beyond the tenth largest shareholder is trivial in the Sri Lankan context. For example, as illustrated in Table 2, the maximum shareholding of the tenth investor was around 4 percent ($M = 0.790$, $SD = 0.840$).

As firm size and leverage can potentially influence corporate performance, they were considered control variables. In addition to these controls, board-related factors such as external directorship, CEO duality could be influential. However, in this study, such variables were not considered. Firm size was measured using the natural logarithm of total assets, and leverage was measured using the debt-to-equity ratio. Moreover, year dummies for 2015-2019 were added to control time-variant effects. Table 1 summarises the operationalization of the variables.

Table 1: Operationalization of variables

Variable	Symbol	Indicator	Measurements	Similar Literature
Firm Performance	TobinsQ	Tobin's Q	The ratio of the market value of the firm to the book value of assets. (Market value of equity + book value of debts)/book value of total assets	Chung and Pruitt (1994); Hewa Wellalage and Locke (2014); Lindenberg and Ross (1981)
Ownership Concentration	HHI	Hirschman-Herfindahl Index	Sum the squared proportions of shareholdings of the ten largest shareholders	Demsetz and Lehn (1985); Konečný and Částek (2016)
Firm Size	SIZE	Total Assets	Natural logarithm of total assets.	AlQadasi and Abidin (2018); Nashier and Gupta (2020); Pathirawasam (2013)
Leverage	LEV	Debt-to-equity ratio	Total debt/ Total equity	Alimehmeti and Paletta (2012)

Corporate governance studies are often criticized for their failure to account for the risk of endogeneity issues (Roberts & White, 2013). Moreover, it is not unusual to omit some variables that should have been included in the vector of explanatory variables due to unobservability. Endogeneity could lead to biased estimates, thus distorting the effect of corporate governance on firm performance (Demsetz & Villalonga, 2001). In such a context, a fixed-effects panel regression model could be adopted to allow for individual heterogeneity and to control for individual-specific and time-invariant characteristics. Therefore, a fixed-effects panel regression model as specified in equation 1 was used in this study after evaluating the suitability of the fixed-effects model relative to the random-effects model using the Hausman test.

$$TobinsQ_{it} = \alpha + \beta_1 HHI_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \lambda_t + \mu_{it} \text{----- (1)}$$

In the equation, TobinsQ denotes the performance measure, and HHI denotes the ownership concentration measure. SIZE and LEV, respectively, denote the two control variables, namely firm size and leverage. Further, i denotes individual firms, t denotes time, λ represents a vector of year dummies (to control for time-variant macroeconomic shocks), and μ denotes error term.

Results and Discussion

As illustrated in Table 2, firms in insurance and diversified financials sectors show the highest

ownership concentration, where the largest ten shareholders hold around 60 percent of the total shareholdings. In contrast, the ownership concentration in banks is relatively lower (Mean = 23.35, $SD = 17.87$) compared to other firms in the sample. The average share of the largest shareholder in the banking sector is only around 23 percent, i.e., approximately one-third relative to the other two sectors. The HHI also indicates that the ownership is highly concentrated in insurance and diversified financials sectors whereas the ownership

concentration is relatively lower in the banking sector relative to other sectors. More precisely, the ownership concentration in the diversified financials and insurance sectors is twice higher than that of the banking sector. According to the classification stipulated in Horizontal Merger Guidelines (2010), the Sri Lankan ownership in the banking sector is unconcentrated whereas the same in the diversified financials and insurance sectors are highly concentrated.

Table 2: Ownership Concentration

Indicator	Mean	SD	Minimum	Maximum
The stake of the largest ten shareholders (%)				
The largest shareholder (L1)	53.99	27.13	9.63	100.00
The 2 nd largest shareholder (L2)	12.27	10.05	0.00	44.34
The 3 rd largest shareholder (L3)	6.22	5.50	0.00	25.09
The 4 th largest shareholder (L4)	3.88	3.61	0.00	15.88
The 5 th largest shareholder (L5)	2.67	2.91	0.00	13.78
The 6 th largest shareholder (L6)	2.10	2.33	0.00	9.41
The 7 th largest shareholder (L7)	1.64	1.86	0.00	7.57
The 8 th largest shareholder (L8)	1.22	1.36	0.00	8.07
The 9 th largest shareholder (L9)	0.96	0.98	0.00	4.61
The 10 th largest shareholder (L10)	0.79	0.84	0.00	4.03
The stake of the largest shareholder (L1)				
Banks (n=60)	23.35	17.87	9.63	70.83
Diversified Financials (n=219)	61.12	24.37	16.11	100.00
Insurance (n=49)	59.66	22.08	17.14	100.00
Overall (n=328)	53.99	27.13	9.63	100.00
Herfindahl-Hirschman Index (HHI)				
Banks (n=60)	1222.46	1331.92	220.17	5072.97
Diversified Financials (n=218) ^a	4726.86	2642.99	671.46	10000.00
Insurance (n=48) ^a	4396.27	2276.52	884.23	10000.00
Overall (n=326) ^a	4036.43	2743.96	220.17	10000.00

