International Business Research; Vol. 9, No. 11; 2016
ISSN 1913-9004 E-ISSN 1913-9012
Published by Canadian Center of Science and Education

Examining the Relationship between Disproportional Ownership Mechanisms and Company Performance: An Empirical Research

Sara Saggese[1]

[1]Department of Economics, Management, Institutions, University of Naples "Federico II", Naples, Italy

Correspondence: Sara Saggese, Department of Economics, Management, Institutions, University of Naples "Federico II", Via Cinthia, Complesso Universitario Monte S. Angelo, 80126, Naples, Italy. E-mail: sara.saggese@unina.it

Received: September 5, 2016 Accepted: September 8, 2016 Online Published: September 29, 2016

doi:10.5539/ibr.v9n11p70 URL: http://dx.doi.org/10.5539/ibr.v9n11p70

Abstract

The paper explores the relation between the use of disproportional ownership mechanisms and firm performance in listed companies. Literature suggests that such tools deviate from the proportionality principle between cash-flow rights and control rights and negatively affect firm outcomes. Differently, some studies emphasize that disproportional ownership mechanisms have a positive effect on company performance as controlling shareholders can be motivated to maximize corporate outcomes, providing outperforming benefits than the potential minority expropriation risk. Moreover, it is still an open issue whether firm performance can be interpreted as determinant of disproportional ownership mechanisms. Therefore, it is an empirical question whether company performance can be considered as an implication and/or a driver of disproportional ownership devices. Moving from these premises, the article relies on a unique hand-collected dataset and examines a sample of Italian listed companies through regression analyses. Findings show that the use of disproportional ownership devices is affected by past company performance and highlight that these ownership tools worsen firm outcomes. The research has both theoretical implications for future studies and practical implications for policy makers.

Keywords: disproportional ownership mechanisms, ownership structure, Italy, performance

1. Introduction

In the last decades, governance scholars have extensively examined corporate ownership. Nevertheless, literature exploring the relationship between ownership structures and performance does not offer univocal findings (Zattoni & Cuomo, 2010). This phenomenon is even more evident with respect to disproportional ownership mechanisms (hereafter DOMs - Disproportional Ownership Mechanisms). Indeed, the academic research and the policy makers have highlighted that, aside companies under managerial control, large listed firms are often governed by blockholders through mechanisms (i.e. pyramidal structures; cross shareholdings; multiple voting shares; non-voting shares; priority shares; golden shares; voting-rights and ownership ceilings; depositary certificates; voting trusts; partnerships limited by shares; loyalty shares) that deviate from the proportionality principle (i.e. the One Share-One Vote rule also known as OSOV) between cash-flow rights and control rights and separate corporate ownership from its control (Institutional Shareholder Services, 2007; Burkart & Lee, 2008; Adams & Ferreira, 2008; Saggese & Sarto, 2016). As a consequence, in firms ruled by such ownership tools, blockholders can exert the majority of voting rights, appoint most board directors and condition strategic and operating options of companies, despite they hold minority cash-flow rights (Aslan & Kumar, 2012; Kumar & Zattoni, 2014). However, governance scholars have not reached consensus as to whether disproportional ownership mechanisms have positive or negative relationships with firm outcomes (Jansson & Larsson-Olaison, 2010).

Limited research has sought to examine the role played by company performance as driving factor of disproportional ownership mechanisms. Some studies have found a positive relationship between the use of certain types of DOMs and firm performance (Barontini & Caprio, 2006; Saggese, 2014), while other have highlighted that the strong investor protection limits the incentives to use DOMs even when the resources available through company performance are large (Enriques & Volpin, 2007; Saggese, 2013). Aside this line of inquiry, other research efforts have tried to shed light on the performance implications of DOMs and two main

streams of literature have emerged. Some studies have emphasized that controlling owners limit the classic agency risk and the managerial opportunism (Roe, 1994) but foster the expropriation of company wealth at the expenses of minority investors (Bigelli & Megoli, 2004; Enriques & Volpin, 2007). Indeed, literature in this strand has suggested that controlling shareholders raise a principal-principal agency problem and can easily extract private benefits of control as the separation between cash-flow rights and voting rights through disproportional ownership mechanisms is wider (Hu & Kumar, 2002; Kang, Kumar, & Lee, 2006; Kumar & Rabinovitch, 2013). This is especially true in markets with weak minority shareholder protection where the incentive to expropriate company resources to the detriment of non-controlling investors is strong (La Porta, Lopez-de-Silanes, & Shleifer, 1999; Zattoni, 1999; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000; Cuomo, Zattoni, & Valentini, 2012). As a result, research in this tradition has provided evidence on a negative effect of disproportional ownership on firm outcomes (Core, Holthausen, & Larcker., 1999; Claessens, Djankov, Fan, & Lang, 2002) or has found a U-shaped relationship between ownership concentration and company performance (Hu & Izumida, 2008). Differently, studies belonging to the second stream of research have emphasized that the effect of ownership structures on company performance depends on the context and have pointed out that, in given circumstances, blockholders can be motivated to maximize corporate value (Thomsen & Pedersen, 2000; Jog, Zhu, & Dutta, 2010). In this sense, the presence of controlling shareholders can produce benefits that outperform the potential risks for minority shareholders (Jin & Park, 2015), reflecting in better company outcomes (Barontini & Caprio, 2006; Almeida & Wolfenzon, 2006b; Hanousek, Kočenda, & Svejnar, 2007; Carvalhal, 2012; Gonz ález, Guzm án, Pombo, & Trujillo, 2012).

