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Organization capital, dividends and firm value: International evidence

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ABSTRACT

This study investigates the relationship between organization capital, dividends, and firm value across 61 countries. We find that firms with higher organization capital distribute more dividends. By exploiting changes in the stringency of national labor regulations, we demonstrate that this effect strengthens when labor markets become more flexible. Additionally, we document that the market places a premium on dividend payouts from firms with higher organization capital. Further analysis reveals that this premium differential and the positive organization capital-dividend payouts relationship, are more pronounced in firms and countries marked by substantial agency issues. The robustness of our evidence is affirmed through several endogeneity tests, supporting the agency view of organization capital.

1. Introduction

Organizations need to adapt and innovate to navigate the challenges brought about by globalization, technological advancements, and customer demands. In this endeavour, modern corporations rely increasingly on organization capital, which refers to the collective stock of knowledge and skills embodied in a firm's key personnel (Eisfeldt and Papanikolaou, 2013). For example, Toyota's renowned operational excellence and product quality depend on the understanding and expertise of its production managers and engineers regarding the company's unique production systems and processes, such as lean manufacturing, just-in-time inventory management, and continuous improvement. Tesla's pioneering culture and strategy for electric vehicles and renewable energy solutions are fuelled by the vision and skills of its engineers. Likewise, Samsung's designers and R&D staff are vital to the company's competitive advantages in the electronics industry. Accordingly, a large body of literature emphasizes the benefits of organization capital, as it documents its positive relationship to improved output, investment, innovation capacities, and efficiency, as well as future operating performance (Kaplan and Norton, 2004; Lev et al., 2005; Leung et al., 2018; Hasan and Cheung, 2018).

However, several studies reveal its negative side (Leung et al., 2018; Marwick et al. 2020; Hasan and Uddin, 2022; Khoo and Cheung, 2023). Eisfeldt and Papanikolaou (2013) show that organization capital poses a risk to shareholders and thus relates to a higher cost of equity. The authors argue that organization capital is embodied in the firm's key talents, which can have outside options and transition between firms. These outside options increase the retention cost of top talent and determine the portion of the firm's

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cash flows that accrue to shareholders, making firms with high organization capital appear riskier from shareholders' perspective. As both key talent and shareholders have a claim on the firm's cash flows, organization capital suggests agency issues. Key talents may have incentives to overinvest in organization capital to improve their outside options and or to maximize their private benefits. Additionally, organization capital is expected to relate to information asymmetries since it is not reported in financial statements (Lev et al., 2005). As organization capital is not easily verifiable and can potentially move between companies it has limited pledgeability and thus impedes debt financing. In summary, firms with high organization capital are likely to face comparatively higher financial constraints, agency problems, and information asymmetries. Given these traits, organization capital can theoretically be linked to both higher and lower dividend payments.

A voluminous part of the theoretical and empirical research recognizes the use of dividends as a tool to mitigate agency costs and/or a signalling device. Dividends may serve as a deterrent to undesirable managerial behaviour by diminishing assets under managerial control and simultaneously enhancing the probability of external financing; thus, subjecting the firm to heightened market scrutiny and monitoring (Easterbrook, 1984; Jensen, 1986; Renneboog and Szilagyi, 2020; Brockman et al., 2022). From an agency standpoint, we expect firms with high organization capital to distribute more dividends to constrain top talents' self-serving behaviour. Advocates of signalling theory argue that managers utilize cash dividends to signal enhanced performance and promising prospects to external parties, particularly in environments characterized by high information asymmetry (Bhattacharya, 1979, 1978; John and Williams, 1985; Grinstein and Michaely, 2005). From a signalling perspective, companies with substantial organization capital are expected to distribute higher cash dividends to reduce the informational disadvantage relating to organization capital.

Yet, organization capital and dividends may be linked via a negative relationship. Investment, financing, and payout decisions are interdependent and bound by an underlying budget constraint (McCabe, 1979; Lambrecht and Myers, 2012; Farre-Mensa et al. 2024). In this respect, dividends and investments in organization capital are competing uses of funds and are thus expected to be inversely related. Moreover, organization capital has been shown to hamper external financing (Eisfeldt and Papanikolaou 2013, Falato et al. 2022; Khoo and Cheung, 2023). As a result, high organization capital – firms might reduce their payouts to finance their investments internally rather than resorting to costlier external financing. Considering these conflicting arguments, the relationship between organization capital and dividend policies becomes an intriguing empirical question.

Hasan and Uddin (2022), investigate the relationship between organization capital and dividends, based on a sample of US firms. The authors document a positive relationship while their overall empirical analysis is consistent with the agency view of organization capital and the role of dividends as a mechanism to mitigate agency issues. Yet, Hasan and Uddin's (2022) study, as well as most of the organization capital versus corporate outcomes research, is US-based. Without testing the robustness of these findings outside the US, it is not feasible to assess their generalizability and external validity. Several international studies have shown that corporate financial behaviour differs between U.S. and non-U.S. firms due to key country-related characteristics such as legal regimes, institutional and ownership structures, and financial development (Dewenter and Warther, 1998; Chemmanur et al., 2010). These differences often challenge the international applicability of theoretical frameworks used to explain US firms' financial decision-making.

In this respect, the organization capital–dividends relationship may vary outside the US, as the risk of organization capital investment (i.e., key employees outside options) is affected by the stringency of national labour regulations (Leung et al. 2018). Moreover, national investor protection regulation, financial market, and ownership structures affect the degree and thus the comparative significance of information asymmetry and agency concerns (Dewenter and Warther, 1998; La Porta et al. 2000; Leung et al. 2018). In terms of firm characteristics, the United States hosts many of the world's largest companies by market capitalization. Also, compared to other countries, the U.S. has now an unusually low number of listed firms, partly due to a high rate of acquisitions. This "U.S. listing gap" has led to an increase in the percentage of larger and more mature companies (Doidge et al., 2017), characteristics more likely to relate to agency problems rather than information asymmetries and external financing concerns. As such, the first objective of our study is to investigate the relation between organization capital and dividends in a global setting. Beyond the benefits of an increased sample size and an expanded scope of investigation, our international setting allows for further and meaningful tests.

Consequently, in our study, we aim to answer the following questions: Does the positive relationship between organization capital and dividends hold in a global setting? In this setting, is this relationship consistent with the agency view of organization capital? After our results provide an affirmative answer to these questions, we proceed to a third and equally important question: Considering that organization capital stimulates higher dividends, does the market value dividends differently between firms with high organizational capital and those with low organizational capital? We hypothesize that if investors view organization capital as a source of agency concerns, then dividend distributions from high organization capital should be valued at a premium.

To address our set of research questions, we employ an international sample of 198,667 firm-year observations, from listed firms across 61 countries, between 1991 and 2020. We document a positive relationship between organization capital and dividends that holds in both the full and the non-US & Japan samples. The economic effect is substantial, as, in our international setting, we find that a one standard deviation increase in organization capital to total assets increases the dividend payout rate by 10.64 %, relative to the mean. This result is consistent with both agency and signalling-based explanations.

A major issue in interpreting our findings is that the relationship between organization capital and dividend payouts could be driven by unobservable factors associated with both organization capital and dividends. Another issue is reverse causality. Elevated dividend payments restrict the availability of internal capital, and are thus likely to impede investment capabilities, including those in organization capital (Fazzari et al., 1988; Bond and Meghir, 1994a, 1994b; Hubbard et al., 1995; Campello et al., 2010). Finally, we may also have the case that differences in observable characteristics between firms with high and low levels of dividends might drive our results. Under these assumptions, any identified relationship between organization capital and dividend payments may be a result of a combination of differences in underlying fundamentals and the causal impact of organization capital.

To improve our identification strategy, we initially use changes in the country-level of the employment protection legislation (EPL) index that reflect the stringency of national labour regulation concerning job terminations and the use of temporary contracts in recruitment. Leung et al. (2018) suggest that a higher EPL index decreases managers outside opportunities, and this may reduce the risk associated with organization capital. Leveraging country-level changes in the EPL index as an exogenous shock to organization capital, we expect and find the impact of organization capital on dividend payouts to be less pronounced when the EPL index increases. Moreover, we follow Hasan and Uddin (2022) and Lewbel (2012) and employ an instrumental variable (IV) analysis and an IV approach with heteroscedasticity-based instruments, respectively. Finally, we follow Hasan et al. (2021) and Hasan et al. (2022) and utilize the method of entropy balancing. Notably, none of these methods change our initial conclusions.

To explore whether the effect of organization capital on dividend payouts is consistent with agency and/or signalling-based explanations, we examine whether the above relationship becomes more pronounced in environments marked by substantial agency costs and information asymmetries. Our international setting allows us to utilize both firm and country-level proxies for agency concerns. For firm-level proxies of agency costs we use, ownership dispersion, a measurement of overinvestment in organization capital, board size, and governance score (Chen et al., 2017; Khan, 2019; Hasan and Uddin, 2022). For country-level proxy of agency costs, we utilize the anti-self-dealing index, which measures the extent to which minority shareholders are safeguarded from self-dealing that favours controlling shareholders (Djankov et al., 2008)[1] and the board reforms in several countries involving changes in corporate governance practices aimed at improving transparency, accountability, and efficiency in board operations (Fauver et al., 2017). For firm-level proxies of information asymmetries, we use trading volume and the number of analysts following the firm (Elbadry et al, 2015; Hassan and Uddin, 2022). We also classify firms into bank and market-based economies as an indicator of country-level information asymmetries.[2] The relevant results suggest that the positive relationship between organization capital and dividends is more pronounced for firms and countries with more exposure to agency issues. Our results show no support for the signalling-based explanation.

The second part of our analysis seeks to explore the relationship between organization capital and firm value through its impact on dividend payouts. To serve this purpose, we utilize valuation regressions (Fama and French, 1998; Pinkowitz et al., 2006) and document that the market values dividend distributions for firms with high organization capital more compared to firms with low organization capital. Specifically, for firms with high organizational capital, a dividend payout rate of 1 % of total assets increases firm value by 9.961 %, a roughly twofold 5.037 % increase observed in firms with low organizational capital.

We further assess the consistency of the above result with the agency view of organization capital by considering only high organization capital firms and exploring the differential effects of dividend payouts on firm value in subsamples of high/low firm and country-level agency issues. Our results suggest that the premium placed on dividend payouts for firms with high organization capital increases if such firms also exhibit high ownership dispersion, high overinvestment in organization capital, and belong to countries with a low anti-self-dealing index.

We contribute to the literature in several ways. Our study extends ongoing research on the nexus between organization capital and financial decisions. Specifically, it is the first study to explore the relationship between organization capital and dividends in an international context. By doing so, it presents novel evidence that the positive relationship between organization capital and dividends manifests internationally and is not US-specific, while it amplifies in countries and firms more prone to agency issues. As such, our results offer insights into how firms navigate financial decisions in different regulatory environments. In this respect, our study validates organization capital as a determinant of dividend payouts.

Moreover, our study addresses an unexplored yet significant question: Does the market value dividend distributions from firms with comparatively high organization capital more? In this regard, we reveal that dividend payouts from high organization capital firms are valued at a premium, and this premium increases in countries and firms more susceptible to agency concerns. Thus, collectively, our evidence supports the agency view of organization capital. In this regard, our study contributes to the literature that reveals the 'negative' aspects of organization capital (see Falato et al., 2022; Hassan and Uddin, 2022; Khoo and Cheung, 2023).