Note a - one firm in diversified financial sector and one firm in insurance sector did not have data required for calculating HHI in 2015

Similar to these observations, Manawaduge and De Zoysa (2013) also have observed that ownership is highly concentrated in Sri Lanka, where the first ten-largest shareholders hold around 75 percent of the total shareholdings. As Hewa Wellalage and Locke (2014) argued, family ownership in Sri Lankan listed firms could be a significant reason behind this high ownership concentration. Similarly, firms in underdeveloped financial markets with restricted access to external financing are characterized by family predominant and highly concentrated insider ownership (LaPorta et al., 2000). Moreover, inadequate legal protection and market uncertainty in emerging markets would contribute to high ownership concentration (Salas and Deng, 2017).

This study employed the fixed effects regression model specified in equation 1 to test the effect of ownership concentration on the firm performance. The fixed-effects model was chosen based on the Hausman test ($\chi^2(7) = 69.53, p < .001$). Table 3 summarizes the descriptive statistics for the variables used in the panel regression model. The data show that the variability in firm size is relatively lower (Mean = 23.525, $SD = 1.931$) in the entire sample as well as within each sector. Apart from the firm size, all other variables indicate substantial disparities among the selected firms even within respective sectors. For example, even though some firms are characterized by substantially diffused ownership, the ownership of some firms are extremely concentrated. As expected, a substantially high degree of leverage in the banking sector could also be observed,

followed by diversified financials and insurance sectors, respectively. Overall, as indicated in the debt-to-equity ratio, the level of leverage is relatively

high in the financial sector compared to the non-financial sector.

Table 3: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max	N
Entire Sample					
TobinsQ	1.490	3.908	0.008	63.570	329
HHI	4036.426	2743.965	220.165	10000.000	328 ^a
SIZE	23.525	1.931	16.334	27.974	329
LEV	5.476	10.533	0.000	179.890	329
Banks					
TobinsQ	0.971	0.045	0.826	1.072	60
HHI	1222.460	1331.915	220.165	5072.974	60
SIZE	26.209	1.055	24.459	27.974	60
LEV	9.880	3.188	1.001	17.837	60
Diversified Financials					
TobinsQ	1.618	4.708	0.008	63.570	220
HHI	4726.862	2642.993	671.459	10000.000	219 ^a
SIZE	22.936	1.629	16.334	26.076	220
LEV	5.003	12.418	0.000	179.890	220
Insurance					
TobinsQ	1.547	1.673	0.204	7.949	49
HHI	4396.274	2276.520	884.226	10000.000	49
SIZE	22.882	0.995	20.872	24.735	49
LEV	2.203	2.420	0.001	10.794	49

Note a - one firm did not have data to calculate the HHI. Therefore, only 328 firm-year observations were used in the regression

Table 4: Fixed Effect Regression Results

Dependent Variable: Tobin's Q

$R^2=0.0782$; $F(7, 255) = 12.65$; $p < 0.001$

Variable	Symbol	β	t	VIF
Hirschman-Herfindahl Index	HHI	0.001**	2.40	2.98
Firm Size	SIZE	-5.290***	-8.75	7.66
Leverage	Lev	0.012	0.54	1.35
Year Dummy ₁	2016	0.723	1.24	2.03
Year Dummy ₂	2017	2.479***	4.14	2.06
Year Dummy ₃	2018	2.864***	4.45	2.07
Year Dummy ₄	2019	3.053***	4.67	2.08
Constant	α	121.616		

Notes: The ***, ** and * indicate statistical significance at 1%, 5% and 10% levels respectively.