While the majority of these studies has focused on emerging markets (Lins, 2003), East Asian countries (Claessens *et al.*, 2002), Northern Europe (Cronqvist & Nilsson, 2003; Maury & Pajuste, 2005) and USA (Gompers, Ishii, & Metrick, 2010; Villalonga & Amit, 2009), Italy has been almost neglected, despite it is the ideal setting to explore the relationship between DOMs and performance for a number of reasons. Indeed, Italy is a country characterized by large private benefits of control (Zingales, 1994; La Porta *et al.*, 1999; Faccio & Lang, 2002). Moreover, Italian listed companies present a strong ownership concentration and marked misalignment between cash-flow rights and voting rights due to the notable adoption of disproportional ownership mechanisms by listed companies (Brioschi, Buzzacchi, & Colombo, 1990; Bianco & Casavola, 1999; Johnson, La Porta, Lopez-de-Silanes, & Shleifer, 2000; Faccio & Lang, 2002; Volpin, 2002; Hauser & Lauterbach, 2004). Finally, Italy has been also characterized by a wave of reforms aiming to improve the protection of both financial markets and investors, and to limit the incentives to the distorted use of DOMs (Mengoli, Pazzaglia, & Sapienza, 2009; Saggese, 2013; Linciano, Ciavarella, & Signoretti, 2014).

The inconclusive findings of previous research on the topic and the existing gaps in the literature raise the following questions: does past firm performance drive the use of DOMs? And how do these tools affect company outcomes?

To answer these questions, using accounting and market measures of company performance, the paper makes inference on the relationship between disproportional ownership mechanisms and firm outcomes based on a unique hand-collected dataset of Italian listed companies between 2005 and 2014.

Findings show that (i) the use of DOMs is negatively affected by past operating performance, and (ii) these same mechanisms worsen company outcomes as measured by Tobin's Q. The results suggest that, in Italy, the incentives to use DOMs are driven by past company performance. Indeed, in this setting, these ownership tools play a relevant economic function as they are considered as a proper ownership solution to address issues of managerial effectiveness, when the past performance is limited. Opposite conclusions can be drawn when the past company performance increases since the use of DOMs decreases. In this circumstance, law reforms may have discouraged their employment by making more effective alternative ownership structures able to foster a better allocation of company resources. Finally, the study emphasizes that the deviation from the OSOV principle due to DOMs limits value maximizing behavior as it does not fully transfer the outcomes of managerial decisions to controlling owners.

The paper provides both theoretical and practical contributions. First, it contributes to the ongoing debate on the drivers and the effects of ownership structures by providing evidence on the negative relationship between disproportional ownership mechanisms and company performance. Second, it highlights the pivotal role played by law reforms in modifying the incentives to use DOMs.

The rest of the paper is organized as follows. Section 2 discusses the relevant literature on the topic and develops the research hypotheses. Section 3 illustrates the study setting. Section 4 presents the sample and describes the research methodology. Section 5 illustrates the results and the discussion. Section 6 concludes and provides directions for future research.

2. Theoretical Framework and Hypotheses Development

Governance literature has often emphasized that ownership structure has relevant implications for firm performance (Shleifer & Vishny, 1997; Thomsen & Pedersen, 2000; Saggese & Sarto, 2016).

Moving from this premise, earlier debate around the topic has focused on Anglo-Saxon public companies with dispersed ownership structures (Gugler, 2001) where the separation between ownership and control raises the classic agency problem (type I) involving shareholders and managers (Jensen & Meckling, 1976). Scholarly research in this tradition has explored the influence of ownership structures on the managerial activity and has highlighted that dispersed ownership limits the firm's value maximization as it fosters opportunistic choices to the detriment of owners (Lins, 2003; Claessens, Djankov, & Lang, 2000).

