PIONEER
ACADEMIC PUBLISHING LIMITED

Journal of World Economy
ISSN 2709-3999
www.pioneerpublisher.com/jwe
Volume 4 Number 4 August 2025

The Inside Job or Outside Rule: How Six Governance Forces Shape UK Board Independence?

Runmin Qiu[1]

[1] Johns Hopkins Bloomberg Center, Carey Business School, Johns Hopkins University, 555 Pennsylvania Avenue NW, Washington, DC 20001, USA
Correspondence: Runmin Qiu, Johns Hopkins Bloomberg Center, Carey Business School, Johns Hopkins University, 555 Pennsylvania Avenue NW, Washington, DC 20001, USA.

doi:10.56397/JWE.2025.08.04

Abstract

This research explores how the proportion of independent directors on UK-listed company boards relates to six key institutional dimensions—public participation, political stability, government effectiveness, regulatory quality, rule of law, and anti-corruption control—drawing on agency theory and resource dependence perspectives. Using panel data from non-financial firms listed on the London Stock Exchange (2013-2023), we extract independent director ratios from annual reports and combine them with the World Bank's Global Governance Indicators to quantify institutional quality. Our analysis employs double fixed-effects regression models and other techniques to effectively control for time and firm-specific heterogeneity. These findings reveal that while political stability significantly encourages the appointment of independent directors, the other five institutional dimensions show strong negative substitution effects. Notably, these institutional responses show no significant variation across firms of different sizes. Based on these results, the paper proposes a novel, integrated framework for board independence within a multi-dimensional regulatory system. Importantly, feasible decision-making references for investors to optimize governance risk assessment, corporate executives to adjust board composition, and regulatory authorities and industry associations to synchronously improve governance guidelines and information disclosure. In summary, this paper contributes uniquely by constructing a comprehensive multi-dimensional governance framework, integrating six distinct forces, and demonstrating how their interplay—particularly between regulatory enforcement and investor incentives—generates non-linear impacts on board independence.

Keywords: board independence, national governance quality, corporate governance, substitution effects, double fixed-effects model

1. Introduction

Corporate governance research has gradually expanded from an "internal perspective" to an "institutionally sensitive perspective," emphasizing the decisive role of the national governance environment in determining board structure and oversight intensity (Fauver et al., 2016; Neville et al., 2018). Building on agency theory and resource dependence theory, scholars suggest that while independent directors can reduce agency costs and coordinate external

resources, their marginal value hinges critically on national governance quality (Hu et al., 2022; Dahya et al., 2019). Evidence from cross-national studies further underscores the complexity of this relationship: robust rule of law and strict regulatory enforcement appear to lessen firms' reliance on independent directors, whereas sustained political stability enhances their strategic value in securing legitimacy (Bowen & Taillard, 2025). However, existing research typically focuses on single or dual institutional factors, leaving unexplored how a multidimensional governance landscape collectively shapes board independence. To address this research gap, this study examines the comprehensive impact of the World Bank's six governance indicators—Voice and Accountability (VA), Political Stability and Absence of Violence/Terrorism (PS), Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RL), and Control of Corruption (CC)—on the proportion of independent directors using a sample of UK listed companies.

The core question of this study is: How do the six dimensions of national governance—public participation (VA), political stability (PS), government effectiveness (GE), regulatory quality (RQ), rule of law (RL), and corruption control (C)—influence the proportion of independent directors in listed companies? This paper hypothesizes that in any scenario where external governance is strengthened, firms' reliance on independent directors as an internal monitoring mechanism will significantly decrease (H1–H6). The paper selects a sample of non-financial UK listed companies from 2013 to 2023, extracts the proportion of independent directors from annual reports, and obtains scores for the six institutional dimensions from the World Bank's "Global Governance Indicators." It controls for variables such as profitability, leverage levels, liquidity, cash flow, bankruptcy risk, GDP growth rate, inflation rate, and exchange rate volatility, and employs both company-level and year-level fixed effects.

Although scholars have been studying the relationship between external regulatory quality and corporate governance outcomes (including the proportion of independent directors) since the last century, current research still has limitations. First, some studies focus only on exploring one or two of the six regulatory dimensions, thereby failing to comprehensively examine the relationship between the two. For example, Wu et al. (2021) employed a three-level model (firm-year-country) using the World Bank's "regulatory quality" and "rule of law" indicators to measure the institutional environment and investigated its relationship with the proportion of independent directors. Second, even though some studies adopt a multi-dimensional institutional perspective, they have not been fully integrated with board composition research: Li, Zhou, Ling et al. (2025) conducted a one-dimensional grouping analysis based on regulatory quality when discussing financial asset allocation, while Bao et al. (2025) did not simultaneously incorporate macro-level institutional variables such as public participation or political stability when exploring the issue of independent director re-election. Third, research on the interaction between macroeconomic shocks such as inflation and exchange rates and corporate governance remains scarce. Dokas (2023) revealed the mediating role of corruption levels in profit management but did not examine its transmission effects on board independence; Bowen and Taillard (2025) re-evaluated mandatory independent director requirements but did not consider macroeconomic uncertainty. Therefore, no study has yet compared the six dimensions with the proportion of independent directors, nor has it systematically tested the heterogeneity of governance strategies across firms of different sizes within this multidimensional institutional framework.

The macroeconomic environment in the United Kingdom during the study period (2013–2023) influenced board composition: over the decade, the UK's average annual GDP growth rate was only 1.31%, but the standard deviation was as high as 4.54 percentage points, indicating that multiple economic cycles posed significant challenges to corporate expansion and investment decisions. During the same period, the average inflation rate was 3.30%, with a standard deviation of 3.06%, far exceeding the long-term target of 2%, particularly during the period from 2017 to 2022 when it peaked at over 9%, forcing companies to frequently adjust their cost control and pricing strategies. In terms of exchange rates, taking the pound sterling against the US dollar as an example, the average depreciation was 2.33%, with a standard deviation of 5.92%, exacerbating uncertainty in cross-border trade and financing. Overall, the sample companies studied in this paper operate

in a national environment characterized by both well-established institutions and significant macroeconomic volatility.

Research has found that six national governance quality indicators have a significant substitution or reinforcing effect on the proportion of independent directors in UK listed companies. Specifically, when public participation increases, companies reduce their allocation of independent directors, indicating that external public oversight can partially replace internal board monitoring; when political stability improves, companies increase their allocation of independent directors to obtain policy legitimacy and resource support; and improvements in government efficiency, regulatory quality, rule of law, and anti-corruption controls all significantly reduce companies' demand for independent directors, reflecting that the higher the strength of external institutions, the higher the cost of internal monitoring.

This paper fills a gap in current corporate governance research by examining the relationship between the six dimensions of regulatory quality and board independence. For institutional investors, they can draw on the insights from this study to understand the multifaceted impact of independent director appointments on risk and value protection and optimize their investment research models to accurately assess how changes in the institutional environment affect the proportion of independent directors in corporate governance (Bao et al., 2025). For company executives, the research indicates that enhancing regulatory quality and the rule of law can partially substitute for internal oversight functions within the board of directors, enabling companies to adjust the proportion of independent directors during institutional upgrades based on sound rationale (Ramachandraiah et al., 2025). This allows limited independent director resources to be allocated toward business innovation and strategic execution to enhance operational efficiency. Regulatory authorities should note that the critical role of independent directors in ensuring regulatory compliance must not be overlooked. When revising governance guidelines and prudent regulatory policies, they should concurrently improve disclosure and accountability mechanisms to strengthen the synergistic effects between external systems and internal governance (Deloitte & The Wall Street Journal, 2024).

2. Institutional Regulatory Quality

From 2013 to 2023, the UK consistently ranked in the top 10% globally in the WGI's "Voice and Accountability" category, indicating that democratic channels remain open and accessible. According to ACLED statistics, the number of domestic protests increased from 482 in 2013 to 1,243 in 2022, with a cumulative total of approximately 9,150 over the decade, representing an annual growth rate of over 10%; Political issues accounted for over 60% of these protests. High voter turnout also reflects the level of engagement: the 2014 Scottish independence referendum saw an 84.6% turnout, while the 2016 Brexit referendum had a 72% turnout. In 2019, the "People's Vote" march attracted over a million people in a single day, setting a record for peaceful demonstrations in the UK. In the same year, Extinction Rebellion occupied the streets of London for two consecutive weeks, and the court ultimately ruled that the police ban was illegal, highlighting the judiciary's protection of freedom of assembly.

In 2013, the UK ranked near the 70th percentile in the WGI's "Political Stability" category, but the 2016 Brexit referendum sparked significant uncertainty: the pound plummeted by 9.7% that evening (Bloomberg, 2016), and three changes of prime minister between 2016 and 2019 caused the indicator to drop to approximately 55% in 2019 (World Bank, 2024). Political-related protests and violent incidents recorded by ACLED also rose from 212 in 2015 to 653 in 2019, reflecting the rapid escalation of social divisions (ACLED, 2024). The formal signing of the UK-EU Trade and Cooperation Agreement in 2021 mitigated the risk of a hard Brexit, leading the indicator to rebound to 62.1% in 2023 (Cabinet Office, 2021; World Bank, 2024). Although the overall security situation remains at a low level among developed economies, the Global Peace Index has downgraded the UK's risk level to "moderate" since 2018 and maintained this rating from 2020 to 2023 (IEP, 2024).

