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Strategy versus control orientation and firm performance: Evidence from Europe

Michael Troilo, Svetlana Orlova, Miklos Stocker, Michal Zdziarski

ABSTRACT

Objective: The objective of the article is to investigate the relationship between strategy and control in national-level corporate governance (CG) codes impact firm-level financial and strategic performance.

Research Design & Methods: We build on existing CG literature to offer a conceptual matrix showing the evolution of CG codes as they balance strategy and control. We relate the emphasis on strategy versus control at the national level to the firm level for both strategic outcomes as well as more traditional financial measures. Using Compustat data from 12 700 unique firms across 31 countries for the period 1990-2016, we estimate the impact of CG codes on various financial performance measures with multivariate regression and logistics (logit) models.

Findings: We find that there is a positive and significant relationship between higher emphasis on strategy in CG codes and return on assets (ROA). We also find a positive and significant relationship between the former and the probability of paying dividends, investing in research and development (R&D), and spending on capital expenditures (CAPEX).

Implications & Recommendations: Stronger legal institutions associate with a higher emphasis on strategy in CG codes. We suggest that policymakers should refine their CG Codes to focus more on strategy where feasible given our findings. We also recommend strengthening legal institutions, such as rule of law, as this will accelerate the evolution of CG codes from monitoring to strategy.

Contribution & Value Added: Our findings indicate that policymakers should refine their CG codes to emphasize strategy where feasible. In addition, strengthening legal institutions would accelerate the evolution of CG codes.

Article type: research article

Keywords: Corporate Governance; Corporate Governance Codes; Strategy-Control Ratio; Firm performance; Institutions

JEL codes: G30, M16, F38

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INTRODUCTION

Corporate governance (hereafter CG), the processes and policies that direct companies, is indispensable for increasing the value of the firm (Gompers *et al.*, 2003). This direction spans time; in the short term CG manifests itself in the monitoring of daily operations and in the long term it concerns strategy. While CG embraces both control and strategy, there are necessary tradeoffs. Since resources are finite, including the attention and effort of the board of directors and the employees at all levels, often there will be more emphasis on either control or strategy in a given company at a given point in time.

In this paper, we examine the relationship between strategy and control in CG. Using a dataset of nearly 17 000 firms across 31 European and Central Asian countries over 26 years, we analyze the prevalence of strategy versus control in CG codes on firm-level outcomes. A higher incidence of strategy corresponds with a higher likelihood of paying dividends, spending on capital expenditures, and in investing in research and development (R&D). There is also a positive relationship

between strategy and ROA. At the country level, stronger legal institutions associate with a higher degree of strategy in CG codes.

Our work builds upon an extant literature spanning several decades, but in particular we are extending the recent studies of Almaskati *et al.* (2020), Haxhi and Aguilera (2017), Martins *et al.* (2017), and Schiehl and Martins (2016), at both the national institutional and firm levels of analysis. At the national level, we offer a conceptual matrix of strategy versus control as well as data of where countries stand on this matrix. While Haxhi and Aguilera (2017) and Schiehl and Martins (2016) are the inspiration, this matrix represents a contribution. At the firm level, we are contributing findings about the impact of strategy in CG codes on important metrics of firm performance, building on the work of Renders *et al.* (2010). Although there are a multitude of studies concerning CG and firm outcomes, there are relatively few that examine the issue of strategy versus control at the national level and relate it to firms across countries and across time in the manner we have, particularly for metrics of strategic performance. The scope of this analysis in terms of countries and time is another addition to the literature. According to Cuomo, Mallin, and Zattoni (2016), comparisons of the content of national CG codes at the international level are relatively rare, particularly for large panel data sets such as ours.

We begin with a literature review, in which we not only canvas the vast prior work on CG but also describe our contributions and how they connect to earlier studies via our hypothesis development. We then describe our data and methods and offer our results. A discussion of these findings, as well as limitations of the study, conclude the paper.

LITERATURE REVIEW

Corporate Governance and Institutional Context

The importance of corporate governance cannot be overemphasized. Extant literature recognizes that “good governance” facilitates value creation (Gompers *et al.*, 2003; Anokhin *et al.*, 2016), and correlates positively with higher financial performance as measured by firm value, profitability, and sales growth (Bebchuk *et al.*, 2009; Renders *et al.*, 2010; Fuenzalida *et al.*, 2013; Cumming *et al.*, 2017). Corporate governance is a function of strong property rights and rule of law; Bhagat and Hubbard (2022) posit that strong rule of law reassure shareholders that their contractual rights vis-à-vis debtholders and other stakeholders will be upheld. Corporate governance embraces both the strategic vision for the long-term viability of the firm as well as the daily accountability necessary to maintain the firm as a going concern. This mirrors the exchange of the two primary theories in the CG literature. The necessity of control and monitoring springs from agency theory (Jensen & Meckling, 1976); boards attempt to align the motivations and behaviours of the agents (management) with those of the principals (owners). In this sense corporate governance is about all tasks and activities that are intended to supervise and steer the behaviour of top management (Fuenzalida *et al.*, 2013; De Witt, 2017).

On the other hand, resource dependency theory advocates the board as strategic advisors to the firm (Pfeffer & Salancik, 1978), guiding the company forward as it copes with emerging competition and dynamic market conditions. Monks and Minow (1995) express the crux of this idea as “the relationship among various participants in determining the direction and performance of corporations” (Monks & Minow, 1995, p. 1). Filatotchev and Wright (2011) capture the strategic function of CG, noting that, “corporate governance is at the heart of the strategic decision-making process in the MNE, and, by affecting risk preferences and interest congruence among various stakeholders, various constellations of governance factors such as ownership structure, board characteristics, and incentive systems may have profound effects on the MNE’s global strategy, operations, and performance” (Filatotchev & Wright, 2011, p. 484). Beyond these considerations, Peng (2014) broadens the main factors of corporate governance to the legal system and regulation, the role of stakeholders, the financial institutes and the role of private, public and state partnerships.

Boards of directors have two basic tasks to perform: to control and monitor management on behalf of the firm’s shareholders, and to provide advice and counsel to the CEO and other top managers in strategy (Forbes & Milliken, 1999). Regarding strategy versus control, Cumming *et al.* (2017) remark

that, as the role of management is essentially to identify and implement an efficient strategy, the “organization control processes are equally important in terms of creating value in the context of globalization. These processes facilitate accountability, monitoring, and trust within and outside of the firm, and should ultimately lead to improvements in the firm’s performance and long-term survival” (Cumming *et al.*, 2017, p. 123). Bezemer *et al.* (2022) emphasize that the strategy role of corporate boards is still broadening and evolving, with a current focus on corporate social responsibility (CSR) issues.

It is apparent from these quotes, and from the body of corporate governance literature as a whole, that strategy and control complement one another in the operations of the firm. This idea of complementarity is the crux of Hillman and Dalziel’s (2003) board capital construct, which attempts to integrate agency theory and resource dependency theory. On the other hand, the board of directors, management, and other employees of the firm have scarce resources, including time and energy, for running the company. Their governance may then be more directed to long-term strategy or short-term control as they choose how to allocate their time. A complex set of interactive factors at the country, industry, and firm levels will influence which orientation, strategic or control, seems paramount for corporate governance.