Our findings have profound implications for investors, managers, and policymakers. Investors who prefer dividend-paying firms should take into consideration the impact of investments on organization capital on dividend levels. Furthermore, from our managerial perspective, our study shows that investors may consider organization capital as an important factor in firm valuation. Thus, firms that strategically deploy their intangible assets to enhance global competitiveness should acknowledge the agency view of organization capital. Finally, our results may have implications for global regulatory bodies in terms of considering policies that recognize the role of organization capital in decision-making.

2. Literature review and hypotheses development

2.1. Organization capital

Organization capital represents the collective stock of knowledge and skills embodied in the firm's key personnel (Eisfeldt and Papanikolaou, 2014). Several studies emphasize the role of organization capital as a significant factor of production and highlight its

[1] As Brockman et al. (2022) underline, the anti-self-dealing index is influenced by the legal tradition of the country and thus constitutes a reliable predetermined proxy for agency costs in the presence of endogeneity.

[2] Banks have a relative advantage in gathering information and are more motivated to monitor firms compared to other providers of capital (Hoshi et al., 1991; Dewenter and Warther, 1998; Chakraborty and Ray, 2006).

benefits on several corporate outcomes (Corrado et al. 2009; Eisfeldt and Papanicolaou, 2013; Peters and Taylor, 2017). Eisfeldt and Papanikolaou (2013) document that higher organization capital relates to superior productivity and higher growth opportunities. Kaplan and Norton (2004) and Subramaniam and Youndt (2005) link organization capital to enhanced innovation capabilities. Moreover, Lev et al. (2005) show that higher organization capital is linked to better operating performance and stock returns. Li et al. (2018) analyse several acquisition deals and show a positive relationship between acquirers' organization-capital and superior M&A deal performance. In addition, Hasan et al. (2021) report that firms with high organization capital are more tax efficient, while Hasan and Cheung (2018) demonstrate that investing in organization capital decreases the probability of firms experiencing adverse stages in their life cycle. Leung et al. (2018) show that the advantages of organizational capital are not limited to the U.S. Using an international sample, the authors report that organization capital relates to higher productive, innovation and managerial efficiency, and enhanced innovation output.

However, several studies underscore the negative traits of organization capital (Leung et al., 2018; Marwick et al., 2020; Hasan and Uddin, 2022; Khoo and Cheung, 2023). Eisfeldt and Papanikolaou (2013) show that organization capital can pose a risk to shareholders, resulting in a higher cost of equity. The authors argue that organization capital is embodied in the firm's key talents, who have the option to leave and can move between firms. These outside options raise the cost of retaining top talent and impact the share of the firm's cash flows that go to shareholders, making firms with high organization capital riskier from shareholders' perspective. Accordingly, Eisfeldt and Papanikolaou (2013) document that high organization capital firms tend to exhibit higher stock returns, aligning with the idea that shareholders require a higher risk premium for investing in these firms. In further support, Leung et al. (2018) show that the positive organization capital – stock returns relationship is more pronounced in flexible labor markets, where greater employee mobility and competition make organization capital investment riskier from a shareholders' perspective.

Furthermore, as both key talent and shareholders have claims on the firm's cash flows, organization capital indicates agency problems. Key talents may have incentives to overinvest in organization capital to improve their outside options or maximize their private benefits. Khoo and Cheung (2023) document a negative relationship between trade credit and organization capital suggesting that suppliers of trade credit acknowledge the latter's associated risk. Furthermore, organization capital is linked to information asymmetries because it is not disclosed in financial statements (Lev et al., 2005). Since organizational capital is not easily verifiable and can potentially move between companies, it has limited pledgeability, which hinders debt financing. Summarizing, organization capital is likely to exacerbate financial constraints, agency problems, and information asymmetries.

2.2. Hypotheses development

Considering the negative traits of organization capital discussed in the previous section, we hypothesize that the relationship between organization capital and dividends can be either positive or negative. We initially build on the role of dividends as a mechanism to mitigate agency costs and/or a signaling device and predict a positive relationship between organization capital and dividends.

Under an agency theory framework, firms pay dividends to constrain managerial self-serving behavior. Dividends reduce cash under managerial control, prompting the firm to raise capital from the market to cover its investment and/or liquidity needs. External financing is accompanied by increased scrutiny by investors and analysts, who monitor the firm's activities and ensure that managers focus on shareholder value rather than their benefits (Easterbrook, 1984; Jensen, 1986; Brockman et al., 2022). From an agency-based point of view, we expect a positive relationship between organization capital and dividends, as the need to constrain top talents' self-serving behavior will encourage higher dividend payouts.

In the presence of asymmetric information between the firm and its investors, dividends may serve as a credible signal of future promising performance to investors (Bhattacharya, 1979, 1978; John and Williams, 1985; Grinstein and Michaely, 2005). Organization capital is likely to relate to information asymmetries due to its intangible nature, which makes it challenging for external investors to accurately assess its value and future earnings impact (Lev, 2001). Therefore, we anticipate that high organization capital firms will pay out more dividends to alleviate their related informational disadvantage. Based on the above discussion, we formulate the following hypothesis:

***H_{1a}**: Firms with high organization capital pay more dividends.*

However, we also argue that the relationship between organization capital and dividends may be negative. Several studies point out that the often-overlooked inter-temporal budget constraint renders financial decisions interdependent (McCabe, 1979; Lambrecht and Myers, 2012; Farre-Mensa et al., 2015). Ceteris paribus, sources of funds (profits and external financing) should be positively related to uses of funds (payouts and investment), while uses of funds are inversely related to one another as they compete for the same limited amount of capital. Considering this view, we expect a negative relationship between investment in organization capital and dividends since both represent competing uses of funds. Moreover, several studies argue that firms follow a financing hierarchy where firms prefer internal over the costlier external financing (Myers, 1984; Myers and Majluf,1984; Myers, 2001; Vernimmen, 2011). In this respect, organization capital has been shown to impede external financing (Eisfeldt and Papanikolaou 2013, Falato et al. 2022; Khoo and Cheung, 2023). As a result, high organization capital – firms may pay lower dividends to strengthen their internal financing capabilities and avoid costly external capital. Considering the discussion, we formulate our second hypothesis:

H_{1b}: Firms with high organization capital pay less dividends.

3. Sample selection procedure and methodology

3.1. Sample selection procedure

Our sample includes international listed firms from the period between 1991 and 2020, with data sourced from the Compustat North America and Compustat Global databases. Consistent with previous studies (e.g., Attig et al., 2021; Long et al., 2024), we exclude financial firms (SIC codes 6000–6999) and regulated utilities (SIC codes 4900–4999). We also obtain country-level macroeconomic data from the World Bank and OECD. We exclude firms with physical capital below $5 million to avoid potential bias from smaller firms (Peters and Taylor, 2017). We also drop firm-year observations with negative values for sales, total assets, total common equity, and cash dividends (e.g., Attig et al., 2021; Bae et al., 2021). We then exclude observations with missing information for calculating dividend payouts, organization capital, and our control variables. Additionally, we set a requirement of at least 20 firm-year observations per country to ensure meaningful representation. Finally, to mitigate the impact of outliers, we winsorize all continuous variables at 1 % and 99 % of their distributions. Our final sample consists of 20,157 firms and 198,667 firm-year observations from 61 countries (see Table 1).

3.2. Measurement of organization capital

We follow Peters and Taylor (2017) and measure organization capital by accumulating a fraction of past SG&A expenditure using the perpetual inventory method:

$$OCap_{i,t} = (1 - \delta_0)OC_{i,t-1} + (SG\&A_{i,t} \times \theta_0) \tag{1}$$

where $SG\&A_{i,t}$ denotes firm i's selling, general, and administrative expenditure at time t, δ_0 signifies the depreciation rate of organization capital, θ_0 indicates the percentage of SG&A expenditure directed towards organization capital, and $OrgCap_{i,t}$ denotes firm-specific organization capital at time t.

The initial stock of organization capital for each firm is estimated as follows:

$$OC_{i,t_0} = \frac{SG\&A_{i,t_0} \times \theta_0}{g + \delta_0} \tag{2}$$

where g represents the growth in the flow of organization capital, determined as the average growth of firm-level SGA expenditure. In line with existing literature (Eisfeldt and Papanikolaou, 2013; Peters and Taylor, 2017), we adopt a 20 % depreciation rate for organization capital and also assume that θ_0 is 30 %. Finally, we follow prior literature (Francis et al., 2021; Gao et al., 2021; Kim et al., 2021) and scale the stock of organization capital by firms' total assets ($OrgCap_{PT}$).

3.3. Empirical design

To examine the impact of organization capital on dividend payouts, we estimate the following baseline empirical specification:

$$DIV_{i,t} = \beta_0 + \beta_1 OrgCap_{PT_{i,t}} + \beta_2 ControlVariables_{i,t} + FixedEffects + \varepsilon_{i,t} \tag{3}$$

where *DIV* is calculated as the ratio of cash dividends to total assets. The main independent variable is $OrgCap_{PT}$ which is organization capital, as measured by Peters and Taylor (2017), and scaled by total assets.[3]

We also incorporate various firm and country characteristics that prior research has identified as potential factors influencing dividend payouts. These variables are included to isolate the specific impact of organization capital on dividend payments and to eliminate alternative explanations.

Companies with higher and more stable profits and superior performance are better equipped to pay dividends. Thus, we control for firm profitability (*Profitability*), earnings volatility (*EarningsVol*), and annual stock returns (*StockReturn*). We include firm size (*FirmSize*) as a proxy of the degree of information asymmetry, as larger firms are typically better known, and thus are expected to face lower information asymmetry (Frank and Goyal 2003; Lemmon and Zender 2010). We also include firm age (*FirmAge*) to control for a firm's life cycle and its documented impact on dividends (DeAngelo et al., 2006). To account for the interdependence between payout and investment decisions, we control for capital expenditures (*Capex*), research and development expenditures (*R&D* and *DummyXRD*) and growth opportunities proxied by the market-to-book ratio (*MTBK*), (Canil et al., 2023; Mekhaimer et al., 2022; Attig et al., 2021). In addition, we use firm leverage (*Leverage*) to account for the role of debt as an alternative mechanism against agency problems. He and Zhang (2022) document that firms with high levels of leverage are more inclined to pay cash dividends, whereas Byrne and O'Connor (2017b) show that firms with high leverage exhibit lower payouts.

We include firm tangibility (*Tangibility*) in our model because tangible assets can serve as collateral, easing access to external financing and thereby enhancing the ability to pay dividends (Farre-Mensa et al. 2024). However, since tangibility may also indicate higher capital expenditures, it could imply restricted cash flow availability and thus be associated with lower dividends (Khoo et al.

[3] In Section A2 of the Internet Appendix, we also use alternative measures of dividend payments and organization capital and find similar results.

Table 1
Sample Selection Procedure.

Description and Criteria	Firm-Year Observations
Initial Sample (Compustat North America and Compustat Global data between 1991–2020)	1,167,220
Less Duplicates of GVKEY and FYEAR	(37,718)
Less Financial Firms and Regulated Utilities	(213,588)
Exclude firms with negative values for total assets, total common equity, sales and cash dividends	(55,780)
Exclude Firms with negative selling, general, and administrative expenses and physical capital lower than $5 million	(276,152)
Less Missing Accounting and Macro Variables for the Baseline Regression Model	(385,070)
Less Countries with Less than 20 firm-year observations	(245)
Final Sample	198,667

This table presents the sample selection procedure of our study.

2017).