However, both scholars and practitioners have pointed out that, in many countries, companies are characterized as having concentrated ownership structures whose main agency problem (type II) is due to the owner-owner conflict and is related to the risk of minority shareholder expropriation by blockholders (La Porta *et al.*, 1999; Faccio & Lang, 2002; Institutional Shareholder Services, 2007; Zattoni & Cuomo, 2010). Indeed, despite large shareholders owning substantial cash-flow rights improve managerial monitoring and limit the classic agency costs (Shleifer & Vishny, 1997), their presence fosters the extraction of private control benefits (Bebchuk, Kraakman, & Triantis, 2000; Gianfrate, 2007). This circumstance is especially widespread in most Asian markets and European countries where the phenomenon is mainly due to the presence of pyramidal structures, cross shareholdings, multiple voting shares, non-voting shares, priority shares, golden shares, voting-right ceilings, ownership ceilings, depositary certificates, voting trusts, partnerships limited by shares, and loyalty shares (Bianco & Casavola, 1999; Zattoni, 1999; Volpin, 2002; Ferrarini, 2006; Institutional Shareholder Services, 2007). Indeed, these ownership tools produce a wedge between controlling and minority shareholders and a full violation of the OSOV rule since they directly or indirectly assign the former with more control than cash-flow rights (Burkart & Lee, 2008; Zattoni, 1999; Gianfrate, 2007; Saggese, 2013).

Governance literature has sought to identify both the determinants and the effects of employing these devices (Zattoni & Cuomo, 2010; Saggese, Sarto, & Cuccurullo, 2015; Saggese & Sarto, 2016). Research efforts aiming to investigate the driving motivations have mainly explored the influence of industry/business characteristics (Watanabe, 2002; Lim & Kim, 2005; Mishra, 2011) and financial market features (Langlois, 2013; Masulis, Pham, & Zein, 2011) on the use of DOMs. Therefore, it is still an open issue whether company performance can be also interpreted as driver of disproportional ownership mechanisms. In this sense, some studies have emphasized that past company performance reflects the resources that can be discretionary allocated by blockholders (Kim, Lim, & Sung, 2007; Saggese & Sarto, 2016) and have documented a positive relationship between the use of DOMs and firm results (Barontini & Caprio, 2006; Saggese, 2014). Different conclusions can be drawn when looking at the studies that have interpreted the legal tradition of countries as an important determinant of these devices by pointing out its ability to affect the ownership dispersion and the wedge between voting and cash-flow rights (Almeida & Wolfenzon, 2006b; Morck & Yeung, 2005; Zattoni & Cuomo, 2010; Venezze, 2014; Craninckx & Huyghebaert, 2015). Indeed, according to the "law and finance" approach, the above mentioned separation is more frequent in settings with weak shareholder protection because the advantages of minority interest expropriation and the extraction of private control benefits are stronger than in other contexts (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998; La Porta *et al.*, 1999). The proponents of this view argue that the phenomenon depends on the lack of a regulation able to identify and hinder such behaviors that reflects in a stronger use of DOMs (La Porta *et al.*, 2000). In line with these conclusions, the research explains the strong presence of these devices in continental Europe and East Asia by looking at the limited investor protection of the national regulations in force, and interprets their improvements as able to hamper the employment of disproportional ownership devices (Almeida & Wolfenzon, 2006a; Zattoni & Cuomo, 2010; Faccio, Lang, & Young, 2010; Cuomo *et al.*, 2012). Indeed, in some settings, the law reforms aiming at increasing the investor protection have reflected in a lower use of DOMs (Enriques & Volpin, 2007) because they have limited the incentives to adopt ownership structures separating voting and cash-flow rights, even when the resources available through company performance were large (Saggese, 2013). Thereby, it remains an empirical issue whether past firm outcomes positively or negatively affect the use of disproportional ownership devices. For this reason, it can be hypothesized that:

HP 1: The use of DOMs is affected by past company performance.

Aside disproportional ownership determinants, a strong debate has focused on the effects of employing DOMs. In this regard, literature has highlighted that one of the most relevant outcomes of disproportional ownership mechanisms is the controlling shareholder entrenchment (Morck, Schleifer, & Vishny, 1988; Morck & Yeung, 2005; Acero Fraile & Alcalde Fradejas, 2014). In particular, academics have argued that the OSOV rule deviation due to