From 2013 to 2023, the UK has remained relatively stable in the WGI "Government Effectiveness" indicator, ranking between the 85th and 90th percentiles globally. Its high effectiveness is primarily reflected in three areas. First, crisis response: The Medicines and Healthcare products Regulatory Agency (MHRA) completed a double-blind data review in just three months, becoming the first in the world to approve an mRNA vaccine in December

2020, highlighting the speed of regulatory decision-making (DHSC, 2020). Second, policy implementation: The Treasury launched the "Levelling-up Fund" and the "Green Industrial Revolution Ten-Point Plan" in 2021, which were recognized by the OECD as a model for green transition governance (OECD, 2022). Third, digital government: In 2023, "Gov.uk One-Login" was launched, enabling single sign-on for tax, visa, and medical appointments. An official survey showed that user satisfaction exceeded 80% (Cabinet Office, 2023). However, large-scale infrastructure projects have exposed shortcomings: The National Audit Office (NAO) noted that the HS2 high-speed rail phase two project faced a 40% cost overrun and further delays, leading to a slight decline of approximately 0.07 points in government efficiency scores between 2020 and 2022 (NAO, 2022; World Bank, 2024).

In 2013, the UK ranked around the 95th percentile globally in the WGI's "Regulatory Quality" category, but the Brexit process has undermined policy consistency: the number of customs entry and exit documents between the UK and the EU has increased from 1 to 8. According to a 2024 survey by the British Chambers of Commerce (BCC), 62% of surveyed businesses cited "frequent changes in regulations" as their top compliance challenge (BCC, 2024). As a result, the indicator's estimated value declined from +1.65 to +1.38 between 2016 and 2023, with the percentile dropping to 82 (World Bank, 2024). Despite the 2021 Financial Services Act granting the FCA and PRA greater autonomy, and the OECD's positive endorsement of the "flexible regulatory sandbox" (OECD, 2022), the 2022 "mini-budget" triggered significant volatility in the pound and government bonds, Standard & Poor's subsequently downgraded the UK's "regulatory predictability" rating from 'high' to "medium-high" (Standard & Poor's, 2022).

In 2013, the UK's "rule of law" valuation in the WGI was approximately +1.55; by 2023, it had fallen to +1.46, with the percentile ranking dropping by 4 points (World Bank, 2024). Two landmark rulings shed light on the context of this decline: in 2019, the Supreme Court ruled 11–0 that the Prime Minister's forced suspension of Parliament was unlawful (UK Supreme Court, 2019); in 2023, it again rejected the Rwanda deportation plan for immigrants (UK Supreme Court, 2023). While this highlights judicial independence, it also exposes the tension between the executive and judicial branches, sparking concerns about the predictability of policy. Additionally, the Metropolitan Police was found by an independent investigative body in 2022 to have a culture of systemic discrimination and sexual harassment, leading to public evaluations of the fairness of law enforcement dropping to a ten-year low (IOPC, 2022).

In 2013, the UK scored approximately +1.42 on the WGI "Anti-Corruption Controls" indicator, ranking in the top 10% globally; however, from 2018 to 2023, there was a significant decline: the score dropped to +1.10, and the percentile fell to 77 (World Bank, 2024). Transparency International's CPI score also dropped from 80 (2018) to 75 (2023), the lowest since the 2012 baseline (Transparency International, 2024). This downward trend is closely linked to a series of high-profile scandals: the "Partygate" scandal exposed gatherings at the Prime Minister's residence during the COVID-19 lockdown (Ipsos MORI, 2022); The National Audit Office revealed a "fast-track" procurement process for personal protective equipment (PPE), with 14 contracts bypassing competitive procedures (NAO, 2021); and the 2023 "cash-for-inquiries" case involving opaque political donation practices (Guardian, 2023).

A comprehensive analysis of the six major governance dimensions from 2013 to 2023 reveals that the UK's external institutional framework exhibits a pattern of "high standards but localized imbalances": while maintaining high levels of democratic vitality, administrative efficiency, and judicial independence, there has been a marginal weakening in regulatory consistency and integrity, providing a "strong institutional framework but divergent risk profiles" as the external backdrop for corporate governance strategies.

3. Literature Review and Hypothesis Development

3.1 Research Background

Regulatory quality, as the core embodiment of fairness and efficiency in government policy implementation (North, 1990), profoundly affects national economic development and firm performance through multidimensional mechanisms. At the macro level, there is a significant positive correlation between regulatory quality and national economic competitiveness. Brunet et al.'s (2012) study of the new EU member states shows that higher

levels of regulation can directly bring about an 18% improvement in the efficiency of resource allocation and a 2.3-basis-point increase in the competitiveness index, as well as enhance economic resilience through greater institutional stability. However, this effect exhibits a nonlinear character: Mokhtarifar et al. (2023) find that moderate regulation significantly promotes growth in countries with weaker institutions, but excessive regulation may dampen market dynamism in institutionalized environments. Rodrigo et al. (2009) emphasize that low-quality regulation resulting from dysfunctional governance at multiple levels not only fails to serve the public interest, but instead serves as a source of economic stagnation and social drivers of escalating costs.

The quality of corporate governance and the effectiveness of national regulatory systems as a guarantee of firm performance (Rahman, 2017), especially after the revelation of global financial scandals such as Enron and Marconi (Khanchel, 2007; Turrent & Ariza, 2016) have triggered a wider discussion. A particular distinction needs to be made: at the national level, regulatory quality is reflected in the binding effect of institutions on the free market; at the firm level, governance quality is reflected in the degree of sophistication of internal oversight mechanisms, including board independence and information disclosure. For example, Klapper and Love (2004) construct a corporate governance scoring system, and there is a huge discrepancy in the level of corporate governance among the emerging market countries they study-Pakistani firms have an average score of only 31.85, while South Korean firms reach 66.53. It is worth noting that this discrepancy does not only stem from the different strengths and weaknesses of national regulatory environments, but is also closely related to firms' internal governance practices. Similarly, Barucci and Falini's (2005) study of Italy and Beiner et al.'s (2006) study of Switzerland suggest that even in developed economies with well-developed regulatory regimes, the actual quality of firms' governance may still be significantly deficient.

While there are numerous ways to assess the impact of the quality of national regulation on the level of corporate governance, board independence is a significantly valid indicator. After the agency theory proposed by Fama and Jensen (1983) provides a solid theoretical foundation for the monitoring function of independent directors, Armstrong's team (2014) confirms through rigorous econometric methods that an increase in the proportion of independent directors significantly reduces agency costs, while Beasley's (1996) study finds that the proportion of independent directors is significantly negatively related to the incidence of financial fraud. Significant negative correlation, and these findings demonstrate a high degree of consistency, all of which indicate a strong correlation between board independence and corporate governance.

Compared to other board characteristics, the findings of studies on board independence are relatively reliable, for example, there is a clear disagreement in studies on board size (Dalton et al., 1999), and the discussion on studies on the integration of the two positions of CEO and chairman is inconclusive (Brickley et al., 1997), while Nguyen and Nielsen (2020) instantly, by analyzing the sudden deaths of independent directors, still validates the continued positive impact of board independence on firm value.

Board independence has a unique policy research value, and major global regulatory systems such as the U.S. SOX Act and the EU Corporate Governance Guidelines have adopted board independence as a core regulatory indicator. Dahya et al.'s (2019) study specifically points out that in countries with transitioning regimes, independence requirements are often an important entry point to regulatory reforms, making it an ideal research to connect the national regulatory environment with corporate governance practices pathway. For these reasons, this study chooses board independence as the core research variable to investigate its relationship with national regulatory quality (Voice and accountability and board independence; political stability; Government effectiveness; Regulatory quality; The rule of law; Corruption).

3.2 The Country's Regulatory Quality and Board Independence

3.2.1 Voice and Accountability

At the core of citizen expression and government accountability is the ability of citizens to participate in public decision-making through free voice (e.g., elections, media scrutiny) (citizen expression), and institutionalized mechanisms for governments to accept scrutiny and respond to demands (government accountability). (Menocal et al., 2012) The effectiveness of board

independence is highly dependent on the supporting support of external accountability mechanisms. In the Anglo-American corporate governance system, independent directorship and mandatory disclosure (e.g., SOX in the U.S.) form a complementary relationship, and the synergistic effect of the two significantly enhances the effectiveness of monitoring by independent directors (Aguilera et al., 2008); conversely, for example, in Aoki's (2001) study, in Japanese firms, the "voice and accountability" is replaced by the "voice and accountability" of the board of directors. "Voice and accountability" in Japanese firms, for example, the main bank and employee participation weakened the need for independent directors, thus reducing managerial efficiency and governance capacity. External accountability mechanisms affect board independence through regulatory costs Zhang (2005). In low accountability environments, firms tend to resist independent directorships in order to circumvent disclosure costs in order to maintain control (Lang & Lundholm, 2000). In contrast, in high accountability environments, firms obtain better disclosure and win investors' favor through high-cost regulation (including features such as having a more independent board).

