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Freedom and the commitment to shareholder loyalty

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Freedom is a universal value that fundamentally shapes social and economic life. This study examines how a country's political freedom (PF) and economic freedom (EF) influence corporations' commitment to maintaining a loyal shareholder base (CSL). Using a sample of 45 countries from 2004 to 2015, our first-differencing regressions reveal that both PF and EF are positively associated with CSL. More importantly, the effect of PF is substantially stronger than that of EF. Furthermore, the impact of EF is contingent upon the level of PF, but not vice versa. Finally, our analysis indicates that improvements in PF are associated with greater increases in CSL for state-owned enterprises, suggesting that limited political freedom disproportionately undermines shareholder loyalty in these firms. These findings are robust to a range of tests for endogeneity concerns.

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Introduction

Life is dear,

love is dearer.

Both can be given up

for freedom.

(Petöfi Sándor)

The degrees of economic freedom (EF) and political freedom (PF) vary across years and countries. For instance, according to 2018 data from Freedom House, among 195 countries, 50 (26%) were classified as not politically free, 59 (30%) as partly free, and 86 (44%) as free. In terms of EF, the Heritage Foundation reports indicated that 96 out of 180 countries (53%) achieved at least moderate EF in 2018, whereas 84 (47%) exhibited only minimal EF. At the same time, the average level of EF has been improving while the average level of PF has been declining in recent years.¹ This study examines how varying levels of PF and EF differentially influence corporate behavior, particularly regarding firms' propensity for long-term commitment (LTC) versus short-term opportunism. Such sustained commitment represents a crucial determinant of economic development that requires continuous reinvestment in both tangible assets and social infrastructure. Specifically, we investigate how the commitment to shareholder loyalty (CSL) varies under different levels of freedom. The CSL reflects a corporation's dedication to retaining stable and long-term investor relationships, which is a critical characteristic for firms pursuing enduring relationships.

The association between freedoms and CSL is worth studying for two primary reasons. First, a firm's CSL may constitute a critical channel through which freedoms influence economic growth. When companies engage in opportunistic stance rather than cultivating a dedicated shareholder base, their activities are less likely to contribute to stable economic expansion. Although existing research has established a broad country-level correlation between freedoms and economic growth (for example, Wacziarg and Welch, 2008; Giavazzi and Tabellini, 2005; Roll and Talbott, 2003; Persson, 2003; De Haan and Sturm, 2000 and 2001; Dawson, 1998; Gwartney, Lawson, and Holcombe, 1999; Przeworski and Limongi, 1993; Barro, 1996), the specific channels through which these freedoms operate remain underexplored. At the firm level, finance literature offers limited piecemeal evidence for the effect of PF on the cost of external financing (Ben-Nasr, Boubakri, and Cosset, 2012; Qi, Roth, and Wald, 2010), corporate risk-taking (Boubakri, Mansi, and Saffar, 2013; Caprio, Faccio, and McConnell, 2011) and corporate governance (Stulz, 2005). This study addresses this gap by examining how both freedoms influence corporations' CSL, which is a key element of firms' long-term commitment and a potential mechanism linking freedoms to economic growth.

Second, this study not only examines whether PF and EF influence CSL, but also assesses their relative importance. The remarkable economic expansion of China following the 2008 financial crisis has reignited fundamental debates regarding a country's optimal development pathways. The "China Model" posits that the economy can grow faster if a country has substantial economic freedoms with a centralized government (characterized by lower PF) (He and Xu, 2004). This framework claims to offer developing countries a strategic advantage by prioritizing economic reforms over political transformation. But does this "late-comer advantage" hold true? By analyzing which freedom more substantially drives CSL and exploring their potential interaction effects, this study provides empirical insights into this ongoing debate.

To measure CSL, we utilize the "Shareholder Loyalty" index from the Thomson Reuters ASSET4 database. This index captures two key dimensions of a firm's commitment to maintaining a loyal shareholder base: (1) the degree to which a firm delivers strong and sustainable financial returns to its shareholders, and (2) the transparency and reliability of its financial communication. While the "Shareholder Loyalty" index overlaps somewhat with traditional corporate governance ratings, particularly those assessing financial transparency, it differs in a crucial way. Existing governance metrics emphasize formal policies ("on the books") protecting minority shareholders. In contrast, the "Shareholder Loyalty" index tends to focus on the actual effectiveness of a firm's CSL practices, that is, their actions or tangible outcomes rather than a governance orientation.

Higher levels of PF are associated with stronger property rights protection, greater freedom of expression, reduced government corruption and expropriation, and improved information transparency. These institutional features collectively foster more favorable investment climates, healthier political environments, and sound legal environments. Consequently, corporate managers encounter a broader array of high-quality investment opportunities and are motivated to build a loyal shareholder base by providing sufficient financial returns, as measured by metrics such as ROE, return on invested capital, and dividend payout ratio. Simultaneously, in high PF environments, corporate controllers should strive to conduct faithful and transparent communications with their shareholders to maintain long-term relationships, thereby avoiding major trust-breaking incidents such as earnings restatements, accounting controversies, and insider dealings (Dechow, Richardson, and Tuna, 2003; Richardson, Tuna, and Wu, 2002; Dechow, Sloan, and Sweeney, 1996; Aharony, Lin, and Loeb, 1993; Watts and Zimmerman, 1990). In contrast, past studies have also revealed that increased EF is associated with easier access to new businesses and high competition in the market (Giavazzi and Tabellini, 2005; De Haan and Sturm, 2001). In such environments, corporate controllers are incentivized to prioritize shareholder loyalty as a strategic safeguard against shareholders' attrition to competing firms.