disproportional ownership may maximize the private benefits of large blockholders, providing incentives to minority expropriation (Morck, Wolfenzon, & Yeung, 2005; Atanasov, Black, & Ciccotello, 2008; Bhaumik & Gregoriou, 2010). Indeed, in the presence of DOMs, controlling owners can influence firm decisions even if they are marginally involved in the economic consequences of the related choices (Grossman & Hart, 1988; Burkart & Lee, 2008). Moving from this conclusion, some empirical studies have found that the use of DOMs negatively affects the firm value creation as it does not provide incentives to value maximizing behavior (Claessens *et al.*, 2000; Cronqvist & Nilsson, 2003; Maury & Pajuste, 2005; Villalonga & Amit, 2009). Moreover, research has argued that the controlling owner expropriation occurs in the presence of low ownership concentration levels, while blockholders provide effective monitoring when the ownership concentration is high (Hu & Izumida, 2008). Other studies have also shown that, in firms ruled by DOMs, the market tends to penalize controlling shareholder at least in the short term (Jansson & Larsson-Olaison, 2010). Thereby, literature in this tradition has emphasized that DOMs hamper the shareholder value maximization and limit company performance (Claessens *et al.*, 2002; Lins, 2003; Gompers, Ishii, & Metrick, 2003). Different conclusions can be drawn when looking at the opposite view arguing that the managerial ownership is beneficial for companies as it prevents opportunistic behaviors by increasing the internal monitoring (Demsetz & Lehn, 1985; Shleifer & Vishny, 1997; La Porta *et al.*, 1999), and leads to the alignment of blockholder interests with value maximizing objectives (Jensen & Meckling, 1976; Almeida & Wolfenzon 2006b; Carvalhal, 2012; Gonz âlez *et al.*, 2012). Thereby, ownership concentration over one or few large blockholders has been predicted as able to increase the shareholder value because it prevents the potential conflicting interests between the person who manages the firm resources and who owns them (Manne, 1965; Hanousek *et al.*, 2007). In this sense, the scholarly research has emphasized that the managerial involvement of large blockholders not only provides specialized knowledge but entails long investment horizon and fosters investment efficiency by limiting the incentives for myopic investments (Stein, 1988, 1989). Therefore, the use of mechanisms that deviate from the proportionality principle has been predicted to improve firm outcomes (Short, 1994; Gugler, 2001). The empirical evidence has supported this view by showing that the presence of DOMs is associated with higher firm operating results (Barontini & Caprio, 2006).

Since the performance implications of disproportional ownership mechanisms are not univocal, it can be hypothesized that:

HP 2: The use of DOMs influences firm performance.

3. The Institutional Setting

Italy is a unique empirical context and an ideal setting to investigate the research questions. Indeed, in Italy a large number of listed companies present a strong ownership concentration due to the massive use of DOMs (Bianco & Casavola, 1999; Institutional Shareholder Services, 2007; Mengoli *et al*., 2009; Linciano *et al.*, 2014). Moreover, the deviation from the proportionality principle produced by these devices is often followed by the presence of powerful controlling blockholders directly and/or indirectly involved in the company activities as they are appointed to the board of directors, hold CEO positions or simply influence managerial decisions and outcomes (Brunello, Graziano, & Parigi, 2003). In these circumstances, while controlling shareholders hamper the classic agency problem, their presence makes more severe the conflict between large blockholders and minorities (Stulz, 1988), fostering the opportunistic allocation of company resources and the extraction of private benefits of control (Bhaumik & Gregoriou, 2010; Faccio *et al.*, 2010; Acero Fraile & Alcalde Fradejas, 2014). It is also worth noting that Italy is characterized by large private benefits of control that potentially exacerbate the blockholders' incentives to behave opportunistically (Zingales, 1994; La Porta *et al*., 1999; Faccio & Lang, 2002). In this regard, a focus on Italian companies is timely because of the recent national reforms aiming to overcome the risks of minority interest expropriation due to the blockholder opportunism, and to limit the incentives to the distorted use of DOMs (Mengoli *et al.*, 2009; Saggese, 2013; Linciano *et al.*, 2014).

4. Research Methodology

4.1 Sampling and Data Collection

As shown in Table 1, the hypotheses are tested on a sample of 77 Italian listed companies observed over the period 2005-2014. The sample selection procedure starts with the largest 130 companies per capitalization at the end of 2005 in order to avoid any potential bias that might be induced by the mandatory adoption of International Financial Reporting Standards (IFRS) from 2005 onward. From this initial sample the companies without ownership, economic, financial and market performance data for the whole observation window (53 firms) are excluded. Thereby, the final sample comprises 770 firm-year observations (77 firms × 10 years) of Italian listed companies of the Borsa Italiana.

Table 1. Sample Composition

Firms	Total
Largest companies per capitalization at the end of 2005	130
(-) Firms with missing data	(53)
Final sample	77

The dataset is constructed by matching the company performance data with the ownership structure information. To this aim, data are collected from multiple sources. Data on the economic and financial performance of companies are hand-collected from their annual reports. Ownership data and general information on each firm are gathered from the following sources: (i) the websites of the Italian financial authority and stock exchange; (ii) the company websites; and (iii) the Amadeus database.

Following the governance literature, sample firms are classified as being ruled or not by DOMs in the presence of at least one of the ensuing devices: (i) pyramidal structures, (ii) cross shareholdings, (iii) multiple voting shares, (iv) non-voting shares, (v) priority shares, (vi) golden shares, (vii) voting-right ceilings, (viii) ownership ceilings, (ix) depositary certificates, (x) voting trusts, and (xi) partnerships limited by shares (Institutional Shareholder Services, 2007; Burkart & Lee, 2008; Zattoni & Cuomo, 2010).