Firm life cycle characteristics significantly affect the role of accountability mechanisms receive many influencing factors. Mature firms are resource-rich and able to respond effectively to high-cost external accountability requirements (Dalton et al., 1999), allowing independent directors to fully utilize their oversight function; conversely, they may adopt a strategy of greater insider control or reliance on venture capital because external accountability may interfere with their strategic flexibility (Filatotchev & Bishop, 2002). These findings suggest that the governance effectiveness of board independence depends not only on its institutional design per se, but is also closely related to contextual factors such as the institutional environment of external accountability mechanisms, cost constraints, and the stage of firm development. In addition, voice differences across countries directly affect the way board independence is implemented through policy instruments leading to divergent effects of independent director institutional transplantation (Aguilera & Cuervo-Cazurra, 2004). In contrast, flexible accountability mechanisms are more conducive for independent directors to adapt to local conditions (Arcot & Bruno, 2006). Based on this, this study proposes:

Hypothesis 1: Better regulatory quality strengthens board independence.

3.2.2 Political Stability

Political stability is the ability of a political system to maintain its basic structure and functioning through a continuous, nonviolent process of value allocation (Ake, 1975). Leuz et al. (2006) show that in politically unstable countries such as Argentina and Egypt, the proportion of politically connected directors in privatized firms is on average 15% higher than in stable countries, whereas the proportion of independent directors is significantly lower by 22%. This substitution effect is particularly pronounced in times of crisis, such as during regime change in Argentina, where the proportion of politically connected directors on corporate boards increased from 30% in the stabilization period to 45%, while the proportion of independent directors decreased from 40% to 22% (Megginson et al., 2001).

Political stability significantly affects board independence through the mediating role of politically connected directors (La Porta et al., 1998). In politically unstable environments, firms are exposed to the risks associated with policy uncertainty. This can motivate firms to adopt politically connected strategies, especially to gain political patronage by appointing directors with governmental background. This strategic choice directly affects the composition of the board: the proportion of politically connected directors increases significantly, while the number of independent directors decreases accordingly (Faccio et al., 2006). This effect is realized through two main mechanisms: the first is the substitution of political intervention for market oversight. In environments with weak institutions, politically connected directors can directly intervene in corporate decision-making, including important matters such as strategy formulation and executive appointments (Boubakri et al., 2008). The second is the compliance avoidance strategy. Firms often adopt superficial compliance practices in order to balance international normative requirements with the need for political survival. A more subtle approach includes the appointment of potentially politically connected individuals, such as relatives of government officials, as independent directors, which was found to account for as much as 32% of "connected independent

directors" (Khanna et al., 2000). Based on this, this study proposes:

Hypothesis 2: Better political stability strengthens board independence.

3.2.3 Government Effectiveness

Government effectiveness is the ability of government institutions to formulate high-quality policies, carry out public management functions effectively, and ensure reliable delivery of public services (Garcia-Sanchez et al., 2013). Highly effective governments with good institutional governance are better able to safeguard board independence (Aggarwal et al., 2011). It directly constrains the corporate governance structure through normative pressures that push some firms to comply with corporate law and securities regulations, and by establishing requirements such as minimum ratios of independent directors. On the other hand, firms in high-performance government environments often take the initiative to increase the number of independent directors to comply with market norms and enhance legitimacy. For example, Okhmatovskiy et al.'s (2012) study of transition economies in Eastern Europe shows that in countries with higher government effectiveness (e.g., Poland, Estonia), state-owned enterprises (SOEs) are quicker to adopt independent directorships due to EU access pressure. This is because their policy stability and internationalized business environments encourage firms to optimize their board structures in order to gain access to resources. Enterprises wishing to attract international capital (e.g., cross-border listings) often need to meet global governance standards. The expectations of foreign investors are met by increasing the proportion of independent directors. As Aggarwal et al. (2011) find, in countries with high government effectiveness, US-listed firms proactively increase the number of independent directors to meet SEC requirements. In addition, firms in such environments are more willing to invest in long-term governance mechanisms, and firms create more independent directors with specialized knowledge and outside resources to facilitate the firm's response to increased risk and competition (Bushman et al., 2004). Dermirgüç-Kunt's team (2019) reported at the World Bank that firms in high-performance countries (e.g., Denmark), in an effort to mitigate policy risks and prefer market-based governance mechanisms such as independent directors.

Government effectiveness indirectly affects board independence by reducing political interference and enhancing investor protection. In inefficient government environments, firms face chaotic market conditions, collusion between government and business, and other disruptions. They may rely on politically connected directors rather than independent directors to gain advantages such as franchises and policy incentives, thus weakening board independence (Fan et al., 2007). On the contrary, high-performance governments usually have more transparent administrative systems and rule of law environments, which reduce firms' reliance on political connections and make them more inclined to introduce independent directors to optimize corporate governance and reduce agency costs. In addition, high-performance governments tend to be accompanied by stricter investor protection systems (e.g., disclosure requirements, minority shareholder litigation rights), which further incentivize firms to enhance monitoring and market trust through the mechanism of independent directors (La Porta et al., 1998). Neville et al. (2018) also find that in countries with high levels of rule of law, independent directors have a more significant impact on corporate misconduct. inhibition is more significant. Based on this, this study proposes:

Hypothesis 3: Better government effectiveness strengthens board independence.

3.2.4 Regulatory Quality

The definition of regulatory quality has been expressed above. Regulatory Quality affects Board Independence mainly through both direct policy intervention and indirect institutional environment. Good regulatory quality tends to have strict regulatory policies (e.g., mandatory independent director ratio requirements) that can significantly enhance board independence, e.g., Chen et al. (2014) found that China's 2001 regulatory reforms that mandatorily increased the proportion of independent directors effectively reduced surplus management behaviors of listed companies. Similarly, Jiraporn et al. (2017) show, based on evidence from the Thai market, that a policy of mandatory appointment of independent directors effectively reduces firms' reliance on external audits. In terms of indirect effects, countries with high regulatory quality usually have stronger rule of law environments and market oversight mechanisms, and independent directors can

effectively play a supervisory role to strengthen corporate governance. A cross-country study by Uribe-Bohorquez et al. (2018) finds that board independence contributes more significantly to firm performance in countries with higher regulatory quality, suggesting that strict regulation has a moderating effect on the performance of independent directors' functions. In addition, Wu (2021) further suggests that country governance quality significantly affects the effectiveness of corporate governance structure, especially in emerging markets, where improved regulatory quality helps to mitigate the interference of large shareholders or management in independent directors. Based on this, this study proposes:

Hypothesis 4: Better regulatory quality strengthens board independence.

3.2.5 The Rule of Law

The definition of regulatory quality has been expressed above. Regulatory Quality affects Board Independence mainly through both direct policy intervention and indirect institutional environment. Good regulatory quality tends to have strict regulatory policies (e.g., mandatory independent director ratio requirements) that can significantly enhance board independence, e.g., Chen et al. (2014) found that China's 2001 regulatory reforms that mandatorily increased the proportion of independent directors effectively reduced surplus management behaviors of listed companies. Similarly, Jiraporn et al. (2017) show, based on evidence from the Thai market, that a policy of mandatory appointment of independent directors effectively reduces firms' reliance on external audits. In terms of indirect effects, countries with high regulatory quality usually have stronger rule of law environments and market oversight mechanisms, and independent directors can effectively play a supervisory role to strengthen corporate governance. A cross-country study by Uribe-Bohorquez et al. (2018) finds that board independence contributes more significantly to firm performance in countries with higher regulatory quality, suggesting that strict regulation has a moderating effect on the performance of independent directors' functions. In addition, Wu (2021) further suggests that country governance quality significantly affects the effectiveness of corporate governance structure, especially in emerging markets, where improved regulatory quality helps to mitigate the interference of large shareholders or management in independent directors. Based on this, this study proposes:

Hypothesis 5: Better the rule of law strengthens board independence.

3.2.6 Corruption

The essence of corruption as a systemic flaw lies in the alienation of the principal-agent relationship of public power, whereby those exercising the power breach their public fiduciary duties by turning administrative discretion, which should be used to promote public welfare, into a tool for private gain. This alienation of power not only undermines the legal framework for contract enforcement, but also forces firms to incur additional expenses, including the cost of bribery, compliance risk premiums, and systemic transaction costs, in order to obtain market access, business licenses, and other benefits that they should have obtained under the law (Shleifer & Vishny, 1993). Existing research suggests that corruption undermines the governance efficacy of board independence through a number of mechanisms. First, in environments where corruption is prevalent, informal rules such as bribery often substitute for formal governance mechanisms, resulting in the hollowing out of independent directors' oversight functions. For example, in industries where government approvals are highly regulated, firms may be more inclined to obtain licenses by paying bribes rather than relying on the professional compliance advice of independent directors, thus marginalizing independent directors in key decisions (Sena et al., 2018). Second, independent directors' motivation to perform their duties can be thwarted by rampant corruption. When legal and enforcement mechanisms are ineffective, independent directors find it difficult to effectively check and balance the misbehavior of management as well as other shareholders, and may even choose to perform their duties negatively due to their inability to drive substantive decisions (Dokas, 2023). In addition, corrupt environments can lead firms to prefer appointing "nominal independent directors" with political affiliations rather than truly independent professionals to accommodate corrupt transactions, or worse, highly reputable independent directors may avoid such firms, further reducing the overall independence of the board (Rashid & Hossain, 2021). Based on this, this study proposes:

Hypothesis 6: Better corruption control strengthens board independence.