Although both PF and EF are associated with distinct determinants of CSL, we contend that PF exerts a more fundamental influence because PF functions as an institutional prerequisite for the effective functioning of EF. In environments with limited PF, where government expropriation risks are elevated and government transparency is limited, the allocation of economic freedoms may become politicized. Rather than being distributed efficiently, EF privileges may be preferentially allocated to firms with political connections, thereby undermining EF's potential benefits for broader shareholder interests. Nonetheless, determining which form of freedom exerts a greater influence on CSL constitutes an empirical question.

Using a panel sample of 14,524 firm-year observations from 45 countries between 2004 and 2015, we first find that both PF and EF exhibit positive correlations with CSL (results not tabulated). However, interpreting these level regressions raises two critical issues: (1) PF and EF are highly correlated (within-sample correlation = 0.61), making it difficult to disentangle their individual effects, and (2) the observed relationships may be driven by omitted variables at either the country or firm level that influence PF, EF and CSL, rather than a direct causal link.

To address the first issue and partially mitigate the second, we utilize the time-varying nature of the PF and EF ratings and employ the first-differencing (FD) method inspired by Duchin, Matsusaka, and Ozbas (2010).² First, while PF and EF levels are strongly correlated, their changes are not. Specifically, changes in

PF (EF) index show no significant correlation with changes in the EF (PF) index in previous, concurrent, or subsequent years. Thus, the high correlation between PF and EF levels does not pose a major concern for the FD specification. Second, the FD method helps mitigate potential biases arising from time-invariant factors that may be correlated with PF, EF, and CSL.

The FD analysis produces compelling results. Across both the full sample and our main sample of countries that experienced at least one major change in PF or EF, PF demonstrates a significant impact on CSL, with its coefficient exhibiting greater economic significance than EF's. In contrast, EF fails to show a statistically significant effect. These results indicate that PF plays a more substantial role than EF in determining CSL.

Next, we investigate the potential interdependence between the effects of PF and EF. Employing the FD approach, our analysis reveals that the impact of EF on CSL is contingent upon the level of PF, whereas the effect of PF is largely independent of EF. This asymmetric relationship underscores the greater importance of PF in promoting CSL and suggests that economic reforms, while often more readily implementable, may be ineffective without accompanying political reforms.

We then conduct a series of robustness tests to evaluate the validity of the estimated effects of freedoms, particularly PF, on CSL. Although the FD approach effectively mitigates endogeneity issues related to unobserved time-invariant factors, its results may still be subject to other sources of endogeneity. This occurs because the evolution of PF and EF could coincide with uncontrolled concurrent changes that also influence CSL. To address this concern, we implement three additional tests.

First, we test the robustness of our results with additional controls. We repeat the FD analysis and incorporate additional country-level governance control variables that vary over time and may be correlated with both PF and CSL. Specifically, we incorporate the six governance indicators from the World Bank's *Worldwide Governance Indicators* (WGI): political stability and absence of violence, voice and accountability, rule of law, government effectiveness, regulatory quality, and control of corruption. The core findings remain robust to the inclusion of these controls. Furthermore, we conduct subsample analyses by partitioning the sample according to economic development status and legal origin. The results consistently demonstrate that the positive and statistically significant effect of changes in PF on CSL persists across all subsamples.

The second test is based on the observation that the magnitude of changes in the PF score across countries is similar (either by 1 or 0.5). Nevertheless, some changes result in a major change of a country's PF status (free, partly free and not free) and some do not. We therefore differentiate major changes in freedom from minor ones. If PF and CSL evolve with some unobserved concurrent factors, a major change in PF should not have a larger effect on CSL than a minor change, as the magnitudes of major and minor changes in PF scores are similar. For instance, the average change in the PF score of major improvements is 0.54, while that of minor improvements is 0.53. On the contrary, if there is a causal effect from PF to CSL, the effect of a major change in PF should be stronger, assuming that a cross-status change in PF has a greater shock on corporate long-term commitment. Interestingly, we observe that while a major change in PF exerts a stronger influence on CSL than a minor change, this pattern does not hold for EF. These test results affirm the validity of the impact of PF on CSL.

The third test assumes that, if there are unobserved transient factors that cause concurrent changes of freedom and CSL, the impact of freedom on CSL could be reversed over time. Nevertheless, our results demonstrate that the impacts of PF and EF do not reverse in subsequent years.

Lastly, we use state ownership as an instrument to further validate the causal effect of PF on CSL. If the relationship were driven by a non-political factor that correlates with both PF and CSL (e.g., an unobserved economic growth opportunity), then we would expect private companies—typically more sensitive to market incentives—to exhibit a stronger response in CSL. However, if the relationship is indeed political, state-owned enterprises (SOEs), which are more directly exposed to political changes, should exhibit greater sensitivity. Consistent with the latter interpretation, we find that the impact of PF on CSL is significantly more pronounced among SOEs, supporting the view that political factors are driving the change in CSL.

The remainder of this paper is structured as follows. The second section presents the variables and descriptive statistics. The third section reports the empirical results, and the fourth section concludes.

Variables and samples

CSL. We obtain the Commitment to Shareholder Loyalty (CSL) index from the Thomson Reuters ASSET4 database, which provides objective, systematic, and relevant environmental, social, governance (ESG), and economic data for over 6,500 publicly listed firms. The database tracks 250 key performance indicators dating back to the fiscal year 2002. Thomson Reuters collects this data annually from corporate reports and other public sources, and converts it into consistent, comparable units to enable quantitative analysis. During this process, analysts compile approximately 900 assessment points per company. Each data point in Thomson Reuters ASSET4 undergoes stringent procedural controls and multi-stage verification, including automated quality checks, data validation, and historical benchmarking. These measures ensure high standards of accuracy, timeliness, and reliability. The 900 data points are then serve as inputs to an equally weighted framework to compute more than 250 key performance indicators. These indicators are further organized into 18 categories across four core pillars: economic performance, corporate governance, social performance, and environmental performance. Each year, firms receive a z-score ranging from 0 to 100 for every pillar, allowing them to benchmark their performance against industry peers.