4.2 Variables

The hypotheses are tested by regression analyses. In particular, Hypothesis 1 applies a logistic regression with the use of disproportional ownership mechanisms (DOMs) as dependent variable and the past operating performance (ROA_{t-1}) as independent since the former is binary and follows a binomial distribution. The equation model is the following:

$$DOMs_{i,t} = \beta_0 + \beta_1 ROA_{i,t-1} + \beta_2 BLOCK\_10\%_{i,t} + \beta_3 BLOCK\_20\%_{i,t} + \beta_4 FIRM\_AGE_{i,t} + \beta_5 YEAR_{i,t} + \beta_6 LEV_{i,t} + \beta_7 SIZE_{i,t} + \beta_8 SERVICES_{i,t} + \beta_9 INDUSTRIAL_{i,t} + \varepsilon_{i,t} \quad (1)$$

Differently, Hypothesis 2 is tested through a multiple Ordinary Least Squares (OLS) regression as the response variable (TOBIN_Q) is continuous (McCullagh & Nelder, 1989; Agresti, 2013). The baseline regression model for this hypothesis is the following:

$$TOBIN\_Q_{i,t} = \beta_0 + \beta_1 DOMs_{i,t} + \beta_2 DOM\_NUM_{i,t} + \beta_3 BLOCK\_10\%_{i,t} + \beta_4 BLOCK\_20\%_{i,t} + \beta_5 FIRM\_AGE_{i,t} + \beta_6 YEAR_{i,t} + \beta_7 LEV_{i,t} + \beta_8 SIZE_{i,t} + \beta_9 SERVICES_{i,t} + \beta_{10} INDUSTRIAL_{i,t} + \varepsilon_{i,t} \quad (2)$$

In line with prior literature, firm performance is measured by ROA_{t-1} and Tobin's Q. In particular, the former (ROA_{t-1}) captures the past operating performance of companies. The latter (TOBIN_Q) includes performance information that is not reflected by ROA. Indeed, the Tobin's Q is a stock market-based measure of company performance capturing the expectations on future company growth and profitability potential. In this sense, it is appropriate to assess the role of firm governance on the value creation for shareholders (Gompers *et al.*, 2003; Bhagat & Bolton, 2008; Arosa, Iturralde, & Maseda, 2010).

Differently, DOMs is the proxy for the presence of disproportional ownership mechanisms and is measured as a dummy variable that assumes value 1 in the presence of DOMs and 0 if companies are not ruled by these devices.

To take into consideration both ownership and organizational features of firms, the models are applied controlling for industry, size, leverage, firm age, proportion of shares owned by blockholders and number of DOMs. Figure 1 summarizes the main interactions among hypotheses and variables.

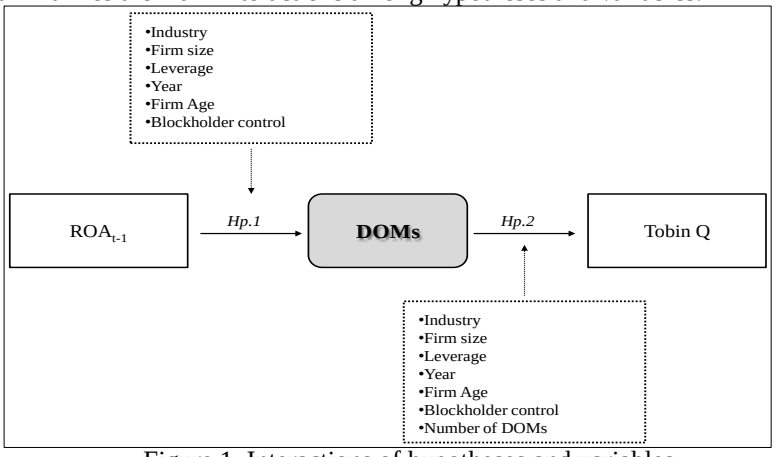

Figure 1. Interactions of hypotheses and variables

Industry (INDUSTRIAL and SERVICES) is measured using dummy variables based on two-Sic digit codes that capture industry fixed effects (Barontini & Caprio, 2006; Thomsen & Pedersen, 2000).

Firm size (SIZE) is measured by the natural logarithm of total assets (Gilson, 1997) and is used as control variable since literature suggests that firm size matters for company outcomes (Banz, 1981; Gedajlovic & Shapiro, 1998) and negatively affects Tobin's Q (Lang & Stulz, 1994).

Leverage (LEV) is the proxy for indebtedness and is used as control variable since scholars highlight that the ownership structure can influence the financial structure of companies and the related performance (Demsetz & Lehn, 1985; Villalonga & Amit, 2009). It is measured as the ratio between total debt and total assets (Coles, Daniel, & Naveen, 2006; Wang, 2006).

However, it is worth noting that performance is also affected by the company age as older firms are more efficient and present a better performance than younger companies (Ang, Cole, & Lin, 2000) as a consequence of the learning curve and survival bias. Therefore, the model also includes the natural logarithm of the number of years since the establishment of the firm as proxy for the company age (FIRM_AGE) (Arosa *et al.*, 2010).