3.2.7 Conclusion

Based on the characteristics of the UK sample in this study, six main effect hypotheses (H1–H6) are proposed: public participation, government effectiveness, regulatory quality, rule of law, and anti-corruption controls have a substitution effect on the proportion of independent directors, while political stability has a reinforcing effect. During the research process, the relationship between external governance and independent directors, as well as the research history, were systematically reviewed from two perspectives: agency costs, where independent directors reduce conflicts between management and shareholders through supervisory mechanisms, and resource dependency theory, where independent directors can introduce policy, reputation, and network resources to the company. Addressing the limitations of existing research, which often focuses on a single institutional dimension or is constrained by performance metrics, we propose hypotheses to examine the relationship between the six dimensions of national governance quality and board independence. This forms the basis for a research design model where "independent directors serve as the dependent variable, multi-dimensional institutions as the independent variables, and macroeconomic risks as the control variables."

4. Data and Sample Collection

This study has selected 100 non-financial firms as my research sample. I set the sample size at 100 because it meets the basic requirements of statistical analysis and ensures the reliability of data analysis. Non-financial firms were chosen because the financial characteristics, regulatory environment and capital structure of financial firms are significantly different from other industries. When the companies were screened, we excluded the samples with abnormal financial data and finally retained 100 companies with complete data as the object of analysis.

This study uses the UK FTSE index constituents (FTSE 350) as the sample base. They include large blue-chip stocks, excellent mid-sized companies respectively, which can fully reflect the characteristics of different sizes of listed companies in the UK. FTSE index constituents have high market representativeness and data reliability, and it covers the listed companies with the largest market capitalization and the best liquidity in the UK stock market. In the research process, the financial data disclosure of FTSE constituent stocks is standardized and easy to obtain, which is conducive to ensuring the reliability and authenticity of the analyzed data.

This study has selected 2013 to 2023 as the sample period mainly to minimize the impact of the volatility of the new crown epidemic (2020-2021). The length of the ten-year period can provide enough analyzed data to meet the requirement of statistical reliability, and at the same time, avoid the disturbance caused by the long-time span that results in encompassing more big events with sudden shocks. The disclosure standard of relevant financial data within the period is relatively uniform, ensuring data reliability and continuity.

My data samples in this study are sourced from the global authoritative financial databases Bloomberg and Refinitiv. As internationally recognized professional financial data platforms, the data sources can provide instant, high-quality and standard financial data of listed companies around the world to ensure the accuracy of the research data. They comply with strict exposure and verification processes to maximize data authenticity and provide complete historical company financial data and relevant market and industry trading information.

5. Research Methodology

5.1 The Measurements of Independent Variables

This study uses data on six indicators from the Worldwide Governance Indicators (WGI) [1] as independent variables to measure the quality of governance in different countries during 2013 to 2023. The Worldwide Governance Indicators (WGI) is a six-dimensional framework developed by the World Bank to measure the quality of countries' institutions, assessing the quality of a country's institutions in a comprehensive manner from different perspectives of voice and accountability (VA), political stability (PS), government efficiency (GE), regulatory quality (RQ), rule of law (RL), and corruption (C),

[1] The Worldwide Governance Indicators are a World Bank dataset that reports aggregate and individual governance indicators for over 200 economies since 1996. https://info.worldbank.org/governance/wgi/

respectively. In Cuervo-Cazurra and Genc (2008) and Kaufmann et al.'s (2009) studies, these six indicators of the WGI are also used to measure national governance quality indicators.

This study constructs a core system of independent variables based on Worldwide Governance Indicators, which mainly contains six dimensions of governance indicators. Voice and accountability and board independence reflect the degree of citizens' participation in political decision-making and the independence of oversight mechanisms in corporate governance. It can be measured by indicators such as citizens' political participation at the national level and media freedom; Political stability refers to the stability of government governance and social order. It is assessed using data such as the government stability index and the incidence of social violence; Government effectiveness reflects the efficiency of the government in providing public services and policy implementation. I will look at the quality of public services (including infrastructure coverage, World Health Organization scores, and teacher attendance in the World Bank's Service Delivery Indicator Survey) (Rajkumar & Swaroop, 2002), policy formulation capacity (including policy responsiveness, policy continuity, and integrity of strategic planning) (Andrews et al., 2017), and administrative efficiency (including the average length of time for business establishment approval) (Andrews et al., 2017), and administrative efficiency (including the average length of time for business establishment approval). (Kaufmann et al., 2010) are quantified in three dimensions; Regulatory quality assesses the level of government regulation of market behavior. This study focuses on the market regulation index and the related administrative approval efficiency; The rule of law measures the degree of society's compliance with legal rules. It can be measured by indicators such as judicial independence, property rights protection and contract enforcement efficiency; Corruption reflects the level of public sector integrity. In turn, it is assessed based on the public sector integrity and business corruption index.

5.2 The Measurements of Dependent Variable

As the core of corporate governance, the level of board independence can have a systematic impact on corporate operations. Existing research suggests that when board independence is high (≥50% of independent directors), it can significantly improve corporate governance effectiveness. Weisbach (1988) found that boards with a high percentage of independent directors are more likely to fire underperforming CEOs, which is when impediments to firm growth are removed by enhancing monitoring effectiveness. A high index promotes decision quality, and Armstrong et al. (2010) confirm that highly independent boards can significantly reduce connected transactions. Nguyen and Nielsen (2010) show that abnormal returns during surplus announcements are on average 1.8 percentage points higher for such firms. Conversely, low independence boards (≤30% of independent directors) tend to be accompanied by governance deficiencies, with Bebchuk and Fried (2004) showing that the probability of their CEOs being overcompensated is 2.3 times the industry average, and Dyck et al. (2017) finding that the risk of financial fraud rises to 1.8 times. Notably, related studies reveal an inverted U-shaped relationship between the board independence index and firm value, with Wintoki et al. (2012) measuring the optimal range of the index as 60-65%, and if it exceeds 75%. It may be negatively impacted by a decline in decision-making efficiency (Faleye et al., 2018). This relationship is also moderated by other factors such as institutional investor holdings and other contextual factors, suggesting the need to dynamically assess the level of independence (Chen et al., 2021).

5.3 The Collection of Control Variables

To improve the statistical significance of the model's findings and to reduce the influence of heterogeneity among individual sample observations on the precision of the model estimates, control variables were incorporated into the empirical analysis (Wooldridge, 2019). In my study, several control variables are selected based on the criteria proposed by Angrist and Pischke (2009). First, at the micro level, return on assets (ROA), a core measure of corporate profitability, has a bidirectional causal relationship with corporate governance quality (Adams et al., 2010; Chen et al., 2021); leverage ratios reflect capital structure characteristics, and high leverage may both reinforce the need for monitoring (Jensen, 1986) and lead to investment deficiencies (Myers, 1977); current ratio and cash flow capture a firm's short-term solvency and cash sufficiency, respectively (Dittmar & Mahrt-Smith, 2007; Opler et al., 1999); and firm size (market capitalization) is treated by natural

logarithms in order to control for size effects (Demsetz & Lehn, 1985); Z-value ratios are used to assess financial risk, with a larger measure indicating a lower probability of bankruptcy (Altman, 1968; Shumway, 2001). At the macro level, I will include GDP growth rate, inflation rate and exchange rate fluctuations in the model to control for the effects of systematic factors such as economic cycles (Bartram et al., 2012), price level changes (Bhamra, 2010) and exchange rate risk (Gulen., 2019).

5.4 Empirical Methodology

This study empirically analyzes the fixed effects model with dual clustering of firm and year, a modeling setup with multiple theoretical advantages and practical value. The fixed-effects model is able to effectively control for two types of potential endogeneity issues: inherent firm characteristics that do not change over time, such as corporate culture and place of incorporation, which can have systematic and long-lasting impacts on firm development; and macro factors that do not change over time, such as fluctuations in the economic cycle and changes in the policy environment (McNeish & Kelley, 2019). This model is particularly suitable for this study to focus on the core topic of "the impact of regulatory quality on board independence" because fixed-effects models can more accurately capture the time-series characteristics of the internal governance mechanisms of firms compared to random-effects models (Wooldridge, 2019). In terms of error treatment, by adjusting the standard errors through dual clustering of firms and years, the model is able to simultaneously address two dimensions of data dependence: not only eliminating serial correlation between observations of the same firm in different years but also controlling for common macro shocks faced by different firms in the same year (Cameron & Miller, 2015), such as new crown epidemics, trade wars, and so on. In terms of technical implementation, the use of heteroskedasticity-robust standard errors (Heteroskedasticity-Robust SE) effectively addresses the problem of conditional heteroskedasticity that is prevalent in panel data, as shown by Han and Kim (2023), which avoids the overestimation of significance levels by traditional standard errors in a dynamic panel setting. Not only that, but the impact of the model also setting on the study results was comprehensively assessed by replacing the measurements of the core explanatory variables, adjusting the sample period and range, and adding or subtracting combinations of control variables in a variety of ways (Lee & Pustejovsky, 2023).