Specifically, ASSET4 assesses firms' economic performance across three dimensions: client loyalty, corporate performance, and CSL. CSL measures a company's management dedication and effectiveness in generating strong, sustainable investment returns. It captures a firm's ability to maintain a loyal shareholder base by generating consistent returns and providing transparent and trustworthy long-term communication with investors. The CSL index comprises 18 evaluation criteria: profit warnings, earnings restatement, auditor independence, insider dealing controversies, accounting compliance, accounting controversies, cash flow growth, return on invested capital, liquidity, ROE, debt-to-equity ratio, Fitch credit rating, retained earnings, long-term debt, stock option dilution, dividend payout ratio, the ratio of non-audit to audit fees, and pension underfunding.

The first dimension within CSL is faithful communication, measured by the first 6 items reflecting accounting and informational integrity. The second dimension is sustainable financial return, captured by the remaining 12 items reflecting profitability and capital stewardship. Each item is assigned a z-score ranging from 0 to 100. For this study, we divide the original CSL score in year t by 100. The detailed CSL metrics are provided in Appendix A.

Freedoms. Our analysis focuses on two key independent variables: Political Freedom (PF) and Economic Freedom (EF).

Following Guedhami, Kwok, and Shao (2017), we employ the PF index developed by Freedom House to evaluate a country's level of political freedom. Freedom House annually assesses each country's political rights and civil liberties, assigning two separate scores on a 1 to 7 scale. A score of 1 indicates the highest degree of freedom, while a score of 7 represents the lowest level of freedom. Freedom House's ratings are derived from comprehensive evaluations of multiple factors, including political participation and pluralism, freedom of expression and belief, electoral processes, rule of law, government functionality, organizational and associational rights, as well as personal autonomy and individual rights. Given the high correlation ($r = 0.9$) between political rights and civil liberties scores in our sample, we compute the PF rating by averaging these two scores to reflect a country's overall PF status. To ensure that higher values correspond to greater PF, we construct our PF measure by subtracting the original average score from 7.

We measure Economic Freedom (EF) using the annual index published by the Heritage Foundation.³ This index evaluates a country's level of economic freedom through 12 distinct components, organized into four categories: (1) Rule of Law (including government integrity, property rights, and effective functioning of the justice system); (2) Government Size (covering tax burden, fiscal health, and government spending); (3) Regulatory Efficiency (encompassing labor, monetary, and business freedoms); and (4) Open Markets (including investment, trade, and financial freedoms). Each component is scored on a 0–100 scale with equal weighting. To isolate the distinct effects of EF from PF, we calculate our EF measure by averaging the scores from the six components in the Regulatory Efficiency and Open Markets categories, as these directly reflect EF. The remaining components concerning Rule of Law and Government Size are more closely associated with PF and are therefore excluded from our EF measure.

Control variables. We extract financial data from Compustat Global and Compustat North America. All the firm-level variables are winsorized at the 1% level to avoid the influence of extreme values. At the firm level, we employ nine variables to control for a firm's financial constraint, growth potential, and social responsibility: firm size (*Size*), leverage (*Debt Ratio*), asset return (*ROA*), cash holding (*Cash Ratio*), research capability (*R&D*), firm sales growth (*Sales Growth*), market-to-book ratio (*Tobin's Q*), degree of corporate social responsibility (*CSR*), and degree of corporate governance (*Corporate Governance*). We construct a firm's CSR score by averaging the environmental and social scores from the Thomson Reuters ASSET4 database. The first four variables cover a firm's access to capital and financial slack, the next three variables generally assess a firm's growth opportunities, and the last two variables capture the extent to which a firm is socially accountable.

At the country level, following the previous literature on international corporate social responsibility studies (e.g., Ioannou and Serafeim, 2012; Liang and Renneboog, 2017; Dyck, Lins, Roth, and Wagner, 2019), we control for the extent of stock market development (*Stock Market*) and economic development (*GDP per capita* and *GDP growth*).

The complete definitions of all variables and their respective data sources are presented in Appendix A. We also report the summary statistics and correlations of the variables in Appendix B.

Sample. For our analysis, we exclude financial firms (SIC codes 6000–6999) and utility companies (SIC codes 4900–4999) from the sample due to their highly regulated operating environments.

Table 1 PF, EF and Corporations' CSL across countries.

Country	N	PF	EF	CSL
Australia	875	6.00	8.61	0.72
Austria	93	6.00	7.84	0.62
Belgium	136	6.00	8.06	0.68
Brazil	119	5.00	5.97	0.53
Canada	718	6.00	8.19	0.65
Chile	47	6.00	7.71	0.55
China	165	0.50	5.22	0.37
Colombia	18	3.50	7.74	0.85
Denmark	19	6.00	8.75	0.53
Egypt	14	1.61	5.69	0.23
Finland	24	6.00	7.49	0.72
France	625	6.00	7.09	0.66
Germany	525	6.00	7.54	0.55
Greece	97	5.27	6.58	0.25
Hungary	14	5.36	7.56	0.65
India	223	4.50	5.17	0.66
Indonesia	91	4.17	5.78	0.47
Ireland	70	6.00	8.37	0.52
Israel	58	5.49	7.49	0.43
Italy	138	5.83	7.29	0.56
Japan	2977	5.66	7.53	0.41
Luxembourg	46	6.00	7.65	0.61
Malaysia	124	3.00	7.19	0.47
Mexico	95	4.06	7.04	0.39
Morocco	4	2.50	6.40	0.19
Netherlands	219	6.00	8.14	0.69
New Zealand	66	6.00	8.61	0.70
Norway	139	6.00	7.09	0.65
Panama	5	5.20	6.80	0.87
Peru	3	4.50	7.20	0.14
Philippines	40	4.00	6.28	0.64
Poland	37	6.00	7.20	0.33
Portugal	58	6.00	6.94	0.37
Russia	111	1.32	5.40	0.57
Singapore	195	2.80	8.57	0.66
South Africa	257	5.00	6.51	0.65
South Korea	352	5.19	7.33	0.39
Spain	227	6.00	7.49	0.50
Sri Lanka	4	2.50	5.85	0.55
Sweden	16	6.00	8.02	0.55
Switzerland	325	6.00	8.20	0.62
Thailand	75	2.26	6.59	0.69
Turkey	81	3.61	6.69	0.68
U.K.	607	6.00	8.54	0.41
U.S.	4392	6.00	8.28	0.66
Sum/Mean	14524	5.61	7.77	0.57