Considering that firms operating in more competitive industries are less likely to distribute higher dividends (Hoberg et al., 2014), we account for industry concentration (*HHI*). Furthermore, we follow He and Zhang (2022) and Balachandrana et al. (2018) and include cash reserves (*Cash Holdings*) and stock repurchases (*Repurchases*) in our model.

In our last set of control variables, we adhere to previous research (Leung et al., 2018; Brockman et al., 2022; Balachandrana et al., 2018) and incorporate the following country-related variables: the ratio of stock market capital to Gross Domestic Product (GDP) (*FinMarketDepth)*, *GDPGrowth*, and the natural logarithm of GDP per capita (*LnGDP*). We also, add firm fixed effects to account for unobserved, time-invariant firm-specific heterogeneity and year *x* industry fixed effects to control for industry-specific trends over time. Finally, to account for the intra-firm correlation of standard errors, we adjust them for clustering at the firm level (Petersen, 2009; Attig et al., 2021; Brockman et al., 2022; Leung et al., 2018). We provide detailed definitions of all variables in Appendix A.[4]

4. Empirical results

4.1. Descriptive statistics

Table 2 displays the distribution of firm-year observations within our sample, along with the average values of dividend payouts and organization capital, across various countries (Panel A), and industries (Panel B). Results in Panel A show that US and Japanese firms constitute slightly more just over half of the full sample (USA-32.36 % and JPN-22.03 %). These countries also exhibit very high investment in organization capital ($OrgCap_{PT}$). Specifically, for the average US firm organization capital accounts for 31.2 % of the total value of book assets, while the respective value for the Japanese firms is 33.2 %. In terms, of dividend payouts (*DIV*), the highest values belong to Morocco (MAR) and Hungary (HUN).

Panel B shows that most of our firm-years belong to the manufacturing (21.40 %) and the wholesale, retail and some services (13.74 %) sectors. The average firm in the wholesale, retail, and some services (Oil & Gas) sector displays the highest (lowest) value of organization capital accounts, i.e., 45.4 % (9.5 %). The highest average dividend payout belongs to firms in the telephone and television transmission sector (2.5 %) and the lowest in consumer durables and manufacturing (1.4 %).

Panel A of Table 3 presents the descriptive statistics for all variables used in our baseline model. The average age of our sample firm is 13 years. Moreover, for the average firm, organization capital represents 26.6 % of book assets, tangible assets (*Tangibility*) account for 32.9 % of total assets, while 14.7 % is held in cash (*Cash Holdings*). The mean dividend and repurchase payout ratios are 1.5 % and 0.6 %, respectively. Also, the average firm has a market-to-book ratio of 1.608 and a profitability ratio of 10.7 %. Investment in capital expenditures (*Capex*) amounts to 5.4 % of total assets, while investments in research and development (*R&D*) to 1.6 %. Finally, the average firm exhibits a leverage ratio of 21.3 %.

Panel B of Table 3 shows that firms with higher organization capital exhibit higher dividend (*DIV*) and repurchase (*Repurchases*) payouts than their low organization capital counterparts, a result consistent with Hasan and Uddin (2022). In addition, high organization capital firms are characterized by higher growth opportunities and higher but more volatile profits. Moreover, they earn higher stock returns, have fewer tangible assets, and hold more cash. These differences are significant at the 1 % level. These results are consistent with the notion that firms with high organization capital are riskier than low organization capital firms, and thus, earn higher returns and hold more cash (Eisfeldt and Papanikolaou, 2013; Falato et al., 2022). Moreover, firms with high organization capital invest comparatively more in R&D than capital expenditure.

4.2. The relationship between organization capital and dividends

Table 4 displays the outcomes of estimating the relationship between organization capital and dividends based on Equation (3). Column (1) presents results for the full sample, while Column (2) focuses on the non-US/Japan sample. The coefficients of organization capital ($OrgCap_{PT}$) are 0.006 and 0.005, respectively, and statistically significant at the 1 % level. These results indicate a positive and

[4] In our model, we employ high-dimensional fixed effects (HDFE) and ensure that our regression results are robust to firm-level and time-level variations, (see Correia, 2016).

Table 2
Country and Industry Distribution.

Panel A: Country Distribution

Country	Obs.	%	*DIV*	$OrgCap_{PT}$	Country	Obs.	%	*DIV*	$OrgCap_{PT}$
USA	64,279	32.36	0.011	0.312	GRC	435	0.22	0.025	0.669
JPN	43,767	22.03	0.009	0.332	NZL	435	0.22	0.046	0.103
CHN	23,472	11.81	0.012	0.103	IRL	415	0.21	0.017	0.217
GBR	8,765	4.41	0.030	0.288	OMN	310	0.16	0.056	0.135
IND	7,876	3.96	0.018	0.155	SAU	236	0.12	0.052	0.090
KOR	7,451	3.75	0.010	0.184	NGA	233	0.12	0.039	0.239
MYS	5,974	3.01	0.024	0.097	TUR	219	0.11	0.041	0.783
HKG	5,120	2.58	0.029	0.160	BGD	208	0.10	0.045	0.134
AUS	3,704	1.86	0.041	0.166	MEX	206	0.10	0.026	0.423
DEU	3,612	1.82	0.020	0.188	PRT	194	0.10	0.020	0.240
SGP	3,227	1.62	0.025	0.128	POL	148	0.07	0.030	0.206
CHE	1,851	0.93	0.025	0.217	ARE	143	0.07	0.037	0.093
THA	1,584	0.80	0.045	0.200	ARG	138	0.07	0.032	0.209
CAN	1,510	0.76	0.006	0.156	CHL	120	0.06	0.020	0.200
FRA	1,391	0.70	0.020	0.218	BHR	98	0.05	0.052	0.133
NLD	1,166	0.59	0.025	0.198	LUX	97	0.05	0.023	0.206
BRA	1,140	0.57	0.029	0.275	MUS	97	0.05	0.017	0.116
ZAF	986	0.50	0.036	0.144	QAT	94	0.05	0.043	0.061
NOR	794	0.40	0.026	0.084	CYP	93	0.05	0.025	0.174
ITA	788	0.40	0.019	0.112	SVN	93	0.05	0.023	0.514
ESP	718	0.36	0.030	0.120	JAM	70	0.04	0.031	0.253
SWE	529	0.27	0.026	0.168	MLT	68	0.03	0.044	0.111
LKA	522	0.26	0.023	0.124	KEN	67	0.03	0.044	0.160
ISR	521	0.26	0.035	0.251	MAR	64	0.03	0.065	0.145
DNK	520	0.26	0.017	0.184	BMU	62	0.03	0.018	0.138
PAK	482	0.24	0.048	0.125	PER	61	0.03	0.051	0.179
BEL	477	0.24	0.027	0.201	CYM	57	0.03	0.040	0.121
AUT	472	0.24	0.018	0.150	JOR	57	0.03	0.062	0.120
IDN	455	0.23	0.021	0.136	ROU	55	0.03	0.044	0.345
FIN	451	0.23	0.032	0.044	HUN	44	0.02	0.060	0.260
PHL	446	0.22	0.026	0.126					

Panel B: Industry Distribution

	Obs.	%	*DIV*	$OrgCap_{PT}$
Consumer non-durables	22,109	11.13	0.021	0.406
Consumer durables	10,216	5.14	0.014	0.218
Manufacturing	42,517	21.40	0.014	0.201
Oil, Gas, & Coal Extract. & Products	6,979	3.51	0.015	0.095
Chemicals and Allied Products	11,439	5.76	0.018	0.228
Business Equipment	25,505	12.84	0.012	0.249
Telephone & Television Transmission	4,232	2.13	0.025	0.164
Wholesale, Retail, and Some Services	27,293	13.74	0.015	0.454
Healthcare, Medic. Equip., & Drugs	12,803	6.44	0.015	0.239
Other	35,574	17.91	0.015	0.169

This table presents the distribution of firm-year observations in our sample as well as the average values of dividend payouts (*DIV*) and organization capital ($OrgCap_{PT}$) across countries and industries. Panel A reports the distribution by country. Panel B displays the distribution of our sample across industries (as defined by the two-digit SIC codes).

significant relationship between organization capital and dividends, and notably, this association extends beyond the US context. Furthermore, the economic significance of this relationship is evident. We find that a one standard deviation increase in organization capital to total assets increases the dividend payout rate of a firm's total assets by 10.64 % ((0.266 × 0.006)/0.015). It is important to note, that the coefficient of organization capital for the non-US, non-Japan sample (0.005) is similar to our full-sample findings. This suggests that the relationship between organization capital and dividends is of almost equivalent magnitude for the average non-US, non-Japanese firm.

Regarding the control variables in our model, results suggest that more profitable firms and firms with higher cash holdings distribute higher dividends. This supports the role of dividends as a mechanism against agency costs of free cash flows. Also, in line with this notion is the negative relationship between dividends and leverage, as both financial decisions are considered alternative mechanisms against agency costs of free cash flows, (Jensen,1986). We also find that smaller firms, firms with high R&D intensity[5] and low stock returns distribute more dividends, which is consistent with the signalling theory. In addition, firms with high growth are

[5] R&D-intensive firms maintain higher levels of information asymmetry to capitalize on product development and market dynamics (Barth and Kasznik, 1999; Aboody and Lev, 2000).

Table 3
Summary Statistics.

Panel A: Summary Statistics

	N	Mean	Std. Dev.	p25	Median	p75
DIV	198,667	0.015	0.022	0.000	0.008	0.020
OrgCap$_{PT}$	198,667	0.248	0.266	0.071	0.167	0.331
Firm Size	198,667	6.278	1.678	5.077	6.085	7.309
Profitability	198,667	0.107	0.080	0.060	0.101	0.149
StockReturn	198,667	0.166	0.615	−0.169	0.038	0.316
EarningsVol	198,667	0.034	0.032	0.014	0.024	0.043
Firm Age	198,667	13.21	7.46	7.00	12.00	18.00
Tangibility	198,667	0.329	0.206	0.17	0.293	0.452
Leverage	198,667	0.213	0.169	0.061	0.194	0.330
MKTB	198,667	1.608	1.200	0.932	1.214	1.798
R&D	198,667	0.016	0.034	0.000	0.000	0.015
DummyXRD	198,667	0.495	0.499	0.000	1.000	1.000
Capex	198,667	0.054	0.051	0.019	0.039	0.070
HHI	198,667	0.176	0.198	0.050	0.099	0.217
Cash Holdings	198,667	0.147	0.134	0.045	0.109	0.208
Repurchases	198,667	0.006	0.021	0.000	0.000	0.000
FinMarketDepth	198,667	116.126	132.321	65.340	95.215	132.147
GDP Growth	198,667	2.340	3.043	0.810	1.996	3.376
LnGDP	198,667	10.130	0.976	10.147	10.470	10.763

Panel B: Subsample Analysis

	OrgCap$_{PT}$>p50 (N=99,334)	OrgCap$_{PT}$<p50 (N=99,333)	Mean equality *t*-test (p-value)
DIV	0.016	0.015	0.000***
Firm Size	6.040	6.510	0.000***
Profitability	0.112	0.102	0.000***
StockReturn	0.190	0.142	0.000***
EarningsVol	0.036	0.033	0.000***
Firm Age	14.100	12.330	0.000***
Tangibility	0.284	0.375	0.000***
Leverage	0.190	0.235	0.000***
MKTB	1.622	1.595	0.000***
R&D	0.020	0.012	0.000***
DummyXRD	0.404	0.586	0.000***
Capex	0.046	0.061	0.000***
HHI	0.168	0.184	0.000***
Cash Holdings	0.151	0.143	0.000***
Repurchases	0.008	0,003	0.000***
FinMarketDepth	113.545	118.707	0.000***
GDP Growth	1.641	3.040	0.000***
LnGDP	10.371	9.891	0.000***

This table presents the descriptive statistics of our variables for a global sample of public firms from 1 January 1991 to 31 December 2020. Panel A presents the descriptive statistics for all variables used in our study. Panel B reports the average values of the variables used in our study across the subsamples of firms with high and low organization capital. High and low organization capital are based on sample median. All variables are defined in Appendix A.

associated with high dividend payments.