CG codes exist at the country level as part of the national institutional framework; this relationship is still relatively under-researched (Aguilera *et al.*, 2016; Schiehl & Martins, 2016; Bhagat & Hubbard, 2022). For nations, institutions are metasystems that govern human behaviour, e.g. the “rules of the game” in North’s (1990, p. 3) oft-repeated description. These institutions include facets of the legal system such as property rights and rule of law that influence CG codes. In an environment where property rights and rule of law are weak, e.g. countries transitioning from planned to market economies (cf. Pisarides *et al.*, 2003), it is understandable why the focus of corporate governance would be on monitoring versus strategy. It is necessary to prevent tunnelling of assets in the present before considering the future. Conversely, where related institutions are robust, fraud on the part of management is likely less of a concern and boards of directors can pay more attention to the long-term vision of the company.

As firm-level governance mechanisms are embedded to the institutional environment, their functioning as well as their organizational impact may be different, even in very similar countries (Schiehl *et al.*, 2014; Filatotchev *et al.*, 2013). Although multinational enterprises can export (or import) their corporate governance practices through acquisitions, restructurings, or cross-listings on a foreign exchange, the mobility of CG practices are limited by the cross-national institutional differences (Cumming *et al.*, 2017; Boivie *et al.*, 2021).

Returning to the concept of interaction, we highlight some relevant studies concerning the impact of national institutions on corporate governance. Bell *et al.* (2014) describes corporate governance as “part of a broader system of interrelated elements, wherein firm-level governance interacts with other organizational contingencies and country-level institutions in determining organizational outcomes” (Bell *et al.*, 2014, p. 316). Chu *et al.* (2016) find that common-law regimes correspond to better CG practices, which in turn leads to more R&D spending. Almaskati *et al.* (2020) find the expected positive relationship between rule of law and their constructed CG index. Hubbard and Bhagat (2022) emphasize that property rights and rule of law have a positive association with CG, since these two institutions are the foundation of limited liability and contractual obligations necessary for equity investment.

Interrelated national level institutions affect national corporate governance patterns. These patterns lead to the evolution of CG practices, which can be observed by the development of CG codes. CG codes are tangible outcomes of this evolutionary process, and they serve as appropriate level of analysis for debate on comparison of different national CG practices. With empirical analysis of CG codes adopted in different countries, cross-national comparisons of CG systems can be achieved. Good corporate governance codes intensify transparency and minimize non-compliance and serve as best practices which became an important part of CG systems and mechanisms. CG codes vary, however among countries in their key attributes as well as in their enforcement, the entities issuing them and the degree of institutionalization within the overall regulatory system (Aguilera & Cuervo-Cazurra, 2004; Haxhi & van Ees, 2010; Hermes *et al.*, 2016; Haxhi & Aguilera, 2017; Almaskati *et al.*, 2020; Mertzanis *et al.*, 2023).

These notions of corporate governance embedded in a set of national-level institutions (cf. La Porta *et al.*, 1999; Aguilera & Jackson, 2003; Doidge *et al.*, 2007; Aguilera *et al.*, 2016; McCahery *et al.*, 2016; Schiehl & Martins, 2016; Martins *et al.*, 2017; Bhagat & Hubbard, 2022) are fundamental to our analysis

of governance orientation and we use CG codes and their focus of strategy or control as key variables in the empirical analysis.

In terms of characterizing CG, we offer a familiar 2 x 2 matrix along the dimensions of strategy and control (Figure 1.):

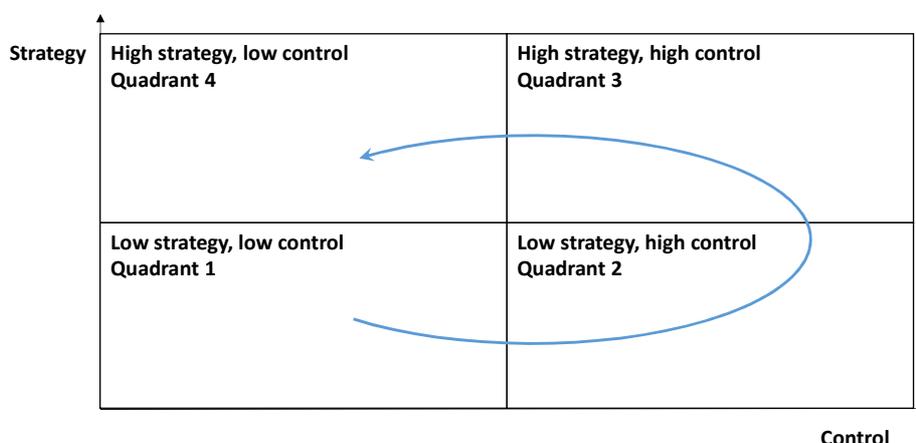


Figure 1. Characteristics of Corporate Governance along the dimensions of Strategy and Control

Source: own elaboration.

The emphasis on strategy versus control is relative, as it is expected that CG codes will in general have much more to say about the latter than the former. Considering the national institutional context, we picture the lower left quadrant as an environment where CG is ineffective because the supporting institutions, e.g. property rights, rule of law, stability of the political regime, etc. are weak. On the other hand, the lower right quadrant exemplifies a milieu where CG functions in terms of accountability, but is not sufficiently developed to aid corporate strategy. The upper right quadrant is more evolved, providing both monitoring and strategic decision-making. This leaves the upper left quadrant: given what we know about the evolution of institutions, it is difficult to imagine CG that emphasizes strategy but is deficient in control. It could be that over time; however, that countries are lower in the control emphasis not due to deficiency but the opposite; proper monitoring is taken for granted because solid control is endemic in CG and in supporting institutions. The arrows represent the progression of CG codes in conjunction with the development of national institutional frameworks.

It is to be expected that stronger institutions will enable the focus of corporate governance to pivot more towards strategy than control. For example, Doidge *et al.* (2007) and Almaskati *et al.* (2020) both find a positive relationship between rule of law and corporate governance. We would not only expect this same result in our analysis, but also that related institutions would have a similar relationship. Regulations and regulatory quality are clearly related to rule of law (cf. Djankov *et al.*, 2002; Bowen & DeClercq, 2008; Levie & Autio, 2011; Troilo, 2011; Bhagat & Hubbard, 2022), yet are distinct from it. We include measures of corporate governance from World Bank Corporate Governance database as control variables in our full specifications.

Corporate Governance and Firm Performance

As noted by Agrawal and Knoeber (2013), the literature on CG and firm performance is sizable and spans several decades. Building on the foundation of agency theory (Jensen & Meckling, 1976), scholars first examined CG in the context of owner concentration, inside ownership, and firm performance (Demsetz, 1983; Morck *et al.*, 1988; McConnell & Servaes, 1990). This stream of literature continues today, with more recent offerings such as Bhagat and Bolton (2008) and Gompers *et al.* (2010) tackling issues such as the endogeneity inherent in the relationship between inside ownership and firm performance. The impact of cultural context, specifically the difference between the insider approach to CG and the market-based approach, has also emerged (cf. Pillai & al-Malkawi, 2018; Ciftci *et al.*, 2019, Almaskati *et al.*, 2020). Lastly, the issue of capital structure as a moderating influence between CG and firm performance is a recent topic of study (Mansour *et al.*, 2022).

The study of ownership, CG, and firm performance led naturally in the literature to the role of large stockholders, boards of directors, and monitoring effectiveness. Yermack (1996) is a seminal example; he finds that board size has an inverse effect on Tobin's Q. Duchin *et al.* (2010) investigate the impact of outside directors; they find that more outsiders on the board correlate with better firm performance. Tulung and Ramdani (2018) also find a positive effect between board size and firm performance as well as board independence and firm performance. Obeitoh *et al.* (2023) study the boards of 40 listed Nigerian firms and discover that board expertise, in conjunction with board size, has a positive impact on firm performance, as does the number of female directors.