BLOCK_20% and 10% proxy for the direct blockholder's ownership and are dummy variables that assume value 1 in the presence of direct controlling shareholders owning 20% and 10% of shares respectively (La Porta *et al.*, 1998; Faccio & Lang, 2002; Zattoni & Cuomo, 2010).

In order to take into consideration that the companies often use multiple disproportional ownership mechanisms, the model presents the variable DOM_NUM that proxies for the number of devices employed by the firms. Finally, to capture year fixed effects, the models include year dummy variables (YEAR). Table 2 provides the variable definition and illustrates the source of data.

Table 2. Variables and Data Sources

Variable	Definition	Source
INDUSTRIAL	Dummy variable equals 1 if the company operates in the industrial sector; 0 otherwise	Amadeus
SERVICES	Dummy variable equals 1 if the company operates in the service sector; 0 otherwise	Amadeus
SIZE	Natural logarithm of total assets	Annual reports
LEV	Book value of total financial debt/Book value of equity at the end of each year	Annual reports
FIRM_AGE	Natural logarithm of the number of years since the settlement of the firm	Company website/ Annual reports
BLOCK_20%	Dummy variable equals 1 in the presence of blockholders directly owning 20% of company shares; 0 otherwise	Amadeus, Website of Italian financial authority and stock exchange
BLOCK_10%	Dummy variable equals 1 in the presence of blockholders directly owning 10% of company shares; 0 otherwise	Amadeus, Website of Italian financial authority and stock exchange
DOM_NUM	Number of DOMs	Corporate governance reports, Website of national Italian financial authority and stock exchange
YEAR	Observation year	-
ROA_{t-1}	Operating profit/Total assets at the end of t-1	Annual reports
TOBIN_Q	(Book value of total assets – Book value of shareholders' equity + Market value of shareholders' equity)/(Book value of total assets)	Annual reports, Website of national Italian financial authority and stock exchange
DOMs	Dummy variable equals 1 in the presence of DOMs; 0 otherwise	Amadeus, Corporate governance reports, Company websites, Website of national Italian financial authority and stock exchange

5. Results and Discussion

5.1 Descriptive Statistics

Table 3 shows the descriptive statistics. It is worth noting that 65% of sample firms are ruled by disproportional ownership mechanisms. Overall, companies present between 0 and 4 DOMs and the mean number of ownership devices in place are 1,070. This result is combined with a notable blockholder control equal on average to 0,896

(direct blockholder's ownership 20%) and 0,857 (direct blockholder's ownership 10%), thus highlighting that sample companies are characterized by strong ownership concentration. Looking at the descriptive statistics for the variables that measure company performance, the ROA_{t-1} has a mean value of 4,046 and a standard deviation of 9,185, while the mean and standard deviation of TOBIN_Q are equal to 1,255 and 1,700 respectively.

Table 3. Descriptive Statistics

	Min	Max	Mean	Std Deviation
INDUSTRIAL	0	1	,34	,472
SERVICES	0	1	,30	,458
SIZE	11,493	20,768	15,661	1,704
LEV	-57,260	252,421	5,834	11,324
FIRM_AGE	1	542	62,810	88,297
BLOCK_20%	0	1	,896	,306
BLOCK_10%	0	1	,857	,351
ROA_{t-1}	-161,082	33,004	4,046	9,185
TOBIN_Q	,370	44,320	1,255	1,700
DOM_NUM	0	4	1,070	1,000
DOMs	0	1	,650	,478

Table 4 presents the correlation matrix of the variables belonging to the models. The examination of the bivariate correlations reveals nothing of concern. However, it is worth noting that, in line with the predictions of the study, the use of disproportional ownership mechanisms (DOMs) is significantly correlated with ROA_{t-1} (-,145**) and TOBIN_Q (-,143**). The employment of these ownership tools is also correlated with SIZE (,244**) and FIRM_AGE (,098**). These conclusions can be also drawn with regard to the number of disproportional devices as the correlation with the DOM_NUM is positive and significant (,785**). Finally, looking at the proxies for company outcomes, the bivariate correlation highlights that TOBIN_Q is significantly correlated with SIZE (-,091*) and ROA_{t-1} (,075*).

Table 4. Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12
1.INDUSTRIAL	1											
2.SERVICES	-,465**	1										
3.SIZE	-,205**	-,163**	1									
4.LEV	-,187**	-,098**	,266**	1								
5.YEAR	-,014	,006	,053	-,004	1							
6.FIRM_AGE	,078*	-,396**	,337**	,146**	,125**	1						
7.BLOCK_20%	-,029	,223**	-,073*	-,087*	-,003	-,209**	1					
8.BLOCK_10%	,054	,105**	-,040	-,087*	-,004	-,144**	,834**	1				
9.ROA_{t-1}	,292**	-,016	-,041	-,129**	-,233**	-,021	-,002	,085*	1			
10.TOBIN_Q	,043	-,001	-,091*	-,006	-,001	-,020	,015	,010	,075*	1		
11.DOM_NUM	-,102**	,100**	,380**	,012	,005	,029	,022	,027	-,063	-,113**	1	
12.DOMs	-,055	-,054	,244**	,030	,003	,098**	,016	-,068	-,145**	-,143**	,785**	1

Note: * p< ,05; ** p < ,01

5.2 Regression Analyses

Aside the univariate tests that provide preliminary evidence on the predicted relationships, Table 5 and 6 illustrate the results of the multivariate regression analyses by using three different models. In both tables, column 1 and 2 show the baseline models that include the control variables used to test the hypotheses. Finally, column 3 illustrates the full model.