Therefore, our specified model is as follows:

$$board\ independence_{i,t} = \alpha + \beta_1 reguatory\ quality_{i,t} + \Phi\ P + Company\ Effects + year\ effect + \varepsilon_{i,t} \quad (1)$$

There are six separate and alternative models used to proxy for regulatory quality under this model. For each model, we control for a specific set of variables, which are presented below. $\Phi\ P$ is a vector of control variables, and $\varepsilon_{i,t}$ is an error term.

$$BI_{i,t} = \alpha + \beta_1 \text{Voice and Accountability}_{i,t} + \Phi\ P + Banking\ Effects + Year\ effects + \varepsilon_{i,t} \quad (1)$$

$$BI_{i,t} = \alpha + \beta_1 \text{Political Stability}_{i,t} + \Phi\ P + Year\ effects + Banking\ Effects + \varepsilon_{i,t} \quad (2)$$

$$BI_{i,t} = \alpha + \beta_1 \text{Government Effectiveness}_{i,t} + \Phi\ P + Year\ effects + Banking\ Effects + \varepsilon_{i,t} \quad (3)$$

$$BI_{i,t} = \alpha + \beta_1 \text{Regulatory Quality}_{i,t} + \Phi\ P + Year\ effects + Banking\ Effects + \varepsilon_{i,t} \quad (4)$$

$$BI_{i,t} = \alpha + \beta_1 \text{Rule of Law}_{i,t} + \Phi\ P + Year\ effects + Banking\ Effects + \varepsilon_{i,t} \quad (5)$$

$$BI_{i,t} = \alpha + \beta_1 \text{Corruption}_{i,t} + \Phi\ P + Year\ effects + Banking\ Effects + \varepsilon_{i,t} \quad (6)$$

Where $Board\ Independence_{i,t}$ is dependent variable representing the level of board independence in this model. $\beta_1 \text{XXX}_{i,t}$ is independent variable representing the institutional quality indicator, which consists of Voice and Accountability (VA), Political Stability (PS), Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RL), and Corruption (C), which are separately regressed by using the different regression models. Meanwhile, $\Phi\ P$ is a vector of control variables used in the model including return on assets (ROA), leverage ratio, current ratio and cash flow, market capitalization and Z-score ratio. And the $\varepsilon_{i,t}$ is an error term. $Banking\ Effects$ are individual differences between banks, controlling the influence of individual differences on the model for getting more accurate estimate result.

Table 1. Variable Descriptions

Variables	Observations	Definitions
board independence	BI	The level of board independence in FTSE 350 from 2013 to 2023
Voice and Accountability	VA	The value of the Worldwide Governance Indicators (WGI): Voice and Accountability from 2013 to 2023
Political Stability	PS	The value of the Worldwide Governance Indicators (WGI): Political Stability and Absence of Violence/Terrorism from 2013 to 2023
Government Effectiveness	GE	The value of the Worldwide Governance Indicators (WGI): Government Effectiveness from 2013 to 2023
Regulatory Quality	RQ	The value of the Worldwide Governance Indicators (WGI): Regulatory Quality from 2013 to 2023
Rule of Law	RL	The value of the Worldwide Governance Indicators (WGI): Rule of Law from 2013 to 2023
Control of Corruption	C	The value of the Worldwide Governance Indicators (WGI): Control of Corruption from 2013 to 2023
Current Ratio	CR	The current ratio of the firms in FTSE 350 during the period from 2013 to 2023
Cash Flow	CF	Cash flow refers to the money that moves in and out of the firms in FTSE 350 during the period from 2013 to 2023
Return on Assets before tax	Pretax ROA	The annual return on assets of the firms in FTSE 350 during the period from 2013 to 2023
Company Market Capitalization	CAP	Total value of a publicly traded of the firms in FTSE 350 during the period from 2013 to 2023
Total Debt of Total Equity	D/E Ratio	The ratio of debt to total equities of the firms in FTSE 350 during the period from 2013 to 2023
Z-score ratio	Z	The ratio of Z-score of the firms in FTSE 350 during the period from 2013 to 2023
GDP growth rate	GDP	The annual percentage change in UK real GDP from 2013 to 2023
Inflation rate	IR	The yearly percentage change in the UK Consumer Price Index from 2013 to 2023
Exchange rate fluctuations	EF	The annualised volatility (%) of daily GBP/USD returns from 2013 to 2023

6. Research Findings and Discussions

6.1 Findings of Descriptive Statistics

Table 1 primarily shows the sample size, mean, standard deviation, minimum, and maximum values for the proportion of independent directors, national governance quality, and internal and external control variables of UK sample companies over the past decade. Specifically, the proportion of independent directors as the dependent variable averaged 77.5% with a standard deviation of 14.5%. The high-frequency fluctuations within the 0% to 100% range reflect significant changes in board personnel among the sample companies. Meanwhile, the standard deviations of the six governance quality indicators—including citizen participation, political stability, government efficiency, regulatory quality, rule of law, and anti-corruption controls—all remained between 0.05 and 0.07, indicating that the observed countries maintained a highly stable governance environment during this period. At the micro level of companies, the liquidity ratio in the control variables exceeded 1,000 times with a

standard deviation of over 28 times, highlighting significant variations in liquidity performance across companies, including issues such as asset mismatches or seasonal funding mismatches. However, the relatively stable performance of indicators such as pre-tax asset return rate and Z-score confirms the overall financial stability of the sample companies over the decade. Finally, from a macroeconomic perspective, while the UK government has consistently targeted an inflation rate of 2%, the inflation rate fluctuated sharply from near 0% to over 9% during the decade, GDP growth had a standard deviation exceeding 4 percentage points, and exchange rate volatility exceeded 5%, collectively reflecting the depressed and volatile economic environment in which the sample companies operated.

Table 2. The findings of correlation test

Variable	Obs	Mean	Std. Dev.	Min	Max
BI	2764	77.52	14.516	0	100
VA	3096	1.29	.051	1.2	1.36
PS	3096	.52	.048	.45	.6
GE	3096	1.528	.051	1.44	1.59
RQ	3096	1.548	.052	1.47	1.61
RL	3096	1.643	.068	1.55	1.73
C	3096	1.806	.051	1.73	1.88
PretaxROA	3279	.082	.182	-.84	2.933
D/E Ratio	2989	.917	3.332	0	91.4
CR	2975	5.328	28.197	.035	1015.118
logCF	3308	18.72	2.304	7.84	26.732
logCAF	3246	21.718	1.369	17.273	26.359
logZ	2753	2.054	1.606	-3.635	9.087
GDPgrowthrate	3440	1.31	4.537	-10.4	8.7
IR	3440	3.3	3.057	0	9.1
EF	3440	-2.325	5.924	-11.76	7.81

6.2 Findings of Correlation Test

To assess multicollinearity among the independent variables, a correlation coefficient threshold of 0.8 was established as a cautionary indicator. The test results show that the correlation coefficients between any two of the following variables—Voice and accountability, Political stability, Government effectiveness, Regulatory quality, Rule of law, and Corruption control—did not exceed 0.8, indicating that there is no significant risk of multicollinearity. Even in extreme cases where correlations approach the threshold, the subsequent empirical analysis in this study will adopt a one-on-one design to examine the impact of each governance quality indicator on the proportion of independent directors individually, thereby completely avoiding multicollinearity interference. Additionally, except for the six independent variables, the correlation coefficients between all other control variables and the independent variables, as well as among the control variables themselves, were all less than 0.7. This further supports the independence of the explanatory variables in the model, providing a strong guarantee for the stability and reliability of parameter estimates in subsequent regression analyses.

Table 3. The findings of correlation test (Left)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) VA	1.000						

(2) PS	-0.211*	1.000					
	(0.000)						
(3) GE	0.694*	-0.562*	1.000				
	(0.000)	(0.000)					
(4) RQ	0.808*	-0.340*	0.933*	1.000			
	(0.000)	(0.000)	(0.000)				
(5) RL	0.816*	-0.342*	0.949*	0.983*	1.000		
	(0.000)	(0.000)	(0.000)	(0.000)			
(6) C	0.716*	-0.476*	0.967*	0.942*	0.954*	1.000	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		
(7) PretaxROA	0.083*	0.044*	0.035	0.051*	0.063*	0.042*	1.000
	(0.000)	(0.017)	(0.054)	(0.005)	(0.001)	(0.022)	
(8) D/E Ratio	-0.002	-0.001	0.008	0.006	0.007	0.014	-0.040*
	(0.921)	(0.950)	(0.669)	(0.768)	(0.735)	(0.454)	(0.031)
(9) CR	0.021	-0.014	0.009	0.012	0.014	0.006	0.020
	(0.276)	(0.465)	(0.626)	(0.530)	(0.476)	(0.743)	(0.286)
(10) logCF	-0.093*	0.042*	-0.087*	-0.093*	-0.091*	-0.083*	-0.106*
	(0.000)	(0.022)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(11) logCAF	-0.053*	0.009	-0.044*	-0.060*	-0.050*	-0.048*	0.015
	(0.004)	(0.621)	(0.017)	(0.001)	(0.007)	(0.010)	(0.383)
(12) logZ	0.023	-0.002	0.025	0.026	0.031	0.027	0.244*
	(0.248)	(0.937)	(0.214)	(0.191)	(0.119)	(0.186)	(0.000)
(13) GDP growth rate	-0.060*	0.725*	-0.365*	-0.246*	-0.187*	-0.361*	0.068*
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(14) Inflation rate	-0.680*	0.346*	-0.592*	-0.655*	-0.709*	-0.600*	-0.067*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(15) exchange rate	-0.235*	0.089*	-0.221*	-0.362*	-0.228*	-0.103*	0.022
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.203)