This table shows the sample size and the country means of PF, EF, and corporations' CSL for each country, with all the variables being defined in Appendix A.

After further removing firms with abnormal values⁴ or with missing financial data, we obtain a sample of 14,524 firm-year observations across 45 countries from 2004 to 2015.⁵ As shown in Table 1, significant heterogeneity in CSL, PF and EF exists across countries. The country-level averages of CSL exhibit significant cross-country variation, with values extending from 0.138 (Peru) to 0.873 (Panama). PF exhibits a range from 0.50 (China) to 6.00 (e.g. Finland), with a mean value of 5.61. Likewise, EF values range from 5.17 (India) to 8.75 (Denmark), with a sample average of 7.77.⁶

In the subsequent analyses, however, we will focus on the countries that have experienced at least one major change in PF or EF between 2004 and 2015. A major change in freedom reflects a change that leads to a re-categorization of a country's freedom status (free, partly free/moderately free and not free/unfree).⁷ We have special interest in this subsample for two reasons. First,

countries that have never had a major change in freedom are mostly either free countries (such as most of the developed countries) or not-free countries under persistent dictatorship. The investment environment in these countries should be different from countries that are subject to major changes. We expect to document larger effects of freedoms in the FD analysis for countries with major changes in freedom. Second, the countries that account for large portions of the sample are all developed countries with no major changes in freedom, and exclusion of these countries generates a more balanced sample. The sample of countries with major changes in freedom includes 3,540 firm-year observations from 17 countries. Appendix D reports all the country years that experienced a major change in either political freedom or economic freedom.

Empirical results

We first present the effects of freedoms on CSL and show the mutual reliance between PF and EF in determining CSL. We then conduct several robustness tests to address endogeneity concerns. Lastly, we demonstrate that the impacts of freedoms are stronger among firms with state ownership.

The effects of PF and EF on CSL. As discussed previously, the level regression is subject to serious multicollinearity and endogeneity concerns. We thus examine the effects of PF and EF on CSL in a first-differencing (FD) analysis inspired by Duchin et al. (2010) to partially address these concerns. First, the FD approach helps mitigate endogeneity concern arising from unobserved time-invariant factors that are correlated with both freedoms and CSL. We are inspired by the approach of Duchin et al. (2010) by employing the FD method while including both the change form and absolute form of all control variables consistently across all estimations. This approach provides better control for unobserved time-varying factors. Second, although the levels of the PF and EF ratings are highly correlated in the sample, their changes, ΔPF and ΔEF , are not. Appendix C demonstrates the p-values of the correlations among ΔPF and ΔEF between year $t-1$ and year $t+1$. Fortunately, ΔPF in year t is not significantly correlated with ΔEF between year $t-1$ and year $t+1$, and vice versa. The longitudinal independence between ΔPF and ΔEF suggests that multicollinearity is not a major concern in the FD approach and relieves the concern that the effect of one freedom on CSL, if there is any, is due to a change of the other freedom in adjacent years.

The FD analysis is based on the following model

$$\begin{aligned} \Delta CSL_{i,t} = & \beta_0 + \beta_1 * \Delta(\text{Freedoms})_{i,t-1} \\ & + \beta_2 * \Delta(\text{firm level controls})_{i,t-1} \\ & + \beta_3 * \Delta(\text{country level controls})_{i,t-1} \\ & + \beta_4 * (\text{firm level controls})_{i,t-2} \\ & + \beta_5 * (\text{country level controls})_{i,t-2} \\ & + \beta_6 * (\text{year})_t + \varepsilon_{i,t} \end{aligned} \quad (1)$$

Table 2 shows the results of the FD analysis. To account for concurrent changes in a country's financial environment and economic development, we control for one-year lagged changes in country-level factors. To capture time-varying factors correlated with PF, EF and CSL, we further control for two-year lagged firm-level and country-level factors. Additionally, we include year dummies to capture year-specific shocks. In the full sample (Model 1), ΔPF_{t-1} has a significant and positive coefficient of 0.054, while ΔEF_{t-1} does not have a significant coefficient.

Next, to assess whether the effect of freedom is more prominent among countries with major changes in freedom, we repeat the FD analysis in the sample of countries that have

Table 2 PF, EF, and CSL in FD analysis.