The panel regression model was statistically significant, ($R^2 = .0782$, $F(7,255) = 12.61$, $p < .001$), and the model explains 7.8 percent of the variation in Tobin's Q. The results depicted in Table 4 suggest that ownership concentration measured using HHI is positively associated with firm performance measured using Tobin's Q ($\beta = .001$, $p = .017$). This finding is consistent with Manawaduge and De Zoysa (2013) and Heugens et al. (2009), who also indicated that the ownership concentration might improve firm performance by decreasing agency costs. Especially in countries with a weak rule of law, the effect of

ownership concentration on performance can be positive (Heugens et al., 2009). In such jurisdictions, shareholders have to concentrate their stake to enforce their interests (Khanna & Palepu, 1997). Nevertheless, this finding directly contradicts Earle et al. (2005), Al-Amarneh (2014), and Lee (2008) who suggest that concentrated ownership would lead to agency conflicts between controlling shareholders and minority stockholders and to substantially poor firm performance.

Moreover, firm size measured using the natural logarithm of total assets was negatively associated

with Tobin's Q ($\beta = -5.290, p < .001$), indicating that large firms perform poorly compared to their smaller counterparts. This might indicate the lower firm performance in the banking sector given the fact that banks are relatively larger than firms in the other two sectors. Nevertheless, since the exploration of the size-effect is beyond the scope of this study, further investigations were not made in this respect. Any statistically significant association between leverage and Tobin's Q was not found ($\beta = .012, p = .588$). Further, as indicated by year dummies, there are statistically significant time fixed-effects for years 2017, 2018, and 2019. This suggests that there are substantial fluctuations in firm performance across different years due to macroeconomic or industry specific factors.

The findings of this study support the claims made in the stewardship theory that higher concentration increases larger shareholders' power and control over management (AlQadasi & Abidin, 2018). For example, as large shareholders have higher stakes than smaller shareholders, they may be better incentivized to protect the firm. Large shareholders also can use their resources and prior experience to uplift managerial and organizational performance (Carney & Gedajlovic, 2001). Especially in Sri Lanka, higher ownership concentration can be attributed to family ownership (Hewa Wellalage and Locke, 2014). Such owners enhance financial performance by discouraging earnings management (Ghaleb et al., 2020). Moreover, larger shareholders often get elected to the board and tend to hold key positions in the boards. This placement inevitably increases owner-managers controlling power over non-owner managers and reduces the information asymmetry between them. This increased power and access to information create less space for non-owner managers to shirk their management. Thereby, a decrease in agency costs can be expected. Thus, ownership concentration could be taken as an instrument to alleviate principal-agent conflicts in the firms in emerging markets (Ghaleb et al., 2020; AlQadasi & Abidin, 2018).

Conclusions

Literature provides mixed evidence on the relationship between ownership concentration and firm performance. Therefore, this study set out to determine whether ownership concentration can reduce firm performance as generally claimed in the agency theoretic corporate governance literature. The focus in this study was on the firms listed under banks, diversified financials, and insurance sectors

in the CSE. Since this is a sector that has been frequently excluded in the previous corporate governance literature, this study contributes to the existing literature by broadening evidence on ownership concentration and firm performance in the financial sector of emerging economies.

The findings of this study indicate a high ownership concentration in diversified financials and insurance firms in Sri Lanka. The ownership concentration in banks is low. The wide prevalence of family ownership and weak legal protection in the market could be held responsible for this higher ownership concentration in Sri Lanka (Hewa Wellalage & Locke, 2014). Further, the findings of this study confirm the positive relationship between ownership concentration and firm performance, in line with the notions of stewardship theory. Therefore, it can be argued that ownership concentration is not detrimental in the Sri Lankan context, contrary to the claims frequently made by the literature supporting the agency theory. Especially in emerging markets characterized by weaker institutions, bank dominant financial systems, and inefficient capital markets, concentrated ownership can enhance firm performance (Javid & Iqbal, 2008).

This study contributes to the body of knowledge by emphasizing the role of ownership concentration in corporate governance and its effect on firm performance in a sector that is fairly less researched in Sri Lanka. Thus, these findings offer valuable insights for policymakers in designing and implementing policies relevant to the corporate governance practices in Sri Lanka and other developing nations, particularly in the Asian region. Further, investors could make vigilant investment decisions based on the concentration of ownership in firms as they can invest in firms with higher ownership concentration, assuming that such firms provide better protection for their investment.

Notwithstanding the aforementioned contributions, this study is not free from limitations. More precisely, this study focused exclusively on the ownership concentration of firms in terms of the shareholdings of the largest ten shareholders. By doing so, this study neglects the other forms of ownership concentration, such as ownership by the government and institutional investors. Demsetz and Villalonga (2001) termed ownership a multi-dimensional phenomenon that could be observed in different performance effects. Thus, future studies can include the identity of owners in their models to obtain a comprehensive insight into the differences between alternative types of owners and the respective performance implications.

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