5. Identification issues

The estimations of our baseline model, presented in the previous section, suggest a positive relationship between organization capital and cash dividends. However, it is plausible that our empirical analysis is susceptible to endogeneity concerns. An issue that can lead to incorrect inferences is reverse causality. Numerous studies argue that higher dividend payments limit internal capital, and consequently crowd out investments, including those in organization capital (Fazzari et al., 1988; Bond and Meghir, 1994a, 1994b; Hubbard et al., 1995; Campello et al., 2010). Moreover, despite the incorporation of *year x industry* and *firm* fixed effects to mitigate omitted industry-specific, time-varying disparities, a notable empirical challenge is that omitted unobservable characteristics may influence both organization capital and dividend payouts similarly. Also, the observed relationship between organization capital and dividend payouts may be driven by differences in the observable characteristics between firms with high and low organization capital, which may lead to biased estimates in our primary results. In the subsequent subsections, we employ various methods to address these identification challenges.

Table 4
The Relationship Between Organization Capital and Dividend Payouts.

	Full sample (1)	**Excluding US & Japan (2)**
$OrgCap_{PT}$	0.006***	0.005***
	(0.001)	(0.001)
Firm Size	−0.000*	−0.000***
	(0.000)	(0.000)
Profitability	0.059***	0.109***
	(0.002)	(0.003)
StockReturn	−0.001***	−0.001***
	(0.000)	(0.000)
EarningsVol	−0.009***	−0.002
	(0.003)	(0.005)
Firm Age	0.002***	0.000
	(0.000)	(0.001)
Tangibility	−0.001	0.001
	(0.001)	(0.001)
Leverage	−0.011***	−0.020***
	(0.001)	(0.001)
MKTB	0.002***	0.002***
	(0.000)	(0.000)
R&D	0.031***	0.042***
	(0.005)	(0.010)
DummyXRD	−0.003***	−0.004***
	(0.000)	(0.000)
Capex	−0.001	0.002
	(0.001)	(0.003)
HHI	−0.001	−0.001
	(0.001)	(0.001)
CashHoldings	0.011***	0.017***
	(0.001)	(0.001)
Repurchases	−0.000	−0.009
	(0.003)	(0.013)
FinMarketDepth	−0.000	−0.000
	(0.001)	(0.001)
GDP Growth	0.000***	0.000
	(0.000)	(0.000)
LnGDP	0.003***	0.001
	(0.001)	(0.001)
Year x Industry FE	Y	Y
Firm FE	Y	Y
Adjusted R^2	0,794	0,815
Number of Obs.	198,667	90,606

This table presents results from estimating our baseline model (eq.3) using ordinary least square (OLS) regressions with fixed effects at the firm and *industry* × *year* levels. The dependent variable is dividend payouts (*DIV*), calculated as cash dividends scaled by total assets. *$OrgCap_{PT}$* is organization capital, measured following Peters and Taylor (2017) and scaled by total assets. Standard errors are included in the parentheses and are clustered by firm. ***. **. and * denote significance at the 1 %, 5 %, and 10 % levels, respectively. All variables are defined in Appendix A.

5.1. Quasi-natural experiment: Employment protection legislation index

To improve our identification strategy, we use variations in the country-level employment protection legislation index and design a quasi-natural experiment to establish the causal effect of organization capital on dividend payouts.[6] The EPL index gauges the stringency of national labor regulations concerning job terminations and the utilization of temporary contracts in recruitment (Long and Siebert, 1983). Consistent with this idea, Gangl (2007) contends that labour protection limits mobility by reducing the ease with which employers can terminate individual contracts and by limiting external job opportunities for employees. In a similar vein, Autor et al. (2007) show that less protective labour regulations are linked to increased employment turnover and higher rates of new firm entries.[7] As such, we anticipate that stringent employee protection (i.e., increases in the EPL index) would decrease managers' outside options and their bargaining position, and thus reduce organization capital associated risk. There are 2,630 firms in countries where the EPL index has increased and 800 in countries where the EPL index has decreased.

[6] More specifically, by comparing firms in countries that experienced increases in the EPL index (treatment group) to those in countries that did not (control group), we can isolate the impact of organization capital from other compounding factors.

[7] EPL index ranges from 0 to 6, and higher values imply better employment protection.

We then separate EPL Index Changes into two distinct datasets: one for increases (*EPL Increases*) and one for decreases (*EPL Decreases*) (Feng et al., 2023). *EPL Increases* (*Decreases*) is a dummy variable equal to one for firms headquartered in countries that have experienced an increase (decrease) in the EPL index, and zero for firms headquartered in countries with no changes in the EPL index. Therefore, we create separate datasets for each country group that experienced an increase (decrease) in the EPL index, where observations from countries with an increase (decrease) in the EPL index are assigned to the treated group, and observations from countries with no changes in the EPL index are placed in the control group.[8]

To test the above hypothesis, we add *EPL Increases* and the product of $OrgCap_{PT}$ and *EPL Increases* to our baseline regressions. The variable of interest is the interaction term (*OrgCapPT* × *EPLIncreases*), the coefficient of which is predicted to be negative, consistent with the expectation of a less pronounced impact of organization capital on dividend payments when the employment protection increases.[9] Our results in Panel A of Table 5 show that the interaction term is negative, implying that the impact of organization capital on cash dividends is less pronounced when there are fewer employment opportunities.

However, a key assumption in our analysis is that, without the treatment, the trends in dividend payouts for both treated and control firms would have been similar (Angrist and Pischke, 2009). Thus, to ensure that the effect of organization capital on dividend payments is not driven by time trends of dividend payments and the increases in the EPL index, we estimate dynamic models by decomposing *OrgCapPT* × *EPLIndexChanges* into separate periods to provide evidence supporting the parallel trend assumption. In particular, we create four variables ($EPL\ Increases_{t-2}$, $EPL\ Increases_{t-1}$, $EPL\ Increases_{t+1}$, $EPL\ Increases_{t+2}$) equal to 1 for firms headquartered in countries with an increase in the EPL index, one and two years before (after) the increase in the EPL index, and 0 for no changes. Our findings indicate that the interaction terms between *EPL Index Changes* and organization capital remain negative and significant, whereas the interaction variables between *EPL Index Changes* one and two years before the change in EPL index and organization capital are positive and statistically insignificant, suggesting that our DiD regressions satisfies the parallel trends assumption (see Fig. 1).[10]

Recent causal inference studies have pointed out potential challenges in the application of staggered DiD methods, often stemming from the common practice of using already-treated firms as control groups. However, the comparison between a group treated earlier and a group treated later may be susceptible to estimation bias due to variations in treatment effects or differences in the timing of treatment (Baker et al., 2022; Chen et al., 2024; Goodman-Bacon, 2021; Sun and Abraham, 2021). In our context, this issue is pertinent as the effects of increases or decreases in the EPL index are introduced gradually and may vary over an extended sample period. To address these concerns, we conduct two robustness checks using alternative estimators proposed by Baker et al. (2022): (1) the stacked regression estimator (Cengiz et al., 2019) and (2) the Callaway and Sant'Anna (2021) estimator.

The stacked DiD approach is a standard method that prevents already-treated observations from being used as controls for later treatments. This method mitigates bias arising from time-varying treatment effects in staggered DiD designs by creating multiple stacks (datasets). Each stack consists of observations from units exposed to treatment simultaneously. In our study, we utilize all observations before and after treatment, ensuring that control groups are "clean" or "good" in the sense that they are either untreated or not yet treated (Krueger et al., 2024). On the other hand, the Callaway and Sant'Anna (2021) approach estimates cohort-time-specific treatment effects using not-yet-treated, last-treated, or never-treated units as clean controls. In contrast, the stacked regression approach creates event-specific datasets for each exogenous event (shock) with treated cohorts and clean controls within the treatment windows. Additionally, this method provides a doubly robust estimator, allowing users to specify control units and exclude previously treated units to prevent them from influencing the results. The control group is limited to those who have never received treatment or those who have not yet been treated during the current period.

Panel B of Table 4 presents the results and confirms our previous findings by using both the stacked DiD regressions as well as the Callaway and Sant'Anna estimator. Specifically, we find that the interaction between EPL Increases and organization capital is negative, suggesting that as labor markets become less flexible the positive effect of organization capital on dividend payouts weakens.

5.2. Instrumental variable analysis

We also consider the scenario under which an unobserved variable, that is not necessarily fixed, influences organization capital and dividend payouts. To mitigate this issue, we employ a two-stage instrumental variable (IV) analysis. We need our instrument to explain firms' investments in organization capital (satisfy the relevance condition) and have no direct impact on dividend payouts (satisfy the exclusion criterion). In doing so, we follow previous research (Francis et al., 2021; Leung et al., 2018) and use industry-level growth uncertainty as our instrument. To measure industry-level growth uncertainty (*Ind_GRU*), we first estimate firm-level standard deviations of yearly assets growth rates over the previous four years and then take the industry median of those firm-level standard deviations (excluding the focal firm).

Carlin et al. (2012) posit that companies operating in industries characterized by rapid changes allocate fewer resources to organization capital due to the increased risk of technological obsolescence. Thus, we anticipate that industry-level growth uncertainty to relate negatively to organization capital. However, a problem with the above instrument may arise if industry trends influence firms'

[8] We use difference-in-differences (DiD) regressions because they allow us to account for pre-treatment differences in dividend payouts between treated and control groups by examining their trends before the change in EPL index.

[9] Any changes in the EPL index at the country-level are unlikely to be influenced by the actions of a specific firm. Therefore, these changes can be considered as external and unrelated to a firm's organization capital.

[10] Our observations are fewer than the previous regressions due to data unavailability on EPL index.

Table 5
Quasi-Natural Experiment.