	Full Sample (1) ΔCSL_t	Countries with a Major Change (2) ΔCSL_t
ΔPF_{t-1}	0.054* (0.03)	0.135*** (0.03)
ΔEF_{t-1}	0.022 (0.02)	0.043 (0.06)
$\Delta \text{DebtRatio}_{t-1}$	0.227*** (0.07)	-0.007 (0.32)
ΔROA_{t-1}	-0.107 (0.20)	0.982** (0.37)
ΔSize_{t-1}	-0.036 (0.02)	0.064 (0.05)
$\Delta \text{CashRatio}_{t-1}$	-0.043 (0.04)	0.079 (0.11)
ΔQ_{t-1}	0.003 (0.01)	0.003 (0.01)
$\Delta \text{R\&D ratio}_{t-1}$	-0.102 (0.21)	-0.397*** (0.12)
$\Delta \text{SalesGrowth}_{t-1}$	0.015 (0.01)	0.003 (0.03)
ΔCSR_{t-1}	-0.033* (0.02)	0.004 (0.05)
$\Delta \text{CorporateGovernance}_{t-1}$	-0.024 (0.02)	-0.049 (0.05)
$\Delta \text{Log(GDP)percapita}_{t-1}$	0.544 (0.49)	-0.697 (0.65)
$\Delta \text{GDPGrowth}_{t-1}$	-0.000 (0.01)	0.010 (0.01)
$\Delta \text{StockMarket}_{t-1}$	-0.000 (0.00)	-0.001 (0.00)
DebtRatio_{t-2}	0.055*** (0.01)	0.026* (0.01)
ROA_{t-2}	-0.086** (0.04)	-0.016 (0.06)
Size_{t-2}	-0.001 (0.00)	-0.002 (0.00)
CashRatio_{t-2}	-0.024 (0.02)	-0.073*** (0.01)
Q_{t-2}	0.001 (0.00)	0.001 (0.00)
$\text{R\&D ratio}_{t-2}$	0.051* (0.03)	0.043 (0.04)
SalesGrowth_{t-2}	-0.001 (0.02)	-0.055 (0.05)
CSR_{t-2}	-0.009 (0.01)	0.009* (0.01)
$\text{CorporateGovernance}_{t-2}$	-0.020*** (0.01)	-0.020 (0.01)
$\text{Log(GDP)percapita}_{t-2}$	-0.003 (0.00)	-0.001 (0.01)
GDPGrowth_{t-2}	-0.004 (0.00)	0.008 (0.01)
StockMarket_{t-2}	0.000 (0.00)	-0.000 (0.00)
N	12332	3540
Adjusted R-square	0.016	0.074
Year Dummies	Yes	Yes

This table indicates the ΔPF_{t-1} and ΔEF_{t-1} impacts on ΔCSL_t in a first differencing (FD) approach. Standard errors shown in parentheses are clustered at the country level. All the variables are defined in the Appendix A, with *, **, and *** representing two-tail significance levels of 10%, 5%, and 1%, respectively.

experienced at least one major change in PF or EF and report the results in Model (2). The effect of ΔPF persists with larger economic significance. Nevertheless, EF does not show significant effects in Model (2). Moreover, none of the country-level control variables have a significant coefficient. Therefore, PF exerts a stronger influence on CSL than both EF and the included country-level institutional controls⁸.

Mutual Reliance between PF and EF. In this subsection, we continue to employ the above FD approach and limit the analysis to countries with major changes in EF or PF to examine whether the effect of one freedom is dependent on the development of the

Table 3 Mutual reliance of PF and EF in determining CSL.

	(1) ΔCSL_t (high PF)	(2) ΔCSL_t (low PF)	(3) ΔCSL_t (high EF)	(4) ΔCSL_t (low EF)
ΔEF_{t-1}	0.176* (0.08)	-0.042 (0.09)		
ΔPF_{t-1}			0.124*** (0.03)	0.058 (0.11)
Δ of Firm level Controls from Table 2	Yes	Yes	Yes	Yes
Δ of Country level Controls from Table 2	Yes	Yes	Yes	Yes
Firm level Controls from Table 2	Yes	Yes	Yes	Yes
Country level Controls from Table 2	Yes	Yes	Yes	Yes
N	1292	2248	3207	333
Adjusted R-square	0.046	0.115	0.101	0.054
Year Dummies	Yes	Yes	Yes	Yes

This table repeats Mode (2) in Table 2 with subsamples divided according to the development of PF or EF. Model (1) and (2) use high PF and low PF subsamples, and Model (3) and (4) use high EF and low EF subsamples. Standard errors shown in parentheses are clustered at the country level. All the variables are defined in the Appendix A, with *, **, and *** representing two-tail significance levels of 10%, 5%, and 1%, respectively.

other freedom. In Model (1) and Model (2) of Table 3, we compare the coefficient of ΔEF between high (Model 1) versus low (Model 2) PF countries.⁹ It is obvious that the impact of ΔEF is much stronger in Model (1) than in Model (2), and the difference is statistically significant (p value = 0.0643). By contrast, the coefficients of PF are similar in Model (3) and Model (4) when we compare the impact of ΔPF between high (Model 3) versus low (Model 4) EF countries¹⁰ and the difference is statistically insignificant (p value = 0.5324).

The results in Table 3 imply that the impact of EF on CSL is reliant on the advancement of PF but not versa. One explanation is that PF is related to more critical determinants of CSL than EF: PF creates a healthy investment environment which is an important precondition of building loyal shareholder bases whereas EF is associated with stronger market competitiveness. The other explanation is that PF affects the extent to which EF is fairly distributed to firms. For instance, anecdotal evidence shows that, in China, where EF is fairly good but PF is low, most of financial resources and favorable policies afforded by the government end up being enjoyed by firms with state ownership or have connections with government authorities.

The dependence of EF on PF development underscores PF's greater importance than EF in shaping CSL. This relationship suggests that economic reforms alone - regardless of their perceived feasibility - may prove ineffective without accompanying political reforms. International organizations such as World Bank generally require economic reforms in recipient countries before granting aid to them. However, if the aid-receiving countries have low PF, the economic reforms may not bring substantive help. At the same time, PF is effective at building CSL regardless of the development of EF, which suggests that political rights, such as protection of property rights and rule of law, are fundamentally important to a country's promising investment prospect and sound legal system.