Shareholder rights, particularly minority shareholders, also is a focus of CG scholarship. A path-breaking effort in this regard is the work of Gompers *et al.* (2003), who constructed a Governance Index comprised of 24 indicators to measure the degree of shareholder rights. The use of this index begat a resurgence of interest in overall CG and firm performance (cf. Bhagat & Bolton, 2019), as well as more specialized topics such as debt structure (Bharath & Hertz, 2019; Mansour *et al.*, 2022), CEO compensation (Agrawal & Nasser, 2019), and board decision-making and firm value (Vafeas & Vlittis, 2019).

Whereas the vast majority of the research concerning CG and firm performance has focused on the internal workings of the firm, e.g. board composition, our work highlights the relationship between the external emphasis on strategy vs. control at the national level (CG codes) and firm outcomes. Moreover, our research considers firm performance on both strategic dimensions as well as traditional financial results. We examine the influence of CG codes orientation (strategy vs. control) on firms' ROA, research and development expenditures, dividend payments and capital expenditure. Our intuition is that as CG codes evolve from a monitoring function (control) to a strategic function (strategy), firm-level outcomes will improve on both the strategic and financial dimensions.

Our work builds directly on, *inter alia*, Bhagat and Hubbard (2022), Martins *et al.* (2017) Haxhi and Aguilera (2017), and Schiehl and Martins (2016). While these scholars delineated the complex relationship of CG quality within a configuration of national institutions, they left for future work the impact of various kinds of CG codes on firm-level outcomes (Although Martins *et al.*, 2017 did estimate the impact of CG quality on debt maturity and ownership concentration, we are focusing on CG codes and different firm outcomes such as ROA). As described, we are examining the extent to which these codes emphasize strategy, and how that will correlate with firm performance.

In particular, we cite the work of Renders *et al.* (2010) and Mertzanis *et al.* (2023), who established a positive relationship between a higher level of corporate governance at the country level and firm performance, in expectation that more emphasis on strategy in CG codes will correlate with better company outcomes. Renders *et al.* (2010) found this positive relationship explicitly for ROA, which is one of our proxies as well. Mertzanis *et al.* (2023) studied the relationship among institutions, CG and corporate liquidity in the MENA region. They found that the firm level of cash holdings was sensitive to the level of regulation, contract enforcement, attitudes towards risk, and degree of economic development among other factors.

We are extending their work in several ways. First, we are testing different metrics that capture strategic dimensions such as R&D spending as well as financial outcomes such as ROA and dividend payouts. Second, we are using a broader range of 38 countries (mainly European) compared to their 14. Third, our panel is longer at 16 years (2000-2016) than their 5-year span from 1999-2003.

Based upon the above, we propose the following hypothesis for testing:

H1: A higher SC ratio associates with a higher ROA.

Concerning the relationship between CG and dividend payouts, most research treats it as an ancillary effect of another component, such as executive remuneration (Geiler & Renneboog, 2016) or risk disclosure and market liquidity (Elshandidy & Neri, 2015). Gugler (2003), tested dividend payouts directly as a function of CG, but he was researching the aspect of ownership and control. For a panel of Austrian firms between 1991-1999, he found that state-controlled firms "smooth" dividend payouts, have large target payout ratios, and are reluctant to cut dividends relative to family-controlled firms (Gugler, 2003, p. 1318). In recent scholarship, Rajput and Jhunjhunwala (2019) discover a positive relationship between the quality of corporate governance and the likelihood of paying dividends, due to

the fact that in strong CG environments, investors are more able to compel managers to share excess profits. We also analyse the probability of dividend payout and expect a similar result, as a higher emphasis on strategy in a CG code indicates higher CG quality. We test the following:

H2: A higher SC ratio associates with a higher likelihood of paying dividends.

Prior studies of the impact of CG on R&D spending show mixed results (Honore *et al.*, 2015). Much depends on the facet of CG researchers are investigating, and what countries are included. For example, Pindado *et al.* (2015) find a positive relationship between investor protection (nested in various legal and financial institutions) and the market valuation of firms' R&D in a sample of U.S., European, and Japanese companies. Seitz and Waltzinger (2017) discover a positive relationship between contract enforcement and R&D investment over 22 OECD countries for the decade 1995-2005. On the other hand, Rodrigues *et al.* (2019) find the opposite result of Pindado *et al.* (2015) for firms in Europe between 2002-2013; companies in common-law countries such as Great Britain and Ireland had lower R&D than those in continental Europe. Seifert and Gonenc (2012) find that stronger creditor rights correlates with reduced R&D intensity for 21 000 firms over 41 countries for 1980-2006.

We are examining the relationship between the strength of CG for investors as opposed to creditors and its impact on R&D. We are not evaluating the type of legal system, i.e. common-law versus civil law; rather, the emphasis on strategy in the CG code and its effect on R&D. Firms spend on R&D in the hopes of gaining long-term strategic advantage against rivals. Based on Render's (2010) idea that more emphasis on strategy leads to better firm performance, we hypothesize the following:

H3: A higher SC ratio associates with a higher likelihood of spending on R&D.

Prior research on the relationship between CG and capital expenditures (CAPEX) is similar in nature to CG and dividend payouts; CAPEX is not the main focus. For example, Inci *et al.* (2009) examine the impact of earnings on capital investment, where CG figures as a key institution/outgrowth of level of financial development and type of legal system (common versus civil law). Gugler (2003) finds a negative relationship between dividend payouts and capital investment; the ownership and control of the firm (state versus family) significantly impacts the former.

Retracing our steps to Renders *et al.* (2010), we anticipate that a higher emphasis on strategy associates with a higher probability of CAPEX:

H4: A higher SC ratio associates with a higher capital expenditures (CAPEX).

RESEARCH METHODOLOGY

Data

The initial sample consists of firms in the Compustat Global database for the period 1990-2016, which is the source of data for firm-level financial variables. We exclude firms in the financial sector (SIC codes 6000-6999). Further, we limit our sample to European and Central Asian countries for which accounting/financial data is available. Our final sample has data for 31 countries: 29 from Europe plus Turkey and Kazakhstan. At the country level, we collected macroeconomic and corporate governance data from the World Bank. Financial and economic development variables are from the World Bank's World Development Indicators. Corporate Governance variables are from the World Bank's Worldwide Governance Indicators database. Due to the fact that majority of Corporate Governance codes were adopted after 2000, our analysis mainly uses data from 2000-2016 timeframe. Our sample is unbalanced panel data, due to data availability, as not all firms have data available for every year, as new firms are added to the Compustat database, while some firms cease to exist due to discontinuation of their business or mergers. We use the two-digit SIC industry code to distinguish among different industries.

Table 1 shows the raw data behind the construction of the key variable in our analysis, "SC (Strategy/Control) Ratio". We examined CG codes for each country for key words related to "Strategy" and "Control" and counted them. The words "strategy", "strategic", and "leadership" were summed for StrategyFocus, while the words "control", "audit", and "monitor" were added for ControlFocus. Dividing StrategyFocus by ControlFocus yields the SC Ratio. A number of countries revised their CG codes

over time, so new ratios appear in the panel for these countries from the year the revisions occurred. The ratios are multiplied by 100 for ease of reading and use. This semantic analysis of CG codes has its basis in prior literature, e.g. Cicon *et al.* (2012).