The results of the logistic regression used to test Hypothesis 1 show that the slope coefficient on ROA_{t-1} is significant (p < ,001) and negative (-,072***), thus highlighting that the use of disproportional ownership mechanisms is inversely related to the past operating performance (Table 5). This finding supports the Hypothesis 1 and indicates that, in Italy, the incentives to deviate from the OSOV rule through disproportional ownership mechanisms are affected by past company performance. Indeed, as highlighted by the analysis, the use of DOMs increases as the past operating performance decreases and is limited when the past operating performance grows. This result suggests that, in Italy, DOMs are considered a proper ownership solution to address issues of managerial effectiveness as the past performance is limited (Lim & Kim, 2005; Attig, Guedhami, & Mishra, 2008; Mishra, 2011). This is especially true for larger companies. Indeed, in line with previous research (Banz, 1981; Gedajlovic & Shapiro, 1998; Zattoni & Cuomo, 2010), findings in Table 5 document that the variable SIZE is significantly and positively related to the use of DOMs (,372***). Thereby, the result emphasizes that, in larger Italian companies, disproportional ownership mechanisms play a relevant economic function (Morck *et al.*, 2005; Institutional Shareholder Services, 2007; Attig *et al.*, 2008) as tools able to limit transaction costs and foster risks sharing

(Watanabe, 2002; Gianfrate, 2007; Mishra, 2011). However, as highlighted by the sign of the regression coefficient on ROA_{t-1}, the adoption of law reforms aiming at improving investor protection may have encouraged the employment of alternative and more effective ownership solutions able to foster a better allocation of the resources achieved by the company activity (Saggese, 2013; Alvaro, Ciaravella, D'Eramo, & Linciano, 2014).

Table 5. Results of Logistic Regression to Test Hypothesis 1

HP 1

$DOMs_{i,t} = \beta_0 + \beta_1\ ROA_{i,t-1} + \beta_2\ BLOCK\_10\%_{i,t} + \beta_3\ BLOCK\_20\%_{i,t} + \beta_4\ FIRM\_AGE_{i,t} + \beta_5\ YEAR_{i,t} + \beta_6\ LEV_{i,t} + \beta_7\ SIZE_{i,t} + \beta_8\ SERVICES_{i,t} + \beta_9\ INDUSTRIAL_{i,t} + \varepsilon_{i,t}$

	Model 1		Model 2		Model 3	
Variables	**Coefficient**	**Std Error**	**Coefficient**	**Std Error**	**Coefficient**	**Std Error**
CONSTANT	-4,481***	,883	-4,991***	,927	-5,070***	,953
INDUSTRIAL	-,082	,204	-,036	,207	,465*	,240
SERVICES	-,148	,206	-,289	,223	-,001	,236
SIZE	,337***	,055	,343***	,058	,372***	,060
LEV	-,008	,009	-,010	,011	-,017	,013
YEAR			-,009	,028	-,056*	,030
FIRM_AGE			,051	,085	,067	,087
BLOCK_20%			23,32	20851,3	23,13	19960,4
BLOCK_10%			-23,04	20851,3	-22,91	19960,4
ROA_{t-1}					-,072***	,016
Adjusted R^2	,040		,065		,088	
N. observations	770		770		770	

Note: p < ,10; * p< ,05; ** p < ,01; *** p < ,001.

Looking at the effects of disproportional ownership devices, the results of the OLS regression (Table 6) show that the coefficient on the use of these tools is significant (p < ,001) and negatively related to Tobin's Q (-,641***). These findings support Hypothesis 2 and, in line with previous studies (Claessens *et al.*, 2000; Cronqvist & Nilsson, 2003; Maury & Pajuste, 2005; Villalonga & Amit, 2009; Jansson & Larsson-Olaison, 2010) suggest that disproportional ownership mechanisms have implications for firm performance since they worsen company outcomes. In this sense, the research supports the entrenchment view predicting that the deviation from the proportionality principle due to DOMs hampers the shareholder value maximization and limits company performance as it does not fully transfer the outcomes of managerial decisions to controlling owners (Claessens *et al.*, 2002; Lins, 2003; Gompers *et al.*, 2003; Burkart & Lee, 2008). Thereby, the study emphasizes that disproportional ownership increases agency threats and fosters the extraction of private benefits to the detriment of minority investors (Morck *et al.*, 1988; Zattoni, 1999; Morck & Yeung, 2005; Gianfrate, 2007). The negative effect of DOMs on company outcomes is also associated with a significant and negative relationship between company size and TOBIN_Q. Indeed, Table 6 shows that SIZE is the only control variable that has an impact on firm outcomes and its regression coefficient is negative and significant (-,076*). Thereby, in line with previous research (Demsetz & Lehn, 1985; Morck *et al.*, 1988; Lang & Stulz, 1994; Zattoni & Cuomo, 2010), this result highlights that company outcomes reduce as the firm size increases because the larger size improves the amount of resources that can be opportunistically managed by controlling shareholders to extract private benefits of control.