Addressing endogeneity concerns. This section presents multiple robustness checks to evaluate the validity of the effect of freedom, with particular focus on PF's influence on CSL. While the FD approach effectively addresses the endogeneity concern arising from omitted time-invariant factors, potential biases may persist due to unobserved time-varying variables that could simultaneously affect both freedom measures and CSL. For example, a war may result in both a more centralized government (less freedom) and a lower level of CSL. In this case, the correlation between freedom and CSL is driven not by a causal effect of freedom on CSL but by CSL and freedom evolving in line with the

occurrence of the war. We conduct three tests to ease the concern about the existence of unobserved factors that bring co-movement of freedom and CSL.

First, we test the robustness of our results with additional controls. We repeat the FD analysis and incorporate additional country-level governance control variables that vary over time and may be correlated with both PF and CSL. Specifically, we control for the six governance indicators from the World Bank's *Worldwide Governance Indicators* (WGI): voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. The untabulated results remain consistent with our main findings. We also redo the tests for subsamples based on economic development status (developed vs. developing) and legal origin (common law vs. civil law). The untabulated results demonstrate that the effect of changes in PF on CSL remains positive and statistically significant in all subsamples.

Second, we observe that, although the changes of the freedom scores are similar in magnitude,¹¹ some changes lead to re-categorizations of a country's freedom status (free, partly free and not free) but some do not. We classify the changes in PF and EF into four distinct categories: major improvement, major deterioration, minor improvement, and minor deterioration. Specifically, Major Improvement has a value of 1 when a country's degree of freedom enhances either from "not free" to "partly free" or from "partly free" to "free" within a given year, and zero otherwise. Conversely, Major Deterioration takes a value of 1 when a country's degree of freedom declines from "partly free" to "not free" or from "free" to "partly free", and zero otherwise. Accordingly, Minor Improvement and Minor deterioration indicate that a change in freedom does not lead to status re-categorization.

If freedom and CSL develop in line with some unobserved factors, the correlation between the changes of freedom and CSL should not be larger when the change of freedom is major versus minor, because the magnitudes of major and minor changes in freedom are similar.¹² By contrast, if there is a causality running from freedom to CSL, the impacts of major changes in freedom should be greater compared to minor changes. In Table 4, we repeat the FD analysis with the dummy variables indicating major versus minor changes in place of ΔPF and ΔEF . Model (1) only includes the indicators of major changes in PF and EF. All the coefficients of the indicators have predicted signs. Both major improvement and major deterioration of PF have a larger effect on CSL than those of EF, and the effects of the two freedoms have one thing in common: the effect of an improvement is stronger

Table 4 Major versus minor changes in PF and EF.

	(1) ΔCSL_t	(2) ΔCSL_t	(3) ΔCSL_t
PF MajorImprovement _{t-1}	0.204*** (0.06)	0.213*** (0.07)	
PF MajorDeterioration _{t-1}	-0.061*** (0.01)	-0.047*** (0.01)	
EF Majorimprovement _{t-1}	0.023 (0.04)		0.053 (0.06)
EF MajorDeterioration _{t-1}	-0.001 (0.02)		0.035 (0.04)
PF MinorImprovement _{t-1}		0.074** (0.03)	
PF MinorDeterioration _{t-1}		-0.083 (0.05)	
EF Minorimprovement _{t-1}			0.026 (0.03)
EF MinorDeterioration _{t-1}			0.023 (0.02)
Δ of Firm level Controls of Table 2	Yes	Yes	Yes
Δ of Country level Controls of Table 2	Yes	Yes	Yes
Firm level Controls from Table 2	Yes	Yes	Yes
Country level Controls from Table 2	Yes	Yes	Yes
N	3540	3540	3540
Adjusted R-square	0.071	0.073	0.069
Year Dummies	Yes	Yes	Yes

This table repeats Model (2) in Table 2 with major versus minor changes in PF and EF in place of ΔPF and ΔEF . Standard errors shown in parentheses are clustered at the country level. All the variables are defined in the Appendix A, with *, **, and *** representing two-tail significance levels of 10%, 5%, and 1%, respectively.

than that of a deterioration. The superiority of PF over EF implies the importance of promoting political reform in order to enhance firms' shareholder loyalty.

Model (2) shows the impacts of major versus minor changes in PF. We find that *PF Major Improvement* and *PF Major Deterioration* are related to larger changes on CSL than *PF Minor Improvement* and *PF Minor Deterioration*, respectively. However, we do not observe these differential impacts of major and minor changes of EF (Model 3).

The results in Table 4 confirm the validity of the effect of PF on CSL. Although the magnitudes of major and minor changes in the PF rating are similar, major changes have a larger effect than minor changes. The fact that the nature (major versus minor) of the changes in PF also matters to CSL alleviates the concern that the correlation between PF and CSL comes from the existence of uncontrolled factors that determine both PF and CSL.

The third strategy for addressing endogeneity assumes that, if the unobservable determinants that simultaneously alter PF and CSL are only temporarily effective, the impact of PF could be reversed in near future. However, we do not find this result. In Table 5, we examine the impacts of ΔPF and ΔEF in year t-1 on ΔCSL in year t+1 (Model 1) and year t+2 (Model 2). The findings indicate that the impacts of changes in both freedoms are all insignificant, suggesting that the impact of PF on CSL does not have a reversal in year t+1 and year t+2.

State ownership and the effect of freedom. In this section, we investigate potential differences in how PF and EF affect CSL between state-owned and non-state-owned enterprises. Past

Table 5 Persistence of the effects of PF and EF.