Table 1. Corporate Governance Codes by Country

Country	Strategy	Control	Ratio	Firm Obs.	Year	Quadrant
	Focus	Focus				
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Austria	5	100	5	6.022	2009	2 -LS, HC
Austria	5	119	4.2	9.898	2012	2 -LS, HC
Belgium	18	26	69.23	643	2005	4 -HS, LC
Belgium	13	162	8.02	1.127	2009	3 -HS, HC
Bulgaria	5	28	17.86	315	2007	1 -LS, LC
Bulgaria	4	23	17.39	358	2012	1 -LS, LC
Croatia	10	140	7.14	533	2010	3 -HS, HC
Czech Republic	22	168	13.1	32	2014	3 -HS, HC
Denmark	8	65	12.31	808	2008	4 -HS, LC
Denmark	20	47	42.55	820	2012	4 -HS, LC
Estonia	12	99	12.12	196	2005	3 -HS, HC
Finland	1	161	0.62	1.026	2008	2 -LS, HC
Finland	5	182	2.75	295	2015	2 -LS, HC
France	11	59	18.64	3.753	2008	4 -HS, LC
France	13	77	16.88	2.484	2013	4 -HS, LC
Germany	5	33	15.15	4.984	2009	1 -LS, LC
Germany	5	38	13.16	1.065	2015	1 -LS, LC
Greece	0	22	0	2.782	2001	1 -LS, LC
Greece	16	129	12.4	704	2013	3 -HS, HC
Hungary	16	224	7.14	116	2008	3 -HS, HC
Hungary	16	238	6.72	116	2012	3 -HS, HC
Italy	19	155	12.26	2.889	2006	3 -HS, HC
Italy	16	138	11.59	540	2015	3 -HS, HC
Kazakhstan	5	40	12.5	363	2005	1 -LS, LC
Latvia	8	48	16.67	159	2005	1 -LS, LC
Latvia	9	60	15	194	2010	1 -LS, LC
Lithuania	6	37	16.22	274	2003	1 -LS, LC
Lithuania	6	72	8.33	245	2010	1 -LS, LC
Luxembourg	7	103	6.8	298	2009	2 -LS, HC
Luxembourg	7	115	6.09	104	2011	2 -LS, HC
Norway	7	167	4.19	1.283	2009	2 -LS, HC
Norway	7	133	5.26	649	2014	2 -LS, HC
Poland	0	4	0	5.534	2007	1 -LS, LC
Poland	6	24	25	598	2016	1 -LS, LC
Portugal	5	29	17.24	340	2007	1 -LS, LC
Portugal	4	23	17.39	192	2013	1 -LS, LC
Romania	3	53	5.66	295	2009	1 -LS, LC
Romania	2	47	4.26	784	2011	1 -LS, LC
Russia	41	320	12.81	2.569	2004	3 -HS, HC
Russia	17	285	5.96	660	2014	3 -HS, HC
Serbia	4	54	7.41	96	2008	1 -LS, LC
Slovenia	10	138	7.25	35	2008	3 -HS, HC
Slovenia	11	58	18.97	233	2009	4 -HS, LC
Spain	13	149	8.72	1.547	2006	3 -HS, HC
Spain	12	76	15.79	316	2015	3 -HS, HC
Sweden	1	58	1.72	5.310	2008	1 -LS, LC

dependent variables are constructed based on data from the Compustat Global database. The dataset provides information about firms' common/ordinary dividends (*dvc*), total assets (*at*), capital expenditures (*capx*), earnings before interest, taxes, depreciation, and amortization (*ebitda*), research and development expenses (*xrd*) and sales (*sale*). Our dependent (as well as firm-level independent) variables are scaled by size (total assets or sales) to ensure proper comparison across all firms.

Our main independent variable as described above is *SC Ratio*. The value of the index ranges from 0.00 to 69.23, where higher values indicate more emphasis on strategy relative to control.

We use several firm-level characteristics as controls. These variables include size, leverage, market-to-book, cash, tangibility and cash flow. *Size* is the natural logarithm of the book value of total assets. *Leverage* is short-term debt plus long-term debt, divided by total assets. *Market-to-book* ratio is the market value of assets, defined as total assets minus book equity plus market value of equity, divided by total assets. *Cash* is cash and short-term investments scaled by total assets. *Cash Flow* is measured as earnings less interest and taxes, divided by total assets. *Tangibility* is property, plant, equipment scaled by total assets. All firm-level dependent variables are constructed based on data from the Compustat Global database.

At the country level we use *Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption* and *Voice and Accountability* from the World Bank's Worldwide Governance Indicators database to measure the overall level of countries' institutional framework. As mentioned, incorporating these institutional characteristics is based on the idea that corporate governance codes operate in a web of national-level institutions (Schiehll & Martins, 2016; Haxhi & Aguilera, 2017; Martins *et al.*, 2017). We further control for country economic and financial markets development by incorporating the following variables in our regression analysis: *Stocks Traded* (total value), *Market Capitalization*, and *GDP per capita*. All of the economic and financial variables are from World Bank's World Development Indicators.

Table 2 summarizes statistics by country, while Table 3 contains the descriptive statistics for the main variables. At the country level, most firms are operating in stable environments as indicated by the relatively high median values for institutional factors, e.g. 0.924 for rule of law and 0.972 for government effectiveness. The median GDP per capita is 19 369 USD. The firms in our sample have a median return on assets (ROA) of 8.1%. Table 4 shows correlation coefficients for our dependent and independent variables. While we see high degree of correlation among some controls (for example, country level corporate governance variables), the correlation between these variables and our main independent variable *SCRatio* does not exceed 0.158.

Methods

For our main analysis we use the following model:

$$\text{Firm performance (or policy) variable}_{i,t+1} = \beta \text{SCRatio}_{i,t} + \gamma X_{i,t} + \delta Y_{j,t} + \eta Z_{j,t} + \varepsilon \quad (1)$$

Where *Firm performance (or policy) variable* is ROA, *Div_D*, *R&D_D* or *CapExHigh*. *SC Ratio* is the ratio of strategy to control previously described; β is a coefficient; $X_{i,t}$ is a vector of observable firm-specific factors, and γ is a vector of coefficients; $Y_{j,t}$ is a vector of observable corporate governance country-specific factors, and δ is a vector of coefficients; $Z_{j,t}$ is a vector of observable economic and financial country-specific factors that, and η is a vector of coefficients. We employ panel ordinary least squares (OLS) with industry fixed effects, and year fixed effects.

For the tests when the dependent variable is binary (e.g., *Div_D*) we use logistic regression (logit).