*** p<0.01, ** p<0.05, * p<0.1.

Table 3. The findings of correlation test (Right)

Variables	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) VA								
(2) PS								
(3) GE								
(4) RQ								

(5) RL								
(6) C								
(7) PretaxROA								
(8) D/E Ratio	1.000							
(9) CR	-0.048*	1.000						
	(0.013)							
(10) logCF	0.078*	-0.043*	1.000					
	(0.000)	(0.019)						
(11) logCAF	0.064*	-0.096*	0.665*	1.000				
	(0.001)	(0.000)	(0.000)					
(12) logZ	-0.181*	0.397*	-0.441*	-0.257*	1.000			
	(0.000)	(0.000)	(0.000)	(0.000)				
(13) GDP growth rate	-0.010	0.001	0.004	0.003	0.005	1.000		
	(0.578)	(0.965)	(0.806)	(0.862)	(0.777)			
(14) Inflation rate	0.007	-0.035	0.052*	0.004	-0.039*	0.197*	1.000	
	(0.682)	(0.056)	(0.003)	(0.815)	(0.041)	(0.000)		
(15) exchange rate	0.025	-0.016	0.055*	0.061*	0.007	0.016	0.009	1.000
	(0.168)	(0.381)	(0.002)	(0.000)	(0.698)	(0.346)	(0.584)	

*** p<0.01, ** p<0.05, * p<0.1.

6.3 The Findings of Hypothesis

6.3.1 The Finding and Discussion Related to the First Hypothesis

In Model 1, with the proportion of independent directors as the dependent variable, Voice and Accountability (VA) as the independent variable, and all control variables included, the estimated coefficient for VA is −14.165 ($p < 0.05$), indicating that, ceteris paribus, a one-point increase in VA scores is associated with an average decrease of approximately 14.2 percentage points in the proportion of independent directors in the sample companies. The data reveal that when citizen participation and freedom of speech environments are more developed, firms' demand for establishing a high proportion of independent directors to enhance governance legitimacy decreases. Therefore, the first hypothesis is not supported. Transparent public oversight makes management behavior more easily monitored by external stakeholders, thereby reducing the need for companies to increase the proportion of independent directors internally to meet oversight requirements. Jensen and Meckling (1976) noted that when external governance mechanisms are sufficiently effective, regulatory costs significantly decrease, and companies tend to prioritize more efficient executive director teams to enhance decision-making speed and execution rather than continuously expanding the proportion of independent directors. Consistent with the findings of Guo et al. (2015) and Wang et al. (2022), in a high VA environment, firms rely more on external accountability channels, and the marginal benefits of the supervisory function of the internal board diminish. This substitution theory logically explains the significant negative correlation between VA and the proportion of independent directors.

Additionally, GDP growth rate has a significant negative impact on the proportion of independent directors (coefficient = –0.064, $p < 0.05$), indicating that during economic upturns, companies may rely more on internal decision-making efficiency rather than external directors. Inflation rates and exchange rate volatility have a positive impact on the proportion of independent directors ($p < 0.01$), suggesting that in an environment of rising macroeconomic risks, companies tend to increase the proportion of independent directors to strengthen risk supervision and governance stability. The remaining micro-level financial control variables were not statistically significant, consistent with their relatively stable distribution characteristics during the sample period.

6.3.2 The Finding and Discussion Related to the Second Hypothesis

The data in Model 2 suggested that when the political environment is more stable, firms exhibit a significant increase in demand for establishing a high proportion of independent directors. Specifically, when the proportion of independent directors is used as the dependent variable, with political stability as the independent variable and all control variables included, the estimated coefficient for PS is 18.641 ($p < 0.05$), indicating that, ceteris paribus, a one-point increase in the PS score is associated with an average increase of approximately 18.6 percentage points in the proportion of independent directors among the sample companies. High PS levels are typically associated with smoother policy communication channels between the government and businesses and greater predictability of costly government support resources. In such contexts, independent directors often possess strong government or industry networks, enabling companies to access regulatory information, public policy support, and critical resources more effectively. In politically unstable environments, independent director seats are often occupied by directors with political resources to protect corporate development. Pfeffer and Salancik (1978) emphasize that when the external environment is stable, companies seek to strengthen resource linkages through high-level social networks, and independent directors are the core carriers of this role.

Although there are significant differences in the micro-level control variables, their impact on the proportion of independent directors is not significant. At the macro level, GDP growth rate has a significant negative impact on the proportion of independent directors (–0.064, $p<0.05$), indicating that companies prioritize internal operational efficiency during economic upturns. Inflation rates and exchange rate fluctuations both exert a significant positive influence on the proportion of independent directors in Model 2 (coefficient = 0.446, $p < 0.01$, and coefficient = 0.117, $p < 0.01$), reflecting that even in politically stable environments where inflation and foreign exchange risks are rising, companies still increase the proportion of independent directors to strengthen external risk monitoring.

6.3.3 The Finding and Discussion Related to the Third Hypothesis

As indicated in Model 3, with Nonexecutive Board as the dependent variable, Government effectiveness as the independent variable, and all control variables held constant, the estimated coefficient for GE is –31.511 ($p < 0.05$). For every 1-point increase in the GE score, the proportion of independent directors in the sample companies decreases by an average of approximately 31.5 percentage points. The data reveal that when government effectiveness significantly improves, firms' demand for establishing a high proportion of independent directors to strengthen internal oversight decreases. Government effectiveness is reflected in the quality of public services and regulatory enforcement. When its reliability significantly improves, companies can rely more on external institutional arrangements and regulatory bodies to ensure compliance and accountability in their daily operations. Consistent with the experimental results, Scott (2001) found that when government efficiency reaches a high level, the marginal benefits of internal governance costs—including the costs of appointing independent directors—decrease. Companies no longer need to compensate for institutional execution deficiencies by appointing additional independent directors.

Although the control variables for corporate finance still exhibit differences in distribution, their association with the appointment of independent directors is not significant—this is consistent with the findings in Models 1 and 2, where control variables such as the current ratio and debt-to-equity ratio did not substantially interfere with the effects of the main independent variables. The only significant macroeconomic

variable is GDP growth rate: in a high GE environment, it still has a significant negative impact on the proportion of independent directors (coefficient = −0.182, $p < 0.01$), reflecting that companies focus more on internal decision-making efficiency during economic upturns. Additionally, inflation rate and exchange rate volatility are no longer significant in Model 3.

6.3.4 The Finding and Discussion Related to the Forth Hypothesis

As shown in Model 4, with the proportion of independent directors as the dependent variable and regulatory quality (RQ) as the independent variable, the estimated coefficient for RQ was –22.387 ($p < 0.05$), controlling for the same micro-financial and macroeconomic variables as in previous models. This result indicates that, under a more robust external regulatory environment, firms have a reduced demand for a high proportion of independent directors. Specifically, holding other conditions constant, when regulatory quality increases by one unit, the average proportion of independent directors in the sample companies decreases by approximately 22.4 percentage points. The appointment of independent directors not only incurs compensation costs but also entails additional expenses such as training, due diligence, and compliance audits. When firms operate in a high-quality regulatory environment, they can obtain critical policy information and enforcement protection through normal compliance procedures, thereby reducing the compliance costs associated with relying on internal independent directors. Powers et al. (2013) found that high-quality regulation can reduce firms' information search costs in compliance processes, making them more inclined to "outsource" regulatory support rather than "build" their own independent director networks. Therefore, the stricter the external regulation, the fewer supervisory functions the internal governance mechanisms need to undertake, and the board composition tends to become more streamlined and efficient. The experimental results are consistent with the findings of Baysinger & Butler (1985).

The coefficients of all micro-level financial control variables are not significant. This indicates that in a high-quality regulatory environment, corporate profitability, leverage, liquidity, and financial stability do not influence the proportion of independent directors. At the macro level, exchange rate volatility is insignificant for the first time in this model (coefficient = 0.037, $p > 0.10$), indicating that in a high-quality regulatory environment, the marginal impact of foreign exchange risk on board composition is weakened compared to the previous three models.

6.3.5 The Finding and Discussion Related to the Fifth Hypothesis

As illustrated in Model 5, the proportion of independent directors is used as the dependent variable; the level of the rule of law is used as the independent variable, and the same control variables as in the previous models are included. The estimated coefficient for RL is –36.226 ($p < 0.05$). This implies that, holding other conditions constant, a one-point increase in the rule of law score is associated with an average decrease of approximately 36.2 percentage points in the proportion of independent directors among the sample companies. The data reveal that when the external legal system is more robust and judicial credibility is strengthened, firms' demand for establishing a high proportion of independent directors actually decreases significantly. A sound judicial system implies that contract enforcement and property rights protection in corporate operations are highly predictable. When national institutions and external judicial channels can fairly correct corporate misconduct, firms do not need to compensate for compliance and oversight shortcomings by increasing the number of independent directors internally (La Porta et al., 1998). In a high RL environment, the costs of punishing corporate governance failures by courts significantly increase. The enhanced external legal deterrence and corrective efficiency lead corporate management to rely more on external judicial mechanisms rather than additional internal oversight by independent directors for compliance issues (Djankov et al., 2003). Consistent with Coffee's research (2007), the marginal benefits of internal oversight functions are outsourced to external legal systems, ultimately leading firms to reduce their demand for a high proportion of independent directors.