	(1)	(2)
$OrgCap_{PT}$	0.005*** (0.001)	0.005** (0.002)
EPL Increases	−0.001 (0.000)	−0.003 (0.002)
$OrgCap_{PT}$ *x EPL Increases*	−0.001** (0.000)	−0.001** (0.000)
$OrgCap_{PT}$ *x EPL* $Increases_{t-2}$		0.001 (0.004)
$OrgCap_{PT\ t}$ *x EPL* $Increases_{t-1}$		−0.006 (0.007)
$OrgCap_{PT}$ *x EPL* $Increases_{t+1}$		−0.021*** (0.006)
$OrgCap_{PT}$ *x EPL* $Increases_{t+2}$		−0.019*** (0.004)
Control Variables	Y	Y
Year x Industry FE	Y	Y
Firm FE	Y	Y
Adjusted R^2	0.745	0.781
Number of Obs.	148,002	148,002

Panel B: Alternative Estimators

	Stacked Regression	**Callaway & Sant'Anna Estimator**
	(1)	**(2)**
$OrgCap_{PT}$	0.003*** (0.000)	0.003** (0.002)
EPL Increases	−0.001 (0.001)	−0.001 (0.001)
$OrgCap_{PT}$ *x EPL Increases*	−0.002** (0.000)	−0.003** (0.001)
Control Variables	Y	Y
Firm, Year, & Country Fixed Effects		Y
Stack Fixed Effects	Y	

This table displays the relationship between organization capital and dividend payouts after employing a quasi-natural experiment leveraging changes in the employment protection index (EPL). The dependent variable is dividend payouts (*DIV*), calculated as cash dividends scaled by total assets. $OrgCap_{PT}$ is organization capital, measured following Peters and Taylor (2017) and scaled by total assets. *EPL Increases* is equal to 1 for firms headquartered in countries with increases in their EPL index and equal to 0 for no changes. *EPL* $Increases_{t-2}$, and *EPL* $Increases_{t-1}$,(*EPL* $Increases_{t+1}$, *EPL* $Increases_{t+2}$) are equal to 1 for firms headquartered in countries with an increase in the EPL index, one and two years before (after) the increase in the EPL index, and equal to 0 for the firms headquartered in countries with no changes in the EPL index. Control variables are the same as in Table 4. Panel A displays the impact of organization capital and dividends using DiD regressions, whereas Panel B presents the estimates using the stacked regression approach and the Callaway and Sant'Anna (2021) estimator. We use all observations from before and after treatment. The control group in these regressions are never-treated and not-yet-treated firms. Standard errors are included in the parentheses and are clustered by country. ***. **. and * denote significance at the 1 %, 5 %, and 10 % levels, respectively. All variables are defined in Appendix A.

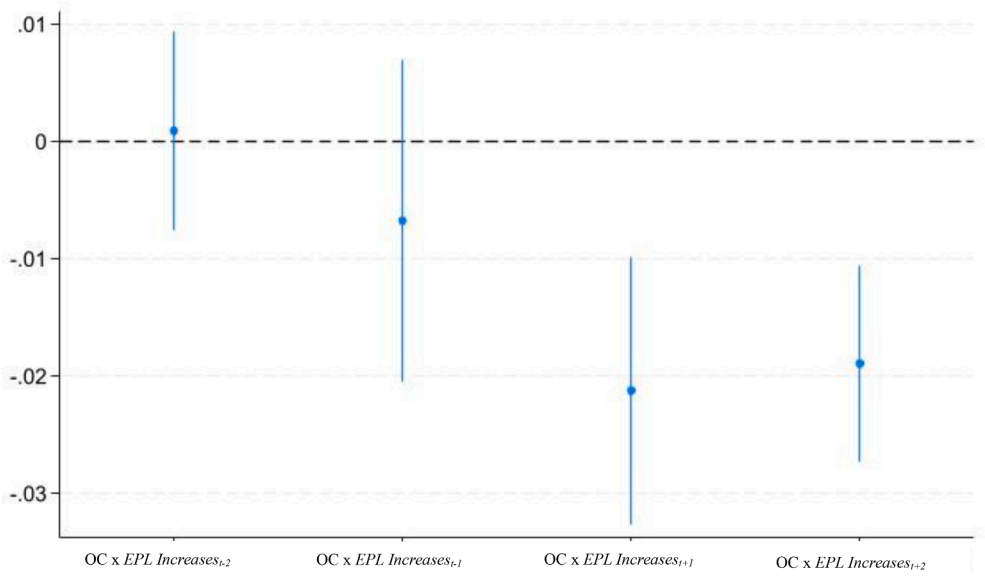

Fig. 1. Parallel Trends Assumptions.

decisions regarding investments in organization capital, thereby impacting payout policies. In addressing this concern, and eliminating the impact of industry-level payouts from the variable representing industry-level growth uncertainty, we follow Francis et al. (2021) and Leung et al. (2018), and estimate the following regression for each industry (two-digit SIC) and use the residuals (*Ind_Gr_Res*) from this regression as our instrument:

$$Ind\_GRU_{j,t} = \alpha + IND\_DIV_{j,t} + \varepsilon_{j,t} \quad (4)$$

In addition to the above, we follow Hasan et al. (2022) and Hasan et al. (2021) and employ an instrumental variable regression estimation developed by Lewbel (2012) using heteroscedasticity-based instruments. This method uses heteroscedasticity in the data to create internal instruments, suggesting that our new instrument overcomes any issues with the exclusion criterion. To construct this

Table 6
Instrumental Variable Analysis.

	Full Sample			**Excluding USA and Japan**		
	First-Stage Results (1)	**Second-Stage Results (2)**	Lewbel (2012) **Approach (3)**	**First-Stage Results (4)**	**Second-Stage Results (5)**	Lewbel (2012) **Approach (6)**
Ind_Gr_Res	−0.185*** (0.042)			−0.072*** (0.012)		
Instrumented Organization Capital		0.088** (0.047)	0.007*** (0.002)		0.224** (0.090)	0.006** (0.003)
Remaining Control Variables						
Firm Size	−0.066*** (0.003)	−0.008* (0.005)	−0.001 (0.000)	−0.052*** (0.008)	0.014 (0.026)	−0.002 (0.001)
Profitability	0.025* (0.015)	0.111*** (0.006)	0.042*** (0.002)	−0.071* (0.032)	0.110*** (0.034)	0.084*** (0.006)
StockReturn	0.000 (0.001)	−0.002** (0.000)	−0.003*** (0.000)	−0.003** (0.001)	−0.001 (0.001)	−0.002** (0.001)
EarningsVol	0.107*** (0.033)	−0.024** (0.012)	−0.005 (0.004)	0.108 (0.121)	−0.050 (0.044)	−0.017 (0.012)
Firm Age	0.036*** (0.006)	0.005 (0.003)	0.001 (0.000)	0.002 (0.122)	0.001 (0.002)	0.001 (0.001)
Tangibility	−0.025*** (0.008)	−0.008* (0.005)	−0.001 (0.012)	0.055* (0.034)	−0.014 (0.015)	0.003 (0.002)
Leverage	−0.046*** (0.008)	−0.009* (0.005)	−0.006*** (0.001)	−0.181*** (0.021)	0.015 (0.064)	−0.024*** (0.005)
MKTB	0.0079*** (0.002)	0.004*** (0.001)	0.003*** (0.000)	−0.006 (0.005)	0.006*** (0.002)	0.004*** (0.000)
R&D	0.850*** (0.125)	0.052* (0.024)	0.026* (0.010)	0.845** (0.241)	−0.142 (0.240)	0.021 (0.019)
DummyXRD	−0.007*** (0.003)	−0.003*** (0.000)	−0.004*** (0.000)	−0.006** (0.003)	−0.005*** (0.001)	−0.004*** (0.001)
Capex	−0.036*** (0.011)	−0.011 (0.007)	−0.002 (0.003)	−0.105*** (0.035)	0.021 (0.030)	−0.001 (0.002)
HHI	−0.011*** (0.003)	−0.001 (0.001)	0.001 (0.000)	0.006 (0.007)	−0.001 (0.003)	0.001 (0.001)
Cash Holdings	0.052*** (0.011)	0.011*** (0.002)	0.006*** (0.001)	0.025 (0.021)	0.011 (0.012)	0.015*** (0.002)
Repurchases	0.287*** (0.092)	0.021 (0.020)	0.006 (0.005)	0.255** (0.115)	−0.054 (0.115)	−0.004 (0.009)
FinMarketDepth	0.001*** (0.000)	−0.001 (0.000)	−0.001 (0.000)	−0.001*** (0.000)	−0.001 (0.000)	−0.001 (0.000)
GDP Growth	−0.005*** (0.001)	−0.001 (0.000)	−0.000 (0.000)	0.003** (0.001)	−0.001 (0.001)	−0.001 (0.000)
LnGDP	0.5446*** (0.033)	0.023*** (0.002)	0.014*** (0.002)	0.315*** (0.055)	−0.055 (0.081)	0.007 (0.005)
Year x Industry FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Test of endogeneity. relevance. and validity of instruments						
First-Stage partial F-Statistic	5.60***		26.40***	19.80***		21.20***
Hausman Test for exogeneity	5.30***		5.85***	5.65***		5.45***

This table presents results from applying instrumental variable analysis on the relationship between organization capital and dividends. In the first stage, the dependent variable is organization capital ($OrgCap_{PT}$), whereas in the second stage, the dependent variable is dividend payouts (*DIV*) and organization capital ($OrgCap_{PT}$) is replaced with its instrumented value from the first-stage model. Columns (1) and (2) reports the findings from the IV approach and Column (3) presents the second-stage results from the instrumental variable regression estimation using heteroscedasticity-based instruments, (following Lewbel's (2012) approach). Columns (4)-(6) present the respective results when we exclude USA and Japan. Standard errors are included in the parentheses and are clustered by firm. ***. **. and * denote significance at the 1 %, 5 %, and 10 % levels, respectively. All variables are defined in Appendix A.

instrument, we firstly regress our current instrument (*Ind_Gr_Res*) and the other control variables on the organization capital, and we then regress the same variables as well as the residuals from the previous regression on dividend payouts.

Table 6 reports the results. In Column (1) of Table 5, we find that industry-level growth uncertainty is negatively associated with organization capital, implying that companies in rapidly evolving sectors invest less in organization capital. Moreover, we conduct various tests to ensure the relevance and validity of our instrument. The values of F-statistics indicate that our instrument is not weak. In addition, the Hausman exogeneity test statistic is not significant, therefore, indicating that we can reject the hypothesis of exogeneity and that IV results are more reliable than OLS results. Finally, in Column (2) of Table 6 we document that the instrumented value of organization capital is positively associated with cash dividend payments.[11] Overall, our findings are consistent with our baseline results.

5.3. Change regression analysis

As an additional methodology, to mitigate the issue of reverse causality, we follow prior literature (Li et al., 2018; Leung et al., 2018; Hasan et al., 2021) and utilize change analysis. This regression approach is considered more resilient in elucidating the additional impact of organization capital on dividend payouts, as it minimizes potential noise in the model by eliminating unobserved effects that remain constant over time. Our results in Table 7 suggest that the coefficient of organization capital remains positive and statistically significant, providing additional support to our initial findings and showing that our results are not driven due to reverse causality.

5.4. Entropy balancing

While tests in Sections 5.1-5.3 contribute to mitigating endogeneity bias arising from unobservable heterogeneity, another potential source of endogeneity stems from factors influencing organization capital that are not adequately controlled in our models. This form of misspecification is typically ascribed to differences in observable characteristics between firms with higher/lower organization capital. For example, Panel B of Table 3 shows that smaller firms and those with low levels of leverage invest more in organization capital. If these conditions hold, any observed empirical correlation between organization capital and dividend payouts could stem from a combination of differences in fundamental characteristics and the causal effect of organization capital.

To address these concerns, we employ the method of entropy balancing (Hainmueller, 2012; Chapman et al., 2019; Colak et al., 2021). Entropy balancing is designed to systematically address covariate imbalance (i.e., differences in observables on one or more distributional moments) among multiple determinants of the outcome variable, without requiring specification of the functional relationship between independent and dependent variables (Hainmueller, 2012; Rosenbaum and Rubin, 1983, Shipman et al., 2017). This method is essential in our study as we observe several significant differences in the means of various variables when we partition our sample into a low organization capital subsample and a high organization capital subsample – using the median of the organization capital.

Thus, we use this approach to ensure that the differences in the control variables between the treated and control groups potentially stemming from a latent (missing) variable issue, no longer hinder valid inferences. As illustrated in Panel A of Table 8, entropy balancing eliminates statistically significant distributional differences across a set of observable covariates between subsamples of firms with high and low organization capital. In Panel B of Table 8, we use the sample with the post-weighting observations and re-run the regressions of Table 3. Panel B of Table 8 shows that in the entropy-balanced sample, the inferences from Table 3 remain unchanged.