Table 2. Summary statistics by countries

Country Name (1)	Number of obs. (2)	Number of firms (3)	Strategy vs Control Ratio (4)	Dividends (5)	R&D (6)	ROA (7)	CapEx (9)	Size (10)	Leverage (11)	Market-to-Book (12)	Cash (13)	Cash Flow (14)	Tangibility (15)	GDP per Capita (16)	Stocks Traded (total value) (17)	Market Capitalization (18)	Control of Corruption (19)	Government Effectiveness (20)	Political Stability (21)	Regulatory Quality (22)	Rule of Law (23)	Voice and Accountability (24)
Austria	26,492	2,407	0.0420	0.033	0.032	-0.052	0.034	2.930	0.000	11.220	0.144	-0.013	2.079	43132.180	77.504	105.361	1.974	1.699	0.927	1.692	1.754	1.436
Belgium	1,903	170	0.0802	0.015	0.029	0.101	0.030	5.755	0.101	1.137	0.082	0.074	0.078	36213.760	22.474	66.807	1.381	1.737	0.845	1.248	1.311	1.388
Bulgaria	383	57	0.1786	0.018	0.006	0.091	0.033	4.825	0.012	4.702	0.039	0.068	2.619	6375.295	2.588	19.110	-0.234	0.110	0.326	0.624	-0.127	0.524
Croatia	821	78	0.0714	0.015	0.037	0.061	0.036	6.897	0.030	0.906	0.037	0.042	0.150	12080.720	2.308	43.659	0.009	0.569	0.578	0.494	0.093	0.472
Czech Republic	362	39	0.1310	0.015	0.002	0.106	0.056	8.964	0.330	0.559	0.046	0.084	0.005	12676.370	10.657	18.921	0.328	0.891	0.945	1.079	0.841	0.964
Denmark	2,509	211	0.1231	0.013	0.053	0.098	0.036	6.489	0.156	0.929	0.075	0.069	0.051	47582.540	31.015	53.945	2.426	2.093	1.097	1.775	1.897	1.583
Estonia	221	18	0.1212	0.028	0.011	0.148	0.062	5.879	0.160	0.997	0.070	0.122	0.134	10985.260	6.019	n/a	0.870	0.972	0.657	1.366	0.924	1.057
Finland	2,249	185	0.0062	0.027	0.024	0.110	0.040	5.298	0.091	1.393	0.084	0.079	0.164	38583.820	89.732	135.269	2.372	2.134	1.425	1.808	1.954	1.565
France	12,438	1,126	0.1864	0.013	0.032	0.091	0.028	5.071	0.053	1.766	0.106	0.066	0.157	34074.340	57.883	73.263	1.357	1.578	0.552	1.155	1.428	1.210
Germany	12,780	1,103	0.1515	0.014	0.037	0.092	0.030	4.773	0.014	2.233	0.097	0.064	0.250	35713.370	55.142	46.013	1.859	1.623	0.925	1.511	1.626	1.358
Greece	2,782	257	0.0000	0.014	0.003	0.068	0.016	5.161	0.031	1.890	0.048	0.039	0.140	22602.360	25.826	44.294	0.337	0.648	0.467	0.814	0.776	0.956
Hungary	382	40	0.0714	0.025	0.047	0.124	0.058	10.402	0.573	0.451	0.069	0.099	0.002	9809.266	17.294	22.470	0.578	0.837	0.817	1.066	0.829	1.038
Italy	4,520	414	0.1226	0.012	0.013	0.081	0.026	6.111	0.163	1.038	0.072	0.051	0.030	30959.050	51.813	37.449	0.306	0.454	0.500	0.826	0.420	1.023
Kazakhstan	226	21	0.1250	0.003	0.001	0.104	0.072	9.760	0.748	0.458	0.044	0.071	0.002	8240.641	2.004	20.008	-0.906	-0.445	0.176	-0.340	-0.660	-1.124
Latvia	385	31	0.1667	0.034	0.008	0.086	0.038	2.299	0.001	21.361	0.036	0.072	3.375	10909.980	1.638	n/a	0.188	0.647	0.494	0.998	0.750	0.761
Lithuania	425	42	0.1622	0.028	0.002	0.103	0.048	5.460	0.046	1.466	0.023	0.085	0.375	11353.390	2.176	n/a	0.224	0.746	0.725	1.066	0.679	0.882
Luxembourg	513	49	0.0680	0.019	0.008	0.092	0.036	6.785	0.246	0.948	0.087	0.065	0.074	88174.790	1.432	151.277	2.063	1.738	1.398	1.710	1.801	1.534
Netherlands	2,973	268	0.1923	0.021	0.026	0.118	0.039	6.187	0.125	1.109	0.068	0.088	0.089	39097.000	91.731	100.550	2.179	2.004	1.132	1.799	1.745	1.604
Norway	3,692	390	0.0419	0.016	0.025	0.074	0.039	6.545	0.202	0.923	0.110	0.049	0.060	70311.660	40.588	50.744	2.174	1.905	1.304	1.449	1.919	1.585
Poland	5,705	615	0.0000	0.023	0.002	0.084	0.033	4.592	0.004	3.219	0.057	0.062	0.968	11081.620	11.659	30.994	0.413	0.622	0.859	0.928	0.658	1.015
Portugal	889	85	0.1379	0.011	0.001	0.087	0.030	7.004	0.499	0.945	0.037	0.058	0.014	17182.480	24.613	38.552	1.117	1.096	1.021	1.101	1.167	1.383
Romania	1.362	137	0.0426	0.042	0.001	0.061	0.000	5.016	0.000	2.087	0.013	0.038	0.135	7609.895	1.017	11.062	-0.202	-0.273	0.164	0.580	0.029	0.414
Russian Federati	3,121	293	0.0531	0.009	0.002	0.111	0.048	9.322	0.536	0.650	0.047	0.074	0.010	9730.874	32.637	40.751	-0.952	-0.397	-0.941	-0.359	-0.814	-0.896
Serbia	65	9	0.0741	0.034	0.000	0.106	0.016	9.979	0.551	0.487	0.097	0.081	0.005	5687.032	2.193	31.307	-0.284	-0.096	-0.299	-0.064	-0.378	0.252
Slovenia	404	31	0.1897	0.012	0.026	0.078	0.048	7.337	0.397	0.721	0.046	0.055	0.009	19368.560	2.429	22.519	0.892	0.990	1.027	0.801	0.982	1.056
Spain	2.080	211	0.0872	0.016	0.003	0.095	0.023	7.630	0.501	0.810	0.059	0.068	0.009	23373.370	103.525	104.339	1.120	1.489	0.038	1.218	1.176	1.246
Sweden	5,756	724	0.0172	0.022	0.038	0.070	0.020	5.595	0.018	1.342	0.106	0.050	0.118	44358.690	86.679	100.892	2.248	1.972	1.258	1.617	1.879	1.564
Switzerland	3,001	286	0.0943	0.014	0.042	0.106	0.036	6.024	0.123	1.044	0.114	0.082	0.102	53231.150	151.038	214.982	2.128	2.023	1.280	1.655	1.906	1.454
Turkey	3,599	328	0.0706	0.029	0.003	0.077	0.021	5,685	0.014	1.370	0.056	0.041	0.129	8671.531	43.698	29.884	0.030	0.289	-0.954	0.328	0.079	-0.161
Ukraine	188	24	0.1759	0.036	0.001	0.120	0.023	8.162	0.030	0.659	0.020	0.083	0.033	2808.929	0.793	22.161	-0.980	-0.584	-0.102	-0.580	-0.790	-0.095
United Kingdom	29,819	3,064	0.2547	0.024	0.034	0.084	0.028	3.729	0.002	5.062	0.097	0.064	0.867	37117.530	87.643	127.569	1.895	1.747	0.487	1.776	1.664	1.312
Total/median	132,045	12,713	0.0943	0.018	0.011	0.092	0.034	6.024	0.101	1.044	0.068	0.068	0.102	19368.560	24.613	43.977	0.870	0.972	0.725	1.079	0.924	1.056

This Table includes summary statistics for all countries in the sample. The initial sample consists of European firms in the Compustat Global database for the period 2000-2016. Column 1 identifies the country, column 2 reports the number of observations and column 3 reports the number firms in the sample. Columns 4 reports Strategy vs Control Ratio. Column 5-15 reports median values of firm characteristics. Columns 16-24 report median values of economic and institutional variables. See data and methodology section for variable definitions.

Source: own elaboration.

Table 3. Summary Statistics for main dependent and independent variables – full sample

Variable (1)	Mean (2)	Sd (3)	p25 (4)	p50 (5)	p75 (6)
Strategy Control Ratio	0.097	0.096	0.042	0.053	0.152
ROA	-0.138	9.290	-0.014	0.081	0.141
Capital Expenditure	0.075	3.501	0.006	0.028	0.068
Dividend	0.103	12.188	0.009	0.021	0.038
R&D	0.107	1.585	0.006	0.025	0.084
Size	5.076	2.978	3.081	4.828	6.799
Control of Corruption	1.540	0.799	1.350	1.819	2.078
Government Effectiveness	1.479	0.597	1.483	1.670	1.849
Political Stability	0.715	0.541	0.472	0.868	1.017
Regulatory Quality	1.406	0.510	1.160	1.593	1.775
Rule of Law	1.420	0.621	1.404	1.664	1.758
Voice and Accountability	1.229	0.481	1.198	1.343	1.455

Note: This Table presents the summary statistics information for main dependent and independent variable. The initial sample consists of European firms in the Compustat Global database for the period 2000-2016. See data and methodology section for variable definitions.