	(1) ΔCSL_{t+1}	(2) ΔCSL_{t+2}
ΔPF_{t-1}	0.020 (0.05)	0.096 (0.08)
ΔEF_{t-1}	-0.015 (0.05)	0.011 (0.02)
Δ of Firm level Controls from Table 2	Yes	Yes
Δ of Country level Controls from Table 2	Yes	Yes
Firm level Controls from Table 2	Yes	Yes
Country level Controls from Table 2	Yes	Yes
N	2948	2392
Adjusted R-square	0.052	0.044
Year Dummies	Yes	Yes

This table repeats Model (2) of Table 2 with CSL in year t+1 and t+2 as the dependent variable. Standard errors shown in parentheses are clustered at the country level. All the variables are defined in the Appendix A, with *, **, and *** representing two-tail significance levels of 10%, 5%, and 1%, respectively.

studies have documented that state ownership¹³ hinders firm efficiency but whether the effect of freedom is larger among state-owned companies (SOE) may be an empirical question.

On the one hand, the effect of a change in freedom on CSL among SOEs may be smaller because of their advantages over other firms (Faccio, Masulis, and McConnell, 2006). Firms with state ownership may be less affected by lack of freedom, as the government could offer policy and financial support to SOEs (Borisova, Fotak, Holland, and Megginson, 2015; Faccio, 2006; Faccio et al., 2006). If firms with state ownership are affected by low freedoms to a less degree, changes in freedoms will have smaller impacts on CSL of these firms.

On the other hand, SOE operating in countries with diminished freedom may face more pronounced distortions. Firms with state ownership generally enjoy the soft budget constraint (Borisova et al., 2015; Borisova and Megginson, 2011; Faccio, 2006; Kornai, Maskin, and Roland, 2003). Such firms are more motivated to follow their political interests at the expense of profit maximization or maintain political ties rather than to take risk (Boubakri, Cosset, and Saffar, 2013; John, Litov, and Yeung, 2008). Reduced PF also negatively impacts corporate transparency (Stulz, 2005). The information asymmetry problem is more severe among firms with state ownership (e.g., Bushman, Piotroski, and Smith, 2004; Guedhami, Pittman, and Saffar, 2009; Ben-Nasr, Boubakri, and Cosset, 2012; Borisova and Megginson, 2011). If the negative impacts of state ownership are more severe under low freedoms, a change in freedoms should have a larger impact on CSL among SOEs.

Models (1) and (2) in Table 6 present the impacts of freedoms for firms with and without state ownership from countries that have experienced at least one major change in PF or EF. The data on state ownership is taken from Chen et al. (2017). After merging this dataset with our sample, we obtain a sample of 485 observations from 10 countries with state ownership. The results of Model (1) and Model (2) show that both ΔPF and ΔEF have a larger effect on ΔCSL among firms with state ownership.

The results in Table 6 show that low freedoms (especially political freedom) distort CSL of firms with state ownership to a greater extent. Although state ownership can grant some advantages to SOEs, it does not ease the distortion associated with low freedoms. Thus, privatization not only enhances the operational and financial performance of SOEs, but

Table 6 State ownership.		
	(1) ΔCSL _t (with state ownership)	(2) ΔCSL _t (no state ownership)
ΔPF _{t-1}	0.158** (0.06)	0.121** (0.03)
ΔEF _{t-1}	0.133 (0.08)	0.011 (0.05)
Δ of Firm level Controls from Table 2	Yes	Yes
Δ of Country level Controls from Table 2	Yes	Yes
Firm level Controls from Table 2	Yes	Yes
Country level Controls from Table 2	Yes	Yes
N	485	3055
Adjusted R-square	0.013	0.106
Year Dummies	Yes	Yes

This table repeats Model (2) in Table 2 with subsamples divided according to the existence of state ownership. Model (1) and (2) use subsamples of firms with and without state ownership. Standard errors shown in parentheses are clustered at the country level. All the variables are defined in the Appendix A, with *, **, and *** representing two-tail significance levels of 10%, 5%, and 1%, respectively.

improvements in either PF or EF can also contribute to greater SOEs’ efficiency.

The results can also be employed to alleviate endogeneity concerns because we could use state ownership as an instrument to further validate the causal effect of PF on CSL. If the relationship between PF and CSL were driven by a non-political factor that correlates with both PF and CSL (e.g., an unobserved economic growth opportunity), then we would expect private companies—typically more sensitive to market incentives—to exhibit a stronger response in CSL. However, if the relationship is indeed political, state-owned enterprises (SOEs), which are more affected by political changes, should show a stronger response. The results in Table 6 support the view that political factors are driving the change in CSL.

Conclusion

In this study, we use CSL as a metric to evaluate the effects of PF and EF on firms’ long-term commitment. We find that both political and economic freedoms are positively associated with CSL, suggesting that freedom is essential to economic development, with CSL potentially serving as a channel through which freedom fosters growth. Our findings yield two key insights into the relative importance of political and economic freedom. First, PF exerts a substantially stronger influence than EF and other country-level controls in promoting long-term shareholder loyalty. Second, while the impact of EF depends on the level of PF, the reverse is not true.

The dependence of EF on the development of PF offers important implications for the design of reform strategies in developing countries. Although implementing economic reforms may be relatively easier for governments aiming to promote growth, such efforts are unlikely to yield lasting success without concurrent political reforms. In this regard, our findings suggest limited support for the so-called “China Model,” in which rapid economic liberalization is pursued in the absence of corresponding political freedom. Policymakers in developing countries, particularly those emulating this model, are presented with a critical issue: economic reforms pursued in the absence of political reforms may yield unexpected outcomes, as the benefits of EF can be distorted by cronyism and a lack of institutional checks.