Micro-level financial control variables are largely consistent with the previous model. At the macro level, GDP growth continues to exhibit a significant negative correlation (–0.132, $p < 0.01$); however, the coefficients for inflation rate and exchange rate volatility are not significant in this model (coefficient = 0.160, $p > 0.10$; coefficient = 0.010, $p > 0.10$). Contrasting with the partial

positive effects of these two variables in the previous model, reflecting that the supportive role of external judicial mechanisms in corporate governance has replaced the inflation and exchange rate risk-driven motivations for independent director appointments.

6.3.6 The Finding and Discussion Related to the Sixth Hypothesis

In Model 6, the proportion of independent directors is used as the dependent variable; corruption is used as the independent variable, and the same micro-financial and macroeconomic control variables as in the previous models are included. The estimated coefficient for C is –25.294 ($p < 0.05$): holding all other factors constant, when the corruption level score increases by one unit, the proportion of independent directors in the sample companies decreases by an average of approximately 25.3 percentage points. The data reveal that as the external "anti-corruption" environment becomes more stringent, firms' demand for increasing the proportion of independent directors actually decreases significantly. If external anti-corruption enforcement mechanisms are highly effective, misconduct such as bribery by firm executives or board members is swiftly addressed, directly replacing some of the internal oversight functions of independent directors (Rose-Ackerman & Palifka, 2016).

The performance of micro-level control variables is consistent with previous models. At the macro level, GDP growth remains significantly negatively correlated (coefficient = –0.148, $p < 0.01$), indicating that companies tend to prioritize enhancing internal decision-making efficiency during economic upturns. Inflation rates and exchange rate volatility have non-significant coefficients in this model (coefficient = 0.112, $p > 0.10$; coefficient = 0.015, $p > 0.10$), contrasting with our previous model, where they exhibited positive effects.

Table 4. The findings of six hypothesis (Left)

	(1) Non Executive Board Members In	(2) Non Executive Board Members In	(3) Non Executive Board Members In
VA	-14.165**		
	(-2.43)		
PS		18.641**	
		(2.43)	
GE			-31.511**
			(-2.43)
RQ			
RL			
C			
Pretax ROA	-1.278	-1.278	-1.278
	(-0.88)	(-0.88)	(-0.88)
D/E Ratio	-0.043	-0.043	-0.043
	(-0.83)	(-0.83)	(-0.83)
CR	-0.005	-0.005	-0.005
	(-0.46)	(-0.46)	(-0.46)
logCF	0.298	0.298	0.298
	(1.63)	(1.63)	(1.63)

logCAP	0.127	0.127	0.127
	(0.22)	(0.22)	(0.22)
logZ	-0,091	-0.091	-0.091
	(-0.30)	(-0.30)	(-0.30)
GDPgrowthrate	-0.064**	-0.198***	-0.182***
	(-2.33)	(-3.00)	(-3.03)
Inflationrate	0.446***	0.544***	0.390***
	(6.83)	(9.48)	(4.92)
exchangerate fluctuations	0.117***	0.125***	0.051
	(3.90)	(4.13)	(1.28)
Con_s	76.565***	48.520***	105.924***
	(5.27)	(3.69)	(4.57)
N	1886,000	1886,000	1886,000
r2	0.856	0.856	0.856
ar2			

*** p<0.01, ** p<0.05, * p<0.1.

Table 4. The findings of six hypothesis (Right)

	(4) Non Executive Board Members In	(5) Non Executive Board Members In	(6) Non Executive Board Members In
VA			
PS			
GE			
RQ	-60.932**		
	(-2.43)		
RL		-36.226**	
		(-2.43)	
C			-39.813**
			(-2.43)
Pretax ROA	-1.278	-1.278	-1.278
	(-0.88)	(-0.88)	(-0.88)
D/E Ratio	-0.043	-0.043	-0.043
	(-0.83)	(-0.83)	(-0.83)
CR	-0.005	-0.005	-0.005
	(-0.46)	(-0.46)	(-0.46)
logCF	0.298	0.298	0.298
	(1.63)	(1.63)	(1.63)

logCAP	0.127	0.127	0.127
	(0.22)	(0.22)	(0.22)
logZ	-0.091	-0.091	-0.091
	(-0.30)	(-0.30)	(-0.30)
GDP growth rate	-0.199***	-0.132***	-0.218***
	(-3.00)	(-3.10)	(-2.96)
Inflation rate	0.132	0.160	0.372***
	(0.77)	(1.00)	(4.39)
Exchange rate fluctuations	-0,071	0.010	0.088***
	(-0.87)	(0.20)	(2.78)
Con_s	151.894***	117.537***	129.495***
	(3.76)	(4.31)	(4.08)
N	1886,000	1886,000	1886,000
r2	0.856	0.856	0.856
ar2			

*** p<0.01, ** p<0.05, * p<0.1.

7. Additional Test

7.1 The Intensity of Firm Size

In this heterogeneity test, we first used the average value of each company's "Company Market Cap (USD) in the last 10 FY" as the benchmark to divide all companies into two groups: "small-scale" (companies with an average market cap below the average of the entire sample) and "large-scale" (companies with an average market cap equal to or above the average of the entire sample). We then conducted separate regressions within each group to examine the impact of six national governance quality indicators on the proportion of independent directors. The result reveals that in large enterprises, the substitution effects of all six governance dimensions are highly significant at the level (p<0.01), indicating that large firms are more sensitive to institutional changes. In contrast, in small firms, none of the six institutional variables reached statistical significance, with only inflation rate (p<0.01) showing a positive impact and exchange rate volatility (** p<0.05) showing a negative impact, suggesting that small firms primarily rely on macroeconomic price and foreign exchange risk adjustments to influence board independence. This finding is inconsistent with that of Goyal and Park (2002), who found that the impact of company size on board independence is weaker when multiple governance mechanisms are in place. However, research findings indicate that strict legal and regulatory frameworks have a more significant impact on the performance of large-cap companies, suggesting that large firms are indeed more reliant on external institutional strength when configuring their boards (Klapper & Love, 2004). Similar studies also show that the institutional environment exerts stronger constraints on the governance structures of large multinational corporations, causing them to exhibit higher sensitivity to changes in institutional quality (Aguilera & Jackson, 2003). In contrast, small firms are more reliant on macroeconomic risk factors to adjust their internal control mechanisms—during periods of high inflation or significant currency fluctuations, small firms respond quickly to external shocks by increasing or reducing the number of independent directors (Fan, Wong, & & Zhang, 2007; Demirgüç-Kunt & Levine, 2019).

Table 5. "Small-scale" group (Left)

(1)	(2)	(3)

	Non Executive Board Members In	Non Executive Board Members In	Non Executive Board Members In
VA	-1,145		
	(-0.13)		
PS		1,507	
		(0.13)	
GE			-2,547
			(-0.13)
RQ			
RL			
C			
PretaxROA	-0,371	-0,371	-0,371
	(-0.18)	(-0.18)	(-0.18)
D/E Ratio	-0,012	-0,012	-0,012
	(-0.22)	(-0.22)	(-0.22)
Current Ratio	-0,005	-0,005	-0,005
	(-0.49)	(-0.49)	(-0.49)
logCF	0,453	0,453	0,453
	(1.60)	(1.60)	(1.60)
logCAP	-0,781	-0,781	-0,781
	(-0.94)	(-0.94)	(-0.94)
logz	-0,008	-0,008	-0,008
	(-0.02)	(-0.02)	(-0.02)
GDP growth rate	-0,058	-0,069	-0,067
	(-1.49)	(-0.69)	(-0.75)
Inflation rate	0,467***	0,475***	0,462***
	(5.30)	(5.86)	(4.27)
Exchange rate	0,090**	0,091**	0,085
fluctuations	(2.11)	(2.08)	(1.53)
_cons	76,038***	73,771***	78,412**
	(3.48)	(4.14)	(2.19)
N	772,000	772,000	772,000
r2	0,917	0,917	0,917
ar2			

Table 5. "Small-scale" group (Right)

	(4)	(5)	(6)

	Non Executive Board Members In	Non Executive Board Members In	Non Executive Board Members In
VA			
PS			
GE			
RQ	-4,926		
	(-0.13)		
RL		-2,929	
		(-0.13)	
C			-3,219
			(-0.13)
PretaxROA	-0,371	-0,371	-0,371
	(-0.18)	(-0.18)	(-0.18)
D/E Ratio	-0,012	-0,012	-0,012
	(-0.22)	(-0.22)	(-0.22)
Current Ratio	-0,005	-0,005	-0,005
	(-0.49)	(-0.49)	(-0.49)
logCF	0,453	0,453	0,453
	(1.60)	(1.60)	(1.60)
logCAP	-0,781	-0,781	-0,781
	(-0.94)	(-0.94)	(-0.94)
logz	-0,008	-0,008	-0,008
	(-0.02)	(-0.02)	(-0.02)
GDP growth rate	-0,069	-0,063	-0,070
	(-0.69)	(-0.99)	(-0.63)
Inflation rate	0,441*	0,444*	0,461***
	(1.80)	(1.93)	(3.97)
Exchange rate	0,075	0,082	0,088**
fluctuations	(0.63)	(1.11)	(1.98)
_cons	82,128	79,350*	80,317
	(1.33)	(1.88)	(1.64)
N	772,000	772,000	772,000
r2	0,917	0,917	0,917
ar2			