Source: own study.

RESULTS AND DISCUSSION

Table 5 displays the results for the OLS estimations of *ROA*. For this table and subsequent tables, we show three separate models, with each specification having more control variables than the one previous. For all models, we include year and industry fixed effects as mentioned, but for brevity we omit them in the table 5. For all three specifications, the *SC Ratio* is positively and significantly correlated with *ROA* at the 10 % level or better, as hypothesized (Hypothesis 1).

Table 6 offers results for the panel logit estimations of dividend payouts. The *SC Ratio* is positive and significant at 1% for all models. These findings support Hypothesis 2.

In Table 7, we view the panel logit findings for R&D. For all three models, the *SC Ratio* is positive and significant at 1%, reinforcing Hypothesis 3.

Our last set of results appear on Table 8: panel logit regressions for capital expenditures (*CapEx-High*). The findings are mixed. In Model 1 and 2, the *SC Ratio* is insignificant. In Model 3, it is negative and significant at 1%, which does not support Hypothesis 4.

Because of high degree of correlation between corporate governance variables from the World Bank's dataset (as can be seen in Table 4), there is a potential concern regarding an effect of multicollinearity on the precision of our estimates (for highly correlated regressors). To address this concern, we use principal component analysis (PCA). We rerun our tests replacing our corporate governance variables with (uncorrelated) principal components into our regression analysis. The estimation results for our main independent variable are virtually identical. For brevity the results are not included in the paper, but available upon request.

As a robustness test, we examine if there is a difference in results for former socialistic vs capitalistic countries. We interact *SC Ratio* variable with *FormerSocialistic*, a indicator variable that equals to one if a country previously was a socialistic economy, and zero otherwise. Table 9 presents the results of the *SC Ratio* impact on *ROA*. While we see a statistically significant difference in Models 1 and 2, in full specification (Model 3) the difference is insignificant once we control for country-level economic and corporate governance characteristics. We observe similar situation with other variables. Table 10 presents the results of a multivariate logit regression analysis of the full sample with *Div_D*, *R&D_D*, or *CapExHigh*, as a dependent variable.

Table 4. Correlation matrix

Variable (1)	Strategy Control Ratio (2)	ROA (3)	Capital Expenditure (4)	Dividend (5)	R&D (6)	Control of Corruption (7)	Government Effectiveness (8)	Political Stability (9)	Regulatory Quality (10)	Rule of Law (11)	Voice and Accountability (12)
Strategy Control Ratio	1.000										
ROA	0.012	1.000									
Capital Expenditure	-0.014	0.024	1.000								
Dividend	0.000	0.027	-0.002	1.000							
R&D	0.018	0.015	-0.003	0.000	1.000						
Control of Corruption	0.103	0.026	-0.030	0.004	0.015	1.000					
Government Effectiveness	0.158	0.016	-0.029	0.003	0.017	0.976	1.000				
Political Stability	-0.032	0.000	-0.015	0.001	0.016	0.793	0.799	1.000			
Regulatory Quality	0.111	0.022	-0.027	0.002	0.018	0.946	0.929	0.809	1.000		
Rule of Law	0.116	0.010	-0.031	0.003	0.014	0.972	0.970	0.810	0.965	1.000	
Voice and Accountability	0.107	-0.012	-0.026	0.001	0.020	0.875	0.879	0.882	0.909	0.917	1.000

Note: This Table shows correlations among the main variables of interest. The initial sample consists of European firms in the Compustat Global database for the period 2000-2016. The sample period spans the years 2000 to 2016. See data and methodology section for variable definitions.

Source: own study.

Table 5. Panel OLS Estimates of Strategy vs Control Ratio on ROA

Variables	ROA (1)	ROA (2)	ROA (3)
Strategy to Control Ratio	1.140***	0.807***	2.264*
	(0.214)	(0.276)	(1.201)
Size		0.320***	0.691**
		(0.096)	(0.285)
Leverage		-1.338***	-2.661**
		(0.437)	(1.110)
Market - to- Book		-0.000***	-0.000
		(0.000)	(0.000)
Cash		-0.867*	-1.300
		(0.509)	(1.051)
R&D		-1.408***	-1.388***
		(0.042)	(0.051)
Tangibility		-0.000	-0.000
		(0.000)	(0.000)
Inflation (CPI)			0.026
			(0.040)
Interest rate (real)			0.088**
			(0.041)
Domestic Credit			-0.007
			(0.006)
GDP per Capita			0.000*
			(0.000)
Gross Domestic Savings			-0.077
			(0.047)
Stocks Traded (total value)			0.009***
			(0.003)
Market Capitalization			-0.006
			(0.004)

Variables	ROA (1)	ROA (2)	ROA (3)
Stocks Market Turnover			0.005** (0.002)
Control of Corruption			1.314** (0.646)
Government Effectiveness			0.274 (0.596)
Political Stability			0.266 (0.710)
Regulatory Quality			3.808** (1.513)
Rule of Law			-3.265*** (1.220)
Voice and Accountability			-1.023 (0.983)
Constant	0.290*** (0.088)	-1.156*** (0.415)	-3.582** (1.488)
Year fixed effects	yes	yes	yes
Industry fixed effects	yes	yes	yes
Observations	53.743	32.110	10.915
R-squared	0.003	0.079	0.074

Note: This table reports the results of a multivariate OLS regression analysis of the full sample with ROA as a dependent variable. The initial sample consists of European firms in the Compustat Global database for the period 2000-2016. See data and methodology section for variable definitions. All specifications include industry fixed effects and year fixed effects. Standard errors are heteroskedasticity consistent and clustered at the firm level. Significance levels are indicated as follows: * = 10%, ** = 5%, and *** = 1%.

Source: own study.

Table 6. Panel Logit Estimates of Strategy vs Control Ratio on Dividends

Variables	Div_D (1)	Div_D (2)	Div_D (3)
Strategy to Control Ratio	1.263*** (0.489)	1.474*** (0.499)	5.029*** (1.505)
Size		0.545*** (0.029)	0.679*** (0.056)
Leverage		-0.109 (0.101)	-0.267 (0.198)
Market - to- Book		0.000 (0.000)	-0.000 (0.000)
Cash		0.465 (0.288)	-0.109 (0.480)
Profitability		8.596*** (1.334)	9.391*** (3.267)
Tangibility		-0.001*** (0.000)	-0.001 (0.001)
Cash Flow		0.665*** (0.146)	-2.318** (0.944)
Inflation (CPI)			-0.059 (0.070)
Interest rate (real)			0.026 (0.081)
Domestic Credit			-0.003 (0.007)
GDP per Capita			0.000*** (0.000)
Gross Domestic Savings			-0.096**

Variables	Div_D (1)	Div_D (2)	Div_D (3)
			(0.049)
Stocks Traded (total value)			0.016***
			(0.005)
Market Capitalization			0.004
			(0.004)
Stocks Market Turnover			0.002
			(0.002)
Control of Corruption			-1.194
			(0.800)
Government Effectiveness			-1.786**
			(0.735)
Political Stability			-1.375
			(0.996)
Regulatory Quality			2.470***
			(0.905)
Rule of Law			3.314***
			(1.075)
Voice and Accountability			-0.628
			(1.251)
Constant	-3.294***	-5.925***	-7.965***
	(0.483)	(0.594)	(2.102)
Observations	54.338	27.610	8.203
Number of gvkey1	9.011	7.943	2.983
Likelihood-ratio test of rho=0	18161	5618	814.3
Prob	0	0	0

Note: This Table reports the results of a multivariate logit regression analysis of the full sample with *Div_D*, an indicator variable, as a dependent variable. The initial sample consists of European firms in the Compustat Global database for the period 2000-2016. See data and methodology section for variable definitions. All specifications include industry fixed effects and year fixed effects. Standard errors are heteroskedasticity consistent and clustered at the firm level. Significance levels are indicated as follows: * = 10%, ** = 5%, and *** = 1%.