6. Potential explanations

6.1. Agency channel

Our findings, as discussed in the previous sections, show a positive relationship between organization capital and dividends. In this section, we seek to explore if this result is consistent with the agency view of organization capital, and the notion that firms disgorge cash as a means to constrain managerial self-serving behavior (Easterbrook, 1984; Jensen, 1986). Thus, we posit that if firms with higher levels of organization capital are susceptible to more agency problems (Hasan and Uddin, 2022; Khoo and Cheung, 2023), one would anticipate that the positive relationship between organization capital and dividend payouts to become more pronounced in environments characterized by significant agency concerns.

To test this conjecture, we re-evaluate our baseline regressions by incorporating interaction terms between organization capital and

[11] Specifically, we find that the coefficient of organization capital (instrumented value) in the instrumental variable analysis is 0.088 which is substantially larger than the OLS coefficient of 0.006. The smaller OLS coefficient can be attributed to attenuation bias, which occurs due to measurement errors in organization capital. This bias leads to an underestimation of the true effect. The IV coefficient of 0.088 indicates a stronger and more significant relationship between organization capital and dividend payouts. The IV approach corrects for biases inherent in OLS estimations by addressing measurement errors and providing a more accurate representation of the causal effect. This larger coefficient suggests that organization capital has a substantial economic impact on dividend payouts, emphasizing the importance of accurate measurement and proper econometric techniques.

Table 7
Change Regression Analysis.

	Full Sample (1)	**Excluding USA and Japan (2)**
ΔOrgCap$_{PT}$	0.006*** (0.001)	0.008*** (0.002)
ΔControl Variables	Y	Y
Year x Industry FE	Y	Y
Firm FE	Y	Y
Adjusted R^2	0.353	0.381
Number of Obs.	192,038	87,580

This table presents the relationship between changes in the level of dividend payouts (*ΔDIV*) on changes in organization capital (*ΔOrgCap$_{PT}$*) and changes in control variables (ΔControl Variables), using ordinary least square (OLS) regressions with firm fixed effects. Control variables are the same as in Table 4. Standard errors are included in the parentheses and are clustered by firm. ***. **. and * denote significance at the 1 %, 5 %, and 10 % levels, respectively. All variables are defined in Appendix A.

Table 8
Entropy Balancing Method.

Panel A: Differences in Observables (covariates) after Entropy Balancing

Covariates	Mean Treated	Mean Control	Diff.	Variance Treated	Variance Control	Diff.	Skewness Treated	Skewness Control	Diff.
Firm Size	6.040	6.040	0.000	2.551	2.551	0.000	0.548	0.548	0.000
Profitability	0.112	0.112	0.000	0.006	0.006	0.000	0.016	0.016	0.000
StockReturn	0.190	0.190	0.000	0.326	0.326	0.000	2.684	2.585	0.101
EarningsVol	0.036	0.036	0.000	0.001	0.001	0.000	2.384	2.384	0.000
Firm Age	14.10	14.10	0.000	60.27	60.27	0.000	0.58	0.54	−0.030
Tangibility	0.284	0.284	0.000	0.027	0.027	0.000	0.816	0.953	−0.137
Leverage	0.190	0.190	0.000	0.025	0.025	0.000	0.684	0.684	0.000
MKTB	1.622	1.622	0.000	1.472	1.472	0.000	2.930	2.765	0.165
R&D	0.020	0.020	0.000	0.001	0.001	0.000	2.763	2.905	0.000
DummyXRD	0.404	0.404	0.000	0.241	0.241	0.000	0.390	0.390	0.000
Capex	0.046	0.046	0.000	0.002	0.0021	0.000	2.121	2.121	0.000
HHI	0.168	0.168	0.000	0.039	0.039	0.000	2.297	2.297	0.000
Cash Holdings	0.151	0.151	0.000	0.017	0.019	0.002	1.265	1.265	0.000
Repurchases	0.008	0.008	0.000	0.001	0.001	0.000	3.947	3.932	0.015
FinMarketDepth	113.545	113.545	0.000	13,649	12,560	1,089	6.793	6.793	0.000
GDP Growth	1.641	1.641	0.000	6.385	6.385	0.000	0.100	0.100	0.000
LnGDP	10.371	10.371	0.000	0.607	0.607	0.000	−2.661	−2.661	0.000

Panel B: The Relationship between Organization Capital and Dividend Payouts after Entropy Balancing

	Full Sample (1)	**Excluding USA and Japan (2)**
OrgCap$_{PT}$	0.007*** (0.001)	0.006** (0.001)
Control Variables	Y	Y
Firm	Y	Y
Year x Industry FE	Y	Y
Adjusted R^2	0.735	0.766
Number of Obs.	198,667	90,606

This table estimates the relationship between organization capital (*OrgCap$_{PT}$*) and dividend payouts (*DIV*) using estimates entropy balancing matching to ensure better covariate balance between treatment (*High OrgCap$_{PT}$*) and control (*Low OrgCap$_{PT}$*) groups by weighing observation such that the post-weighing mean and variance for treated and control samples are equal along the matching estimation. Panel A shows the descriptive statistics after employing the entropy balance method and Panel B reports the results of the effect of organization capital on dividend payouts after employing entropy balancing (Hainmueller. 2012). ***, **, and * denote significance at the 1 %, 5 %, and, 10 % levels, respectively. All variables are defined in Appendix A.

proxies for agency issues. The international context of our study enables us to employ both firm and country-level proxies for agency costs. Our first firm-level proxy for agency issues, following Hasan and Uddin (2022), is ownership dispersion (*DispersedOwn*). Research indicates that a larger shareholder base reflects more dispersed ownership and potentially more agency problems (Ang et al.,

2000).

Our second measure of firm-level agency issues captures overinvestment in organization capital (*OverOrgCap*$_{PT}$) and relies on the notion that key talents may be motivated to engage in excessive investments in organization capital to maximize their benefits.[12] We also use two measures of corporate governance quality, which are expected to relate to lower agency issues, namely board size (*BoardSize*) and Governance Pillar Score (*GovernanceScore*) (Chen et al., 2017; Fauver et al., 2017; Khan, 2019). We obtain data for board size from Boardex and Refinitiv and for the Governance Pillar Score from Refinitiv.,[13][14]Finally, to capture country-level agency costs, we utilize the Anti-Self-Dealing index, measuring the degree to which minority shareholders are protected from self-dealing favoring controlling shareholders (Djankov et al., 2008). As highlighted by Brockman et al. (2022), the anti-self-dealing index is influenced by the legal tradition of the country and serves as a reliable predetermined proxy for agency costs. Accordingly, we create *Low-Anti-Self-Dealing*, an indicator variable that takes the value of 1, if the respective value of the index is below the sample's median and zero otherwise. We, also consider pre and post-periods relevant to global board reforms[15] and construct *PostBoardReform*, an indicator variable that takes the value of 1 for the period after a country has implemented board reforms and zero otherwise. We argue that the post-reform periods are likely to exhibit higher governance quality and lower agency issues.

The outcomes of the regression analysis of our baseline model augmented with interaction terms between organization capital and agency costs are presented in Table 9, Columns (1) to (6). Panel A reports results for the full sample, while Panel B for the sample excludes the US and Japan. In Columns (1) and (2) the interaction term between organization capital and all firm-level proxies for agency concerns (i.e., dispersed ownership, overinvestment in organization capital, board size, and governance score) is both positive and statistically significant at the conventional level. Moreover, in column (5) the coefficient of the interaction term between organization capital and the anti-self-dealing index is positive and statistically significant at the 1 % level, consistent with the notion that the positive organization capital and dividend payouts relationship becomes more pronounced in countries with higher agency concerns. Moreover, the interaction between *PostBoardReform* and organization capital is negative, suggesting that in the period after the board reform (better governance quality and lower agency concerns), the effect of organization capital on dividend payouts is weaker.[16] In summary, the results of this analysis lend support to our agency-driven assertion that companies possessing higher organization capital tend to distribute more cash dividends as a strategy to mitigate the corresponding agency concerns.

6.2. *Does the signaling channel also drive our results?*

In the preceding section, our findings revealed an agency channel driving the positive relationship between organization capital and dividends. In this section, we aim to investigate the simultaneous existence of a signaling channel. Signaling theory suggests that managers employ dividends as a mechanism to communicate improved performance and optimistic prospects to external stakeholders, especially in environments marked by substantial information asymmetry (Bhattacharya, 1979, 1978; John and Williams, 1985; Grinstein and Michaely, 2005). In this regard, even though organizational capital provides firms with many benefits, it is neither monitored by companies nor reported in their financial statements (Lev et al., 2005). Thus, from a signaling perspective, the positive relationship between organization capital and dividends may be the outcome of managers using dividends to communicate their superior future performance. Consequently, one would anticipate that the positive relationship between organization capital and dividend payouts to become more prominent in environments marked by substantial information asymmetry.

To assess the above conjecture, we re-examine our baseline regressions by introducing interaction terms between organization capital and proxies for information asymmetries at both firm- and country-levels. To proxy for information asymmetries at the firm-level, we follow Elbadry et al. (2015) and use the natural logarithm of the number of shares traded annually divided by the number of common shares outstanding (*ShareTurnover*). Elbadry et al. (2015) suggest that information asymmetry concerns relate to a lower trading volume. Our second firm-level proxy is the number of analysts following the firm (*AnalystsNo.*). Previous research indicates that firms with a high number of analysts maintain a lower level of information asymmetry (Chen et al., 2024; Jiraporn et al., 2012). Finally, to capture country-level information asymmetries, we create *Bank-Based*, an indicator variable equal to one for firms located in bank-based economies and equal to zero for firms located in market-based economies (following Demirguc-Kunt and Levine, 2001). Financial intermediaries possess a comparative advantage in information collection and exhibit stronger incentives to monitor firms than other providers of capital (Hoshi et al., 1991; Dewenter and Warther, 1998; Chakraborty and Ray, 2006).

The results of the regression analysis of our baseline model augmented with interaction terms between organization capital and information asymmetries are presented in Table 10, Columns (1) to (3). Panel A reports results for the full sample, while Panel B for the

[12] We construct this measure in a manner akin to Richardson's (2006) overinvestment measure regarding CAPEX, R&D, and M&A activity. Specifically, we estimate a firm's optimal investment level in organization capital, as the predicted values from a dynamic regression of organization capital on several firm-level characteristics. We measure overinvestment in organization capital as the positive difference between observed and predicted organization capital.

[13] When we examine the impact of board size and governance pillar on the association between organization capital and dividend payouts the sample is smaller due to data unavailability.

[14] Unfortunately, we do not have access to ISS International database and we cannot construct another one firm-level governance index calculated from ISS database on 42 attributes (Chang et al., 2018).

[15] We have fewer observations because we focus only on the firms that are located in countries with board reforms and we also restrict our sample five years prior and after each reform (following Fauver et al., 2017).

[16] In Columns (2), (3), and (4), we have fewer observations due to data unavailability.

Table 9
Agency Problems Channel.