For international bodies like the IMF and World Bank, which often prescribe economic liberalization as a condition for aid, the findings indicate that such policies may be ineffective in countries with low PF. The research demonstrates that PF is a key driver of the corporate trust and transparency that attracts long-term and stable capital. Countries seeking to deepen their capital markets can use this evidence to justify political reforms by framing them as essential preconditions for financial development.

We find that improvements in PF enhance shareholder loyalty among state-owned enterprises (SOEs) more than among private companies. This suggests that low PF imposes greater distortions on CSL of SOEs relative to other firms. SOEs are more prevalent in countries with limited PF and often benefit from preferential treatment through their political connections. However, such ties do not necessarily lead to efficient corporate decisions. Enhancing freedom—particularly political freedom—may therefore serve as an alternative to privatization for improving the efficiency and governance of SOEs. Better PF reduces the scope for value-destroying decisions within SOEs and forces them to compete for capital in a fair environment, thereby aligning them more closely with shareholder interests.

In conclusion, this research strongly suggests that the path to sustainable economic growth is not through economic shortcuts that bypass PF, but rather through the parallel cultivation of both political and economic freedoms, with a clear understanding that the former provides the essential foundation for the latter.

Data availability

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

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Notes

- For example, data from 2018 indicates that 71 countries saw a deterioration in their PF scores compared to the previous year, while merely 35 experienced an improvement, and more than 100 countries recorded increased EF scores from 2017.
- Although the first-differencing approach mitigates endogeneity concerns arising from time-invariant firm-level unobservables, our control variables may not fully capture time-varying factors correlated with PF, EF and CSL as the differencing alone may not suffice for robust empirical identification. To address this concern more rigorously, we are inspired by the approach of Duchin et al. (2010) by employing the first-differencing method while including both the change form and levels (absolute form) of all control variables consistently across all estimations. This approach provides better control for unobserved time-varying factors.
- To test the robustness of the effect of PF, we use the alternative measure of EF data for our baseline tests in Table 2. The alternative measure of EF data is collected from the Fraser Institute, which publishes annual index showing EF of a country based on the scores of 5 elements: size of government; legal system and property rights; sound money; freedom to trade internationally; and regulation. Each of the 5 elements is graded on a scale from 0 to 10 and is equally weighted, we construct this alternative EF by taking the average of the 5 elements’ scores. Across both the full sample and our main sample of countries that experienced at least one major change in PF or EF, PF continues to exhibit a significantly positive effect on CSL, whereas EF does not. This pattern of results robustly indicates that PF is a more fundamental driver of shareholder loyalty than EF.
- We omit firms whose total liabilities are larger than their total assets and firms with negative total assets.
- The “Shareholder Loyalty” index was one of three subcomponents of the Economic Pillar, which in turn was one of four pillars in the Thomson Reuters ASSET4 ESG database. In 2017, Thomson Reuters substantially revised the ASSET4 rating methodology, during which the Economic Pillar was removed from the overall rating framework. Subsequently, in 2021, the ESG dataset was retrospectively updated under

the new methodology, making the original Economic Pillar data no longer retrievable. Our dataset, obtained in 2015, therefore lacks only one additional year of data on Shareholder Loyalty.

- 6 The results for lagged PF and EF are basically the same.
- 7 We choose the cutoff points in the PF or EF index to categorize the countries in the sample into three as even groups as possible. A country's PF status is defined as free, partly free and not free if its PF score is larger than 5, smaller than or equal to 5 but larger than 3, and smaller than or equal to 3, respectively. A country's EF status is defined as free, moderately free and unfree if its EF score is larger than 7, smaller than or equal to 7 but larger than 6, and smaller than or equal to 6, respectively. As a result, the sample has 12718, 1114 and 692 observations from politically free, partly free and not free countries respectively, and has 12856, 978, 690 observations from economically free, moderately free and unfree countries respectively. Free countries account for the largest portion because they mostly have a larger number of observations.
- 8 To demonstrate that the results from the first-differencing method are consistent with those obtained from an OLS regression including firm, year, and country fixed effects, we re-estimated our models by regressing CSL on the lagged values of PF, EF, and the control variables, while including firm and year fixed effects, using our main sample of countries that experienced at least one major change in PF or EF. The results show that the coefficients on PF and EF remain qualitatively similar to those reported in Table 2.
- 9 The subsample of high PF countries includes those with PF larger than or equal to 6 and low PF countries are those with PF smaller than 6.
- 10 The subsample of high EF countries includes those with EF larger than 7 and low EF countries are those with EF smaller than or equal to 7.
- 11 For example, the change of the PF rating is mostly either 1 or 0.5.
- 12 For example, the average of ΔPF for major improvements in PF is 0.54, and the average of ΔPF for minor improvements in PF is 0.53.
- 13 For example, Boubakri and Cosset, 1998; Boubakri, Guedhami, Kwok, and Saffar, 2016; Chen, El Ghoul, Guedhami, and Wang, 2017; Guedhami, Pittman, and Saffar, 2009; D'souza and Megginson, 1999; Megginson, Nash, and Van Randenborgh, 1994; Shleifer and Vishny, 1998; Vickers and Yarrow, 1991.

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Author contributions

All authors contributed to the study's conception and design. The authors' contributions are listed as follows: Meng Zheng: (First author) - Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Resources, Software, Roles/ Writing - original draft, Writing - review & editing. Roni Bhowmik: (Corresponding author) - Methodology, Formal analysis, Investigation, Supervision, Writing - review & editing. Liang Shao: (Second author) - Conceptualization, Methodology, Data curation, Formal analysis, Investigation, Supervision, Writing - review & editing. Nitai Chandra Debnath: (Third author) - Methodology, Software, Formal analysis, Writing - review & editing.

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The authors declare no competing interests.

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