Source: own study.

Table 7. Panel Logit Estimates of Strategy vs Control Ratio on R&D

Variables	R&D_D (1)	R&D_D (2)	R&D_D (3)
Strategy to Control Ratio	1.992***	2.776***	8.285***
	(0.472)	(0.579)	(2.178)
Size		0.526***	0.504***
		(0.035)	(0.064)
Leverage		0.146	0.230
		(0.130)	(0.261)
Market – to- Book		-0.000	-0.000
		(0.000)	(0.000)
Cash		1.464***	1.363***
		(0.316)	(0.522)
Profitability		-0.019	0.096
		(0.158)	(0.208)
Tangibility		0.000	0.000
		(0.000)	(0.000)
Cash Flow		0.016	-0.097
		(0.159)	(0.209)
Inflation (CPI)			0.160
			(0.100)
Interest rate (real)			-0.079
			(0.115)

Variables	R&D_D (1)	R&D_D (2)	R&D_D (3)
Domestic Credit			0.016 (0.010)
GDP per Capita			0.000*** (0.000)
Gross Domestic Savings			-0.172** (0.068)
Stocks Traded (total value)			0.004 (0.008)
Market Capitalization			0.009 (0.006)
Stocks Market Turnover			0.005 (0.003)
Control of Corruption			0.566 (1.158)
Government Effectiveness			-0.098 (1.076)
Political Stability			-0.695 (1.444)
Regulatory Quality			1.260 (1.194)
Rule of Law			0.648 (1.513)
Voice and Accountability			-1.384 (1.708)
Constant	-3.658*** (0.636)	-6.842*** (0.750)	-12.125*** (3.080)
Observations	54,362	27,598	8,101
Number of gvkey1	8.991	7.920	2.933
Likelihood-ratio test of rho=0	22407	9281	1821
Prob	0	0	0

Note: This Table reports the results of a multivariate logit regression analysis of the full sample with *R&D_D*, an indicator variable, as a dependent variable. The initial sample consists of European firms in the Compustat Global database for the period 2000-2016. See data and methodology section for variable definitions. All specifications include industry fixed effects and year fixed effects. Standard errors are heteroskedasticity consistent and clustered at the firm level. Significance levels are indicated as follows: * = 10%, ** = 5%, and *** = 1%.

Source: own study.

Table 8. Panel Logit Estimates of Strategy vs Control Ratio on CapEx

Variables	CapExHigh (1)	CapExHigh (2)	CapExHigh (3)
Strategy to Control Ratio	-0.268 (0.272)	-0.223 (0.303)	-3.177*** (1.110)
Size		0.216*** (0.016)	0.231*** (0.030)
Leverage		0.366*** (0.083)	0.507*** (0.163)
Market - to- Book		-0.000 (0.000)	0.000 (0.000)
Cash		-1.328*** (0.156)	-1.782*** (0.257)
Profitability		-0.170* (0.096)	-0.351* (0.197)
Tangibility		-0.000** (0.000)	-0.000** (0.000)
Cash Flow		0.167* (0.000)	0.348* (0.000)

		(0.096)	(0.196)
Inflation (CPI)			0.003
			(0.050)
Interest rate (real)			-0.019
			(0.058)
Domestic Credit			-0.002
			(0.005)
GDP per Capita			-0.000*
			(0.000)
Gross Domestic Savings			0.048
			(0.035)
Stocks Traded (total value)			-0.009*
			(0.005)
Market Capitalization			0.010**
			(0.004)
Stocks Market Turnover			0.001
			(0.002)
Control of Corruption			-1.549**
			(0.613)
Government Effectiveness			2.762***
			(0.527)
Political Stability			-1.182
			(0.781)
Regulatory Quality			1.402**
			(0.697)
Rule of Law			-1.432*
			(0.799)
Voice and Accountability			1.526
			(0.949)
Constant	-1.782***	-2.712***	-5.030***
	(0.355)	(0.398)	(1.522)
Observations	54.516	27.697	8.253
Number of gvkey1	9.016	7.948	3.000
Likelihood-ratio test of rho=0	14306	4622	1040
Prob	0	0	0

Note: This Table reports the results of a multivariate logit regression analysis of the full sample with CapExHigh, an indicator variable, as a dependent variable. The initial sample consists of European firms in the Compustat Global database for the period 2000-2016. See data and methodology section for variable definitions. All specifications include industry fixed effects and year fixed effects. Standard errors are heteroskedasticity consistent and clustered at the firm level. Significance levels are indicated as follows: * = 10%, ** = 5%, and *** = 1%.

Source: own study.

Table 9. Effect of Strategy vs Control on ROA: Capitalistic vs Former Socialistic Economies

Variables	ROA (1)	ROA (2)	ROA (3)
Strategy Control Ratio	1.109***	0.851***	2.355*
	(0.214)	(0.283)	(1.253)
SCR*FormerSocialistic	1.489***	-2.689***	2.486
	(0.288)	(0.965)	(3.576)
Size		0.327***	0.691**
		(0.098)	(0.285)
Leverage		-1.356***	-2.661**
		(0.443)	(1.110)
Market - to- Book		-0.000***	-0.000
		(0.000)	(0.000)
Cash		-0.876*	-1.300

Variables	ROA (1)	ROA (2)	ROA (3)
		(0.510)	(1.051)
R&D		-1.408***	-1.388***
		(0.042)	(0.051)
Tangibility		-0.000	-0.000
		(0.000)	(0.000)
Inflation (CPI)			0.012
			(0.050)
Interest rate (real)			0.096**
			(0.040)
Domestic Credit			-0.006
			(0.006)
GDP per Capita			0.000*
			(0.000)
Gross Domestic Savings			-0.080
			(0.050)
Stocks Traded (total value)			0.009***
			(0.003)
Market Capitalization			-0.005
			(0.004)
Stocks Market Turnover			0.006**
			(0.003)
Control of Corruption			1.029
			(0.644)
Government Effectiveness			0.135
			(0.702)
Political Stability			0.167
			(0.747)
Regulatory Quality			3.908**
			(1.538)
Rule of Law			-2.690*
			(1.540)
Voice and Accountability			-1.234
			(0.991)
Constant	0.063	-1.133***	-3.644**
	(0.141)	(0.409)	(1.495)
Year fixed effects	yes	yes	yes
Industry fixed effects	yes	yes	yes
Observations	53.743	32.110	10.969
R-squared	0.003	0.080	0.074

Note: This Table reports the results of a multivariate OLS regression analysis of the full sample with ROA as a dependent variable. The initial sample consists of European firms in the Compustat Global database for the period 2000-2016. See data and methodology section for variable definitions. All specifications include industry fixed effects and year fixed effects. Standard errors are heteroskedasticity consistent and clustered at the firm level. Significance levels are indicated as follows: * = 10%, ** = 5%, and *** = 1%.