Panel A: Agency Problems Channel-Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)
$OrgCap_{PT}$	0.005** (0.001)	0.004*** (0.001)	0.012*** (0.004)	0.010** (0.004)	−0.000 (0.000)	0.006*** (0.001)
$OverOrgCap_{PT}$	0.001*** (0.000)					
$OrgCap_{PT}$ x $OverOrgCap_{PT}$	0.002* (0.001)					
DispersedOwn		0.000 (0.000)				
$OrgCap_{PT}$ x *DispersedOwn*		0.003*** (0.001)				
BoardSize			0.001 (0.001)			
$OrgCap_{PT}$ x *BoardSize*			−0.001** (0.000)			
GovernanceScore				0.001* (0.000)		
$OrgCap_{PT}$ x *GovernanceScore*				−0.001* (0.000)		
LowAnti-Self-Dealing					0.003*** (0.000)	
$OrgCap_{PT}$ x *LowAntiSelf-Dealing*					0.005*** (0.001)	
PostBoardReform						0.001 (0.000)
$OrgCap_{PT}$ x *PostBoardReform*						−0.002** (0.000)
Control Variables	Y	Y	Y	Y	Y	Y
Year x Industry FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	N	Y
Adjusted R^2	0.712	0.710	0.782	0.775	0.326	0.750
Number of Obs.	198,667	124,848	53,650	29,600	197,028	67,176

Panel B: Agency Problems Channel-Excluding USA and Japan

	(1)	(2)	(3)	(4)	(5)	(6)
$OrgCap_{PT}$	0.002* (0.001)	0.005*** (0.001)	0.034** (0.015)	0.050*** (0.011)	0.001 (0.001)	0.005** (0.003)
$OverOrgCap_{PT}$	0.002*** (0.000)					
$OrgCap_{PT}$ x $OverOrgCap_{PT}$	0.004* (0.001)					
DispersedOwn		0.002 (0.000)				
$OrgCap_{PT}$ x *DispersedOwn*		0.003* (0.002)				
BoardSize			−0.001 (0.001)			
$OrgCap_{PT}$ x *BoardSize*			−0.003** (0.000)			
GovernanceScore				0.001** (0.000)		
$OrgCap_{PT}$ x *Governance Pillar*				−0.001** (0.000)		
LowAnti-Self-Dealing					0.003*** (0.001)	
$OrgCap_{PT}$ x *LowAntiSelf-Dealing*					0.005*** (0.002)	
PostBoardReform						0.001 (0.001)
$OrgCap_{PT}$ x *PostBoardReform*						−0.003** (0.001)
Control Variables	Y	Y	Y	Y	Y	Y
Year x Industry FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	N	Y
Adjusted R^2	0.813	0.795	0.791	0.802	0.454	0.737
Number of Obs.	90,606	19,416	23,450	13,420	88,967	26,480

This table presents results from testing the agency channel regarding the relationship between organization capital and dividend payouts using ordinary least square (OSL) regressions, with fixed effects at the firm and industry × year levels. The dependent variable is dividend payouts (*DIV*), calculated as cash dividends scaled by total assets. $OrgCap_{PT}$ is organization capital, measured following Peters and Taylor (2017) and scaled by total assets. Control variables are the same as in Table 4. Panel A displays results from testing the agency channel in the full sample, whereas Panel B reports results from testing the agency channel while excluding the US and Japan from the full sample. Standard errors are included in the parentheses and are clustered by firm. ***. **. and * denote significance at the 1 %, 5 %, and 10 % levels, respectively. All variables are defined in Appendix A.

sample that excludes the US and Japan. In Column (1) the interaction term between organization capital and trading volume is both positive and statistically significant at the 1 % level, suggesting that in contrast to our expectations regarding the signaling channel, the positive relationship between organization capital and dividends becomes more pronounced in the presence of lower information asymmetries. Moreover, in columns (2) and (3) the coefficient of the interaction terms between organization capital and the number of analysts and bank-based economies are insignificant. In summary, our results do not indicate that the signaling channel explains the positive relationship between organization capital and dividends.

7. Dividends and firm valuation: The role of organization capital

So far, our empirical analysis documents a robust, positive relationship between organization capital and dividends, while lending strong support to the agency view of organization capital in an international setting. In this section, we aim to assess whether the market values differently dividends paid by high versus low organization capital firms. We hypothesize that if dividends paid from high organization capital firms are perceived as an effort to address or mitigate perceived agency issues associated with organization capital, then the market should value such disbursements at a premium. Thus, to test this hypothesis, we employ the valuation regression of Fama and French (1998) and Pinkowitz et al. (2006). Specifically, we examine the market valuation of dividend payouts in low versus high organization capital firms by estimating the following equation:

Table 10
Signalling Channel.

Panel A: Signaling Channel-Full Sample			
	(1)	**(2)**	**(3)**
$OrgCap_{PT}$	0.004*** (0.001)	0.005*** (0.002)	0.004*** (0.001)
ShareTurnover	0.000 (0.000)		
$OrgCap_{PT}$ x ShareTurnover	0.002*** (0.000)		
AnalystsNo.		0.004 (0.031)	
$OrgCap_{PT}$ x AnalystsNo.		0.028 (0.040)	
Bank-Based			−0.008 (0.005)
$OrgCap_{PT}$ x Bank-Based			0.004 (0.005)
Control Variables	Y	Y	Y
Year x Industry FE	Y	Y	Y
Firm FE	Y	Y	N
Adjusted R^2	0.752	0.775	0.280
Number of Obs.	132,012	198,667	139,022
Panel B: Signaling Channel-Excluding USA and Japan			
	(1)	**(2)**	**(3)**
$OrgCap_{PT}$	0.004*** (0.001)	0.003** (0.001)	0.002** (0.001)
Share Turnover	0.000 (0.000)		
$OrgCap_{PT}$ x Share Turnover	0.001*** (0.000)		
AnalystsNo.		−0.001 (0.001)	
$OrgCap_{PT}$ x AnalystsNo.		0.021 (0.018)	
Bank-Based			−0.004*** (0.001)
OrgCapPT x Bank-Based			−0.004 (0.003)
Control Variables	Y	Y	Y
Year x Industry FE	Y	Y	Y
Firm FE	Y	Y	N
Adjusted R^2	0.740	0.775	0.470
Number of Obs.	88,244	90,606	30,943

This table presents results from testing the signalling channel regarding the relationship between organization capital and dividend payouts using ordinary least square (OLS) regressions with fixed effects at the firm and industry × year levels. The dependent variable is dividend payouts (*DIV*), calculated as cash dividends scaled by total assets. *$OrgCap_{PT}$* is organization capital, measured following Peters and Taylor (2017) and scaled by total assets. Standard errors are included in the parentheses and are clustered by firm. ***. **. and * denote significance at the 1 %, 5 %, and 10 % levels, respectively. All variables are defined in Appendix A.

$$MV_{i,t} = \alpha + \beta_1 DIV_{i,t} + \beta_2 \Delta DIV_{i,t} + \beta_3 \Delta DIV_{i,t+1} + \beta_4 EARNINGS_{i,t} + \beta_5 \Delta EARNINGS_{i,t} + \beta_6 \Delta EARNINGS_{i,t+1} + \beta_7 R\&D_{i,t} + \beta_8 \Delta R\&D_{i,t} + \beta_9 \Delta R\&D_{i,t+1} + \beta_{10} INTEREST_{i,t} + \beta_{11} \Delta INTEREST_{i,t} + \beta_{12} \Delta INTEREST_{i,t+1} + \beta_{13} \Delta ASSETS_{i,t} + \beta_{14} \Delta ASSETS_{i,t+1} + \Delta MV_{t+1} + year + firm + \varepsilon_{i,t} \quad (5)$$

Where, X_t, ΔX_t, ΔX_{t+1} signify the level, change, and lead change in the level of variable X, respectively, scaled by total assets in year t. *MV* is a firm's market value at the end of the fiscal year, calculated as the market value of equity plus the book values of short and long-term debt. *EARNINGS* denotes earnings before extraordinary items plus interest, deferred tax credits, and investment tax credits. *R&D* signifies the firm's research and development expenses, while *INTEREST* represents the interest expense. *DIV* is common dividends paid, and *ASSETS* represents a firm's total assets.

The model's framework draws on Fama and French (1998), where the market value of a firm is postulated to be the sum of the market value of a solely equity-financed firm (paying zero dividends with equal pre-tax expected net cash flows) and the value effects of taxation on expected dividend and interest payments. In the context of Equation (5), if the other variables comprehensively capture information related to expected net cash flows from financing decisions, then the coefficients on dividend and debt-related interest variables are deemed to represent the tax effects in the model. To proxy for expected net cash flows, Fama and French (1998) use past, current, and future earnings, investment, and R&D. The change and lead change in total assets are included to represent the net investment component of expected net cash flows. The R&D variable is included due to the mandatory expensing of R&D, and the lead change in market value is included to account for unexpected components in future changes.

In Table 11, Columns (1) and (2) present our findings for the subsamples of firms with high and low organization capital, respectively. Columns (3) and (4) present the findings when using the same stratification for the non-US, non-Japan sample. The results in Columns (1) and (2) show the market valuation difference of dividend distributions between high and low organization capital firms. In economic terms, a total payout rate of 1 % of a firm's total assets enhances firm value by 9.961 % in high organization capital firms, compared to the 5.037 % increase observed in the low organization capital group.[17] Overall, our findings are in line with the

[17] Similar results are provided for the non-US sample in columns (3) and (4), where the value differential placed on a 1% increase in dividend payout rate of the firm's assets, in high versus low organization capital samples, is roughly 3% (i.e., 10.465% − 7.861%).

Table 11
Dividends Payout and Firm Valuation: The Role of Organization Capital.

	Full Sample		Excluding USA and Japan	
	(1) *High $OrgCap_{PT}$*	(2) *Low $OrgCap_{PT}$*	(3) *High $OrgCap_{PT}$*	(4) *Low $OrgCap_{PT}$*
DIV_t	9.961*** (0.929)	5.037*** (0.850)	10.465*** (1.642)	6.861*** (0.985)
ΔDIV_t	−2.617*** (0.674)	−2.415*** (0.508)	−4.204*** (1.024)	−2.523*** (0.610)
ΔDIV_{t+1}	3.310*** (0.661)	1.149** (0.509)	1.593* (0.962)	1.747*** (0.591)
$EARNINGS_t$	3.570*** (0.197)	2.756*** (0.190)	5.337*** (0.520)	3.870*** (0.292)
$\Delta EARNINGS_t$	−0.532*** (0.078)	−0.551*** (0.089)	−1.559*** (0.235)	−1.112*** (0.133)
$\Delta EARNINGS_{t+1}$	1.859*** (0.100)	1.301*** (0.096)	1.861*** (0.224)	1.195*** (0.134)
$R\&D_t$	5.100*** (0.680)	2.865*** (0.996)	1.899 (1.335)	−1.968 (1.362)
$\Delta R\&D_t$	2.408*** (0.620)	4.601*** (0.963)	2.082 (1.435)	5.511*** (1.200)
$\Delta R\&D_{t+1}$	7.091*** (0.704)	7.277*** (1.060)	2.672* (1.495)	0.660 (1.158)
$INTEREST_t$	−6.860*** (1.181)	−4.134*** (0.877)	−6.209* (3.504)	−4.328*** (1.273)
$\Delta INTEREST_t$	−0.506 (0.773)	−1.830*** (0.652)	3.947** (1.699)	1.275 (0.946)
$\Delta INTEREST_{t+1}$	−7.034*** (1.065)	−7.140*** (0.758)	0.314 (2.701)	−3.218*** (1.029)
$\Delta ASSETS_t$	0.257*** (0.037)	0,357*** (0.033)	0.103 (0.071)	0.239*** (0.040)
$\Delta ASSETS_{t+1}$	0.780*** (0.035)	0.968*** (0.031)	0.526*** (0.070)	0.871*** (0.035)
ΔMV_{t+1}	−0.354*** (0.013)	−0.366*** (0.010)	−0.328*** (0.024)	−0.392*** (0.011)
Year x Industry FE	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y
Adjusted R^2	0.742	0.713	0.787	0.725
Number of Obs.	77,049	70,926	18,816	40,817

This table presents results from applying valuation regressions on the full sample and on the subsamples of firms with high and low organization capital. The dependent variable MV_t is the market value of equity plus the book value of debt scaled by the book value of total assets. Standard errors are included in the parentheses and are clustered by firm. ***. **. and * denote significance at the 1 %, 5 %, and 10 % levels, respectively. All variables are defined in Appendix A.

notion that the market perceives organization capital as a potential cause for agency concerns, and consequently, dividend distributions originating from high organization capital are accorded a relatively higher value.