Table 6. Results of Multiple OLS Regression to Test Hypothesis 2

HP 2

$TOBIN\_Q_{i,t} = \beta_0 + \beta_1\ DOMs_{i,t} + \beta_2\ DOM\_NUM_{i,t} + \beta_3\ BLOCK\_10\%_{i,t} + \beta_4\ BLOCK\_20\%_{i,t} + \beta_5\ FIRM\_AGE_{i,t} + \beta_6\ YEAR_{i,t} + \beta_7\ LEV_{i,t} + \beta_8\ SIZE_{i,t} + \beta_9\ SERVICES_{i,t} + \beta_{10}\ INDUSTRIAL_{i,t} + \varepsilon_{i,t}$

	Model 1		Model 2		Model 3	
Variables	**Coefficient**	**Std Error**	**Coefficient**	**Std Error**	**Coefficient**	**Std Error**
CONSTANT	2,629***	,646	2,538***	,683	2,529***	,730
INDUSTRIAL	,104	,158	,103	,160	,086	,160
SERVICES	,0003	,160	-,004	,173	-,077	,180
SIZE	-,091**	,039	-,093**	,041	-,076*	,045
LEV	,004	,006	,004	,006	,003	,006
YEAR			,002	,022	,001	,022
FIRM_AGE			,013	,065	,024	,065
BLOCK_20%			,130	,377	,436	,391
BLOCK_10%			-,057	,323	-,327	,336
DOM_NUM					,102	,114
DOMs					-,641***	,227
Adjusted R^2	,004		-,001		,014	
N. observations	770		770		770	

Note: p < ,10; * p< ,05; ** p < ,01; *** p < ,001.

6. Conclusions and Directions for Future Research

This paper seeks to provide insights into the relationship between disproportional ownership devices and firm performance. The debate on the topic is still open and the research does not offer univocal interpretations of the phenomenon. Moreover, the majority of studies has focused on emerging markets and East Asian countries (Claessens *et al.*, 2002; Lins, 2003), as well as on North European and US settings (Cronqvist & Nilsson, 2003; Maury & Pajuste, 2005; Villalonga & Amit, 2009; Gompers *et al.*, 2010). However, the scholarly research has devoted limited attention to Italy, despite companies are often ruled by disproportional ownership mechanisms and a wave of reforms have tried to limit the distorted use of the devices under investigation (Mengoli *et al.*, 2009; Saggese, 2013; Linciano *et al.*, 2014). To address these research gaps, the article exploits the unique features of Italian listed companies. Findings show that the use of disproportional ownership devices is inversely affected by past company performance, and highlight that these ownership tools are negatively associated with company outcomes.

The research has implications for theory and practice. Indeed, it suggests that, despite DOMs play a relevant economic role in Italian larger companies, the employment of these devices is not incentivized as the past company operating performance increases. Indeed, the regression analysis shows that the employment of DOMs grows as the past operating performance reduces and decreases as the company results improve. Thereby, while DOMs are still considered proper ownership solutions to overcame managerial issues (Lim & Kim, 2005; Attig *et al.*, 2008; Mishra, 2011), the adoption of law reforms may have discouraged their use, making more effective alternative ownership structures able to foster a better allocation of company resources (Saggese, 2013; Alvaro *et al.*, 2014). Moreover, research findings show that disproportional ownership mechanisms limit company outcomes, suggesting that the deviation from the proportionality principle due to DOMs negatively affects company performance as it does not fully transfer the outcomes of managerial decisions to controlling owners (Claessens *et al.*, 2002; Lins, 2003; Gompers *et al.*, 2003; Burkart & Lee, 2008).

These results come with some potential caveats as they refer to the Italian equity market and the evidence provided might not necessarily generalize to all listed firms. Thereby, future studies are encouraged to focus on different settings in order to provide single and cross-country investigations exploring whether and how company performance can be considered a driver of disproportional ownership mechanisms and may be also affected by the use of these devices. Moreover, research should be aimed at examining under what conditions the past company performance modifies the incentives to adopt DOMs. In addition, it should also investigate how the nature of blockholder and the interaction among controlling shareholders may affect company outcomes when disproportional ownership devices are in place. Finally, a fruitful research avenue should analyze how and to what extent the adoption of law reforms may have affected the use of DOMs and should explore its influence on company performance.

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