Source: own study.

Table 10. Effect of Strategy vs Control Ratio on Dividends, CapEx, and R&D: Capitalistic vs Former Socialist Economies

Variables	Div_D (1)	R&D_D (2)	CapExHigh (3)
Strategy Control Ratio	5.263***	7.999***	-3.065***
	(1.574)	(2.178)	(1.111)
SCR*FormerSocialistic	6.103	-6.696	5.180
	(5.088)	(7.847)	(3.735)
Size	0.681***	0.502***	0.234***

	(0.056)	(0.064)	(0.030)
Leverage	-0.266	0.226	0.506***
	(0.198)	(0.262)	(0.163)
Market - to- Book	-0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)
Cash	-0.106	1.356***	-1.775***
	(0.480)	(0.522)	(0.257)
Profitability	9.392***	0.094	-0.350*
	(3.264)	(0.207)	(0.196)
Tangibility	-0.001	0.000	-0.000**
	(0.001)	(0.000)	(0.000)
Cash Flow	-2.328**	-0.096	0.347*
	(0.930)	(0.209)	(0.196)
Inflation (CPI)	-0.086	0.188*	-0.020
	(0.070)	(0.104)	(0.055)
Interest rate (real)	0.036	-0.091	-0.008
	(0.080)	(0.115)	(0.059)
Domestic Credit	-0.001	0.013	-0.001
	(0.007)	(0.010)	(0.006)
GDP per Capita	0.000***	0.000***	-0.000
	(0.000)	(0.000)	(0.000)
Gross Domestic Savings	-0.103**	-0.168**	0.043
	(0.050)	(0.068)	(0.035)
Stocks Traded (total value)	0.017***	0.003	-0.008*
	(0.006)	(0.008)	(0.005)
Market Capitalization	0.005	0.008	0.011***
	(0.004)	(0.006)	(0.004)
Stocks Market Turnover	0.003	0.004	0.002
	(0.003)	(0.003)	(0.002)
Control of Corruption	-1.803**	1.252	-2.134***
	(0.908)	(1.447)	(0.750)
Government Effectiveness	-2.083***	0.243	2.531***
	(0.791)	(1.109)	(0.559)
Political Stability	-1.666	-0.351	-1.409*
	(1.014)	(1.472)	(0.792)
Regulatory Quality	2.782***	0.855	1.676**
	(0.975)	(1.294)	(0.704)
Rule of Law	4.450***	-0.539	-0.376
	(1.316)	(2.053)	(1.129)
Voice and Accountability	-0.965	-1.085	1.184
	(1.324)	(1.707)	(0.970)
Constant	-8.935***	-10.969***	-5.961***
	(2.210)	(3.325)	(1.701)
Observations	8.203	8.101	8.253
Number of gvkey1	2.983	2.933	3.000
Likelihood-ratio test of rho=0	813.3	1821	1037
Prob	0	0	0

Note: This Table reports the results of a multivariate logit regression analysis of the full sample with *Div_D*, *R&D_D*, or *CapExHigh*, as a dependent variable. The initial sample consists of European firms in the Compustat Global database for the period 2000-2016. See data and methodology section for variable definitions. All specifications include industry fixed effects and year fixed effects. Standard errors are heteroskedasticity consistent and clustered at the firm level. Significance levels are indicated as follows: * = 10%, ** = 5%, and *** = 1%.

Source: own study.

Among other uses, corporate governance codes are instruments to compare country level CG practices. We categorized corporate governance codes based upon the dimensions of strategy and control as these purposes are the two most dominant in CG. Building on the insights of Schiehl and Martins (2016), Haxhi and Aguilera (2017), Martins *et al.* (2017), and Bhagat and Hubbard (2022), of CG codes as embedded in a configuration of institutions, we surmised that CG codes evolve from being relatively ineffective at promoting either strategy or control, to becoming proficient at promoting both, and finally to a position where strategy is the focus because the monitoring function is second nature due to the development of the supporting institutions (Figure 1). The contribution to the work of Bhagat and Hubbard (2022) is specifically that while they relate the importance of rule of law to economic development via corporate governance, they do not move beyond this to estimate the impact on firm performance.

While we view this matrix as a contribution, we then added analysis as to how the movement from control to strategy in national CG codes impact firm-level outcomes. Again, the four papers cited in the preceding paragraph are the foundation of this work; these authors investigated country-level conditions and left firm performance for future research. We also considered in our literature review that there is an extensive body of work spanning decades which examines the relationship between CG and firm performance; however, the vast majority of it looks at internal factors such as board size, board composition, and shareholder rights (cf. Bhagat & Bolton, 2019; Bharath & Hertzler, 2019; Agrawal & Nasser, 2019; Vafeas & Vlittis, 2019; Obeitoh *et al.*, 2023). We are relating national-level codes to firm-level outcomes; moreover, we are testing not only traditional measures of financial performance such as ROA and dividends but also strategic outcomes such as CAPEX, and R&D spending. This is an extension of the research of Renders *et al.* (2010) and Mertzanis *et al.* (2023); the latter studied corporate liquidity in the context of the MENA region whereas we measure a range of metrics across an even broader cross-section of nations over time. The use of a large panel data set comparing the content of CG codes is rare in the CG literature (Cuomo *et al.*, 2016) and furthers this avenue of inquiry. We are researching codes from 1990-2016 retrieved from European Corporate Governance Institute (ECGI) collection covering a period in which country codes were constituted and proclaimed by national institutions across Europe.

Regarding the pattern of statistically significant outcomes, we find support for most of our hypotheses. A higher SC ratio does associate with higher ROA (Hypothesis 1), a higher likelihood of dividend payouts (Hypothesis 2), and a higher probability of R&D spending (Hypothesis 3). These findings are positive and statistically significant across all specifications. For capital expenditures (Hypothesis 4), the results are mixed.

CONCLUSIONS

CG codes exist in a configuration of country-level institutions. Our stated objective in this paper is to consider how CG codes balance the competing demands of strategy and control in a given country context, and then to apply this balance in the form of the SC Ratio to various firm-level outcomes. We offer the concept matrix in Figure 1 to demonstrate the evolution of CG codes from a context where both the strategy and control functions exist at a low level, to a preference for high control and then high strategy, to the most advanced state where strategy is the focus because the nexus of national-level institutions provide ample monitoring.

We find that an emphasis on strategy in CG codes correlates positively and significantly with ROA, and with the higher likelihood of dividend payments, R&D investment, and CapEx spending. We also find that stronger legal institutions associate with a higher emphasis on strategy in CG codes.

There are several limitations to our study. We have found correlations but have not demonstrated causality. In addition, despite our inclusion of control variables it is possible that there are omitted variables that would explain part of the relationships we observed. Despite the size of the entire sample, there are a number of missing observations for some countries.

Concerning policy recommendations, we would suggest to policymakers to refine their CG Codes to focus more on strategy where feasible given our findings. There are positive influences at the level of the firm where national CG codes tilt towards strategy. We also recommend strengthening legal

institutions, such as rule of law, as this will accelerate the evolution of CG codes from monitoring to strategy per our Figure 1.

Future research should examine if findings from our study hold true in extended scope of countries with higher anticipated institutional variance including corporate governance traditions. Additional findings should also be possible as time scope of the analysis extends. More recent account for ESG related issues in corporate governance becomes so important it may establish yet another dimension in codes orientation in addition to strategy and control. Finally we anticipate exploring more nuanced measures of strategy versus control and their impact by extending the scope of our semantic analysis or developing new proxies for the concept.

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Conflict of Interest

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