7.1. Dividends, firm valuation, and organization capital: The role of agency problems

In this section, we explore whether the differential impact of dividends on firm valuation on the subsamples of firms with high and low organization capital is in line with the agency view of organization capital. We test the above conjecture by investigating the varying impacts of dividend distributions for firms with high organization capital on firm value, considering subgroups categorized by high/low levels of both firm and country-level agency issues.[18] Our findings in Table 12 suggest that the premium assigned to dividend payouts for high organization capital firms increases when these firms also exhibit characteristics such as high ownership dispersion, significant overinvestment in organization capital, and are located in countries possessing a low anti-self-dealing index. For instance, results in column (5) indicate that a 1 % dividend payout rate relative to a firm's total assets enhances firm value by 16.863 % in high organization capital firms situated in low anti-self-dealing countries; representing an almost threefold effect compared to the 5.343 % increase observed for high organization capital firms situated in high anti-self-dealing countries.

8. Additional tests

We conduct a series of additional tests to further assess the robustness of our findings. Specifically, we re-estimate our baseline model using Tobit regressions to account for left-censoring in dividend payouts (Byrne and O'Connor, 2017a, b; Hassan and Uddin, 2021). Moreover, to ensure that the positive relationship between organizational capital and dividends is robust to time-invariant country characteristics (La Porta et al., 2000; Byrne and O'Connor, 2017a; Chang et al., 2018), we re-estimate our model while including additional country-level controls and specifically, national cultural dimensions, creditor rights and common law vs civil law. As an alternative approach, we also re-estimate our baseline model while including country-fixed effects.

Additionally, to account for the large differences in country representation in our sample, we re-estimate our regressions using inverse weighting by country sample size. This approach gives more weight to observations from countries with smaller representation, ensuring that our findings are not disproportionately influenced by countries with larger representation. Also, Hasan and Uddin (2022) argue that the positive influence of organizational capital on dividends might weaken as organizational capital levels rise, resulting in a non-linear relationship. To explore this potential non-linearity, we adopt the approach of previous studies (e.g., Wang et al., 2010; Hasan and Uddin, 2022) by employing a quadratic specification, incorporating organizational capital and its squared term into our regression analysis.

[18] We have fewer observations than in Table 11 because we focus only on firms with high organization capital.

Table 12
Dividends Payout, Firm Valuation, and Organization Capital: The Role of Agency Problems.

Panel A: Full Sample

	(1) Over-investment in $OrgCap_{PT}$	(2) Under-investment in $OrgCap_{PT}$	(3) High Ownership Dispersion	(4) Low Ownership Dispersion	(5) High Anti-Self Dealing	(6) Low Anti-Self Dealing
DIV_t	11.470*** (0.696)	7.677*** (0.710)	11.809*** (0.885)	7.295*** (0.631)	5.343*** (1.170)	16.863*** (0.367)
Control Variables	Y	Y	Y	Y	Y	Y
Year x Industry FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	N	N
Adjusted R^2	0.764	0.751	0.740	0.758	0.388	0.360
Number of Obs.	44,541	29,870	30,708	30,686	30,897	48,118

Panel B: Excluding USA and Japan

	(1) Over-investment in $OrgCap_{PT}$	(2) Under-investment in $OrgCap_{PT}$	(3) High Ownership Dispersion	(4) Low Ownership Dispersion	(5) High Anti-Self Dealing	(6) Low Anti-Self Dealing
DIV_t	11.294*** (1.374)	9.284*** (1.371)	9.878*** (2.130)	7.795*** (2.557)	6.343*** (1.170)	17.578*** (0.788)
Control Variables	Y	Y	Y	Y	Y	Y
Year x Industry FE	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	N	N
Adjusted R^2	0.810	0.775	0.760	0.902	0.388	0.350
Number of Obs.	10,496	12,655	8,563	8,762	6,188	13,244

This table presents results from applying valuation regressions only on firms with high organization capital. The dependent variable. MV_t is the market value of equity plus the book value of debt scaled by the book value of total assets. Subsamples are created based on the median of the initial sample (including both firms with high and low organization capital). Standard errors are included in the parentheses and are clustered by firm. ***. **. and * denote significance at the 1 %, 5 %, and 10 % levels, respectively. All variables are defined in Appendix A.

9. Conclusion

Several studies have emphasized the favorable effects of organization capital on productivity, investment, innovation capabilities, efficiency, and future operational performance. Despite these positive aspects, certain research contends that organization capital represents a source of various risks to shareholders. In this study, building on agency theory, asymmetric information, and external financing constraints, we investigate the link between organization capital, dividends, and firm value in a global setting. The first part of our study explores the relationship between organization capital and dividends using a sample of international listed firms. The second part of our study answers a previously overlooked but significant inquiry: Are dividend distributions from firms with relatively high organization capital more highly valued by the market? We propose that if investors perceive organization capital as a potential source of agency concerns, then the market should appreciate dividends distributed by firms with substantial organization capital comparatively more.

Our analysis offers several novel findings. First, our study adds to the literature by examining the relationship between organization capital and dividends in an international context. Through this exploration, we introduce unique evidence that the positive association between organization capital and dividends is not limited to the United States but extends globally, particularly in countries and firms more susceptible to agency issues. Consequently, our research ratifies organization capital as a factor influencing dividend payouts, on a global scale.

The final part of our study offers novel evidence that organization capital affects firm value through its impact on payouts. Specifically, we document that dividend payouts from firms with substantial organization capital are valued at a premium. This premium becomes more pronounced in countries and firms that are more vulnerable to agency concerns. Consequently, our collective findings support the perspective that views organization capital from an agency standpoint. In this aspect, our study adds to the body of literature highlighting the 'negative' facets of organization capital. Our findings link organization capital, dividends, and firm value and thus are expected to be of value to market participants especially investors and corporate managers.

CRediT authorship contribution statement

Ioannis Chasiotis: Writing – review & editing, Writing – original draft, Methodology, Investigation, Data curation. **Georgios**

Loukopoulos: Writing – original draft, Methodology, Investigation, Data curation. **Kanellos Toudas:** Writing – review & editing, Supervision, Project administration.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Definitions of variables

Variable	Definition
Panel A: Dependent Variable	
DIV	The ratio of cash dividends scaled by total assets.
Panel B: Organization Capital Measures	
$OrgCap_{PT}$	Organization capital measured as in Peters and Taylor (2017) and divided by total assets over the fiscal year (see Section 2.2 for details).
Panel B Firm Characteristics	
Firm Size	The natural logarithm of total assets over the fiscal year.
Profitability	The ratio of earnings before interest to total assets over the fiscal year.
Stock Return	Annual buy and hold stock return.
EarningsVol	The standard deviation of operating earnings scaled by total assets during the prior 5 years.
Firm Age	Calculated as the difference in year t and the first year the firm appeared in the CRSP and Compustat Global database, (in regression analysis, we use the natural logarithm of firm age).
Tangibility	The ratio of net property, plant, and equipment to total assets over the fiscal year.
Leverage	The book value of all liabilities divided by total assets over the fiscal year.
MKTB	The ratio of market-to-book value over the fiscal year.
R&D	The ratio of research and development expenditures to total assets over the fiscal year. *R&D* is replaced with zero when missing.
DummyXRD	Dummy variable equal to one if R&D expenditure is non-zero or non-missing, and zero otherwise.
Capex	The ratio of capital expenditures to total assets over the fiscal year.
HHI	The Herfindahl-Hirschman index of market concentration is based on sales in four-digit SIC industries.
Cash Holdings	The ratio of cash and cash equivalents to total assets over the fiscal year.
Repurchases	The ratio of share repurchases to total assets over the fiscal year. *Repurchases* is replaced with zero when missing.
Ind_Gr_Res	The residuals from the following regression: $\text{Ind_GRU}_{j,t} = \alpha + \text{IND_DIV}_{j,t} + \varepsilon_{j,t}$Where Ind_GRU is the firm-level standard deviations of yearly asset growth rates over the previous four years, and IND_DIV is the industry median of those firm-level standard deviations (excluding the focal firm).
$OverOrgCap_{PT}$	To construct this measure, we estimate a firm's optimal investment level in organization capital, as the predicted values from a dynamic regression of organization capital on several firm-level characteristics, specifically: $OrgCap_{PTt} = \beta_0 + \beta_1 OrgCap_{PTt-1} + \beta_2 FirmAge + \beta_3 CashHoldings + \beta_4 Profitability + \beta_{45} MKTB + \beta_6 Leverage + \beta_7 FirmSize + FixedEffects + \varepsilon_i$We measure overinvestment in organization capital as the positive difference between observed and predicted organization capital. Under-investment in $OrgCap_{PT}$ and Over-investment in $OrgCap_{PT}$ are based on the sample median.
DispersedOwn	It is defined as the natural log of one plus the number of common/ordinary shareholders (CSHR). High and Low *DispersedOwn* are based on the sample median.
BoardSize	It is the number of directors on the company's board.
GovernanceScore	It is provided by Refinitiv and corresponds to the Governance Pillar Score. It measures a company's systems and processes that ensure its board members and executives act in the, best interests of long-term shareholders and is based on verifiable data in the public domain. It ranges from 0 to 100, with higher values indicating better corporate governance.
AnalystsNo.	The natural logarithm of the number of analysts following a firm.
ShareTurnover	The natural logarithm of the number of shares traded annually divided by the number of common shares outstanding.
Bank-Based	Dummy variable equal to one if a country is above the mean value of the Structure index, and zero otherwise (following Demirguc-Kunt and Levine, 2001).
Panel C: Country Variables	
EPL Increases	It is equal to + 1 for firms headquartered in countries with increases in their EPL index; and equal to 0 for no changes.
FinMarketDepth	The ratio of stock market capital to GDP.
GDP Growth	GDP growth calculated as the annual percentage change in GDP.
LnGDP	Natural log of GDP per capita (in 2005 US dollars).
Anti-Self-Dealing	The average of ex-ante and ex-post private control of self-dealing developed by Djankov et al. (2008). Higher values of the Anti-Self-Dealing Index imply strong shareholder rights. Data on Anti-Self-Dealing are obtained from Andrei Shleifer's website. https://scholar.harvard.edu/shleifer/publications/law-and-economics-self-dealing.
Low-Anti-Self-Dealing	Dummy variable equal to one for firms located in countries with low-anti-self-dealing-index. High and low Anti-Self-Dealing are based on the sample median.
PostBoardReform	Dummy variable equal to one when at the beginning of the year a major board reform becomes effective in the country, and 0 otherwise (following Fauver et al., 2017).

Appendix B. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.intfin.2024.102074.

Data availability

Data will be made available on request.

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