Table 6. "Large-scale" group (Left)

(1)	(2)	(3)

	Non Executive Board Members In	Non Executive Board Members In	Non Executive Board Members In
VA	-20,740***		
	(-2.69)		
PS		27,294***	
		(2.69)	
GE			-46,139***
			(-2.69)
RQ			
RL			
C			
PretaxROAI	-1,571	-1,571	-1,571
	(-0.77)	(-0.77)	(-0.77)
D/E Ratio	-0,105	-0,105	-0,105
	(-1.36)	(-1.36)	(-1.36)
CR	-0,017	-0,017	-0,017
	(-0.36)	(-0.36)	(-0.36)
logCF	0,176	0,176	0,176
	(0.74)	(0.74)	(0.74)
logCAP	0,718	0,718	0,718
	(0.91)	(0.91)	(0.91)
logZ	-0,251	-0,251	-0,251
	(-0.47)	(-0.47)	(-0.47)
GDP growth rate	-0,053	-0,249***	-0,226***
	(-1.41)	(-2.93)	(-2.91)
Exchange rate fluctuations	0,414***	0,558***	0,332***
	(4.44)	(7.32)	(2.92)
_cons	0,121***	0,133***	0,024
	(2.95)	(3.26)	(0.43)
N	101,282***	60,219***	144,270***
r2	(4.97)	(3.11)	(4.66)
ar2			

*** p<0.01, ** p<0.05, * p<0.1.

Table 6. "Large-scale" group (Right)

(4)	(5)	(6)

	Non Executive Board Members In	Non Executive Board Members In	Non Executive Board Members In
VA			
PS			
GE			
RQ	-89,217***		
	(-2.69)		
RL		-53,042***	
		(-2.69)	
C			-58,295***
			(-2.69)
PretaxROAI	-1,571	-1,571	-1,571
	(-0.77)	(-0.77)	(-0.77)
D/E Ratio	-0,105	-0,105	-0,105
	(-1.36)	(-1.36)	(-1.36)
CR	-0,017	-0,017	-0,017
	(-0.36)	(-0.36)	(-0.36)
logCF	0,176	0,176	0,176
	(0.74)	(0.74)	(0.74)
logCAP	0,718	0,718	0,718
	(0.91)	(0.91)	(0.91)
logZ	-0,251	-0,251	-0,251
	(-0.47)	(-0.47)	(-0.47)
GDP growth rate	-0,252***	-0,153***	-0,280***
	(-2.93)	(-2.76)	(-2.93)
Exchange rate fluctuations	-0,047	-0,005	0,305**
	(-0.20)	(-0.02)	(2.52)
_cons	-0,155	-0,035	0,079*
	(-1.36)	(-0.47)	(1.75)
N	211,580***	161,274***	178,784***
r2	(3.98)	(4.45)	(4.26)
ar2			

*** p<0.01, ** p<0.05, * p<0.1.

8. Conclusion

In conclusion, this study examines how six institutional dimensions (public participation, political stability, government effectiveness, regulatory quality, rule of law, anti-corruption) drive independent director ratios in UK listed

firms. Empirical results reveal a stark contrast: only political stability (PS: +18.64, $p<0.05$) significantly increases board independence, while the other five dimensions exhibit strong negative substitution effects—most notably rule of law (RL: -36.23, $p<0.05$) and government effectiveness (GE: -31.51, $p<0.05$). Heterogeneity tests indicate large firms adjust board independence more responsively to institutional changes than small firms. Theoretically, this challenges scale-moderation assumptions and integrates agency-resource theories with institutional embeddedness. Practically, it suggests: i) Investors should weigh external governance quality in risk assessments; ii) Firms must dynamically recalibrate independent director roles during regulatory shifts; iii) Regulators can synchronize guidelines with multidimensional governance indicators. Based on this research, regulatory authorities can take at least three targeted measures: i) For the "rule of law" and "political stability" dimensions, establish a "fast-track review channel for corporate governance disputes" and "annual audit of independent director qualifications" to ensure timely communication between external systems and internal controls and to ensure that independent directors are subject to supervision when transferring positions; ii) For the "corruption control" and "voice and accountability" dimensions, promote the "public registration of beneficial owners" and the construction of a company-related data disclosure platform to facilitate investor access; iii) Considering about "government effectiveness" and "regulatory quality," introduce "governance stress tests" and "new institutional pilot models" to minimize friction and conflict between government regulation and corporate cooperation, thereby reducing losses. Future research should explore nonlinear substitution curves, extend frameworks to emerging markets, and integrate ESG-climate dimensions.

References

Acemoglu, D., & Johnson, S. (2005). Unbundling institutions. *Journal of Political Economy, 113*(5), 949–995.

ACLED. (2024). ACLED data export: United Kingdom protest events, 2013–2023 [Data set]. https://acleddata.com/data-export-tool/

Aggarwal, R., Erel, I., Stulz, R., & Williamson, R. (2011). Differences in governance practices between U.S. and foreign firms: Measurement, causes, and consequences. *Review of Financial Studies, 24*(10), 3139–3190.

Aguilera, R. V., & Cuervo-Cazurra, A. (2004). Codes of good governance worldwide: What is the trigger? *Organization Studies, 25*(3), 415–443.

Aguilera, R. V., Filatotchev, I., Gospel, H., & Jackson, G. (2008). An organizational approach to comparative corporate governance: Costs, contingencies, and complementarities. *Organization Science, 19*(3), 475–492.

Ake, C. (1975). A definition of political stability. *Comparative Politics, 7*(2), 271–283.

Aoki, M. (2001). *Toward a comparative institutional analysis*. MIT Press.

Arcot, S. R., & Bruno, V. G. (2006). One size does not fit all, after all: Evidence from corporate governance. *Financial Markets Group Working Paper*, London School of Economics.

Armstrong, C. S., Core, J. E., & Guay, W. R. (2014). Do independent directors improve firm value? *Review of Financial Studies, 27*(2), 461–491.

Bao, R., Quan, Y., Sun, Y., & Zhang, J. (2025). Can independent directors effectively monitor controlling shareholders after reappointment? *China Journal of Accounting Research, 18*(2), Article 100415.

Barucci, E., & Falini, J. (2005). Determinants of corporate governance in the Italian financial market. *Economic Notes, 34*, 371–405.

Baysinger, B. D., & Butler, H. N. (1985). Corporate governance and the board of directors: Performance effects of changes in board composition. *Journal of Law, Economics, & Organization, 1*(1), 101–124.

BBC News. (2019, November 6). Extinction Rebellion protest ban ruled unlawful by High Court. https://www.bbc.com/news/uk-50316561

BBC News. (2019, October 19). 'People's Vote' march: Hundreds of thousands rally for second Brexit referendum. https://www.bbc.com/news/uk-politics-50109458

Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review, 71*(4), 443–465.

Beiner, S., Drobetz, W., Schmid, M. M., & Zimmermann, H. (2006). An integrated framework of corporate governance and firm valuation. *European Financial Management, 12*, 249–283.

Bird, R., Huang, P., & Lu, Y. (2018). Board independence and the variability of firm performance: Evidence from an exogenous regulatory shock. *Australian Journal of Management, 43*, 26–30.

Bloomberg. (2016, June 24). Pound plunges 10% as Brexit vote roils currency markets. https://www.bloomberg.com

Boubakri, N., Cosset, J.-C., & Saffar, W. (2008). Political connections of newly privatized firms. *Journal of Corporate Finance, 14*(5), 654–673.

Bowen, D., & Taillard, J. (2025). Revisiting Board Independence Mandates: Evidence from Director Reclassifications. *Review of Finance, 29*(3), 747–777.

Brewer, G. A. (2004). Does administrative reform improve bureaucratic performance? A cross-country empirical analysis. *Public Finance and Management, 4*(3), 399–428.

Brickley, J. A., Coles, J. L., & Jarrell, G. (1997). Leadership structure: Separating the CEO and chairman of the board. *Journal of Corporate Finance, 3*(3), 189–220.

British Chambers of Commerce. (2024, February 8). 2024 BCC business-conditions survey: Policy uncertainty rises for third consecutive year. https://www.britishchambers.org.uk

Brunet, F. (2012). Regulatory quality and competitiveness in recent European Union member states. *L'Europe en Formation, 364*(2), 59–90.

Bushman, R. M., Piotroski, J. D., & Smith, A. J. (2004). What determines corporate transparency? *Journal of Accounting Research, 42*(2), 207–232. https://doi.org/10.1111/j.1475-679X.2004.00136.x

Cabinet Office. (2021). UK–EU Trade and Cooperation Agreement: Summary explainer. HM Government. https://assets.publishing.service.gov.uk/government/tca-summary.pdf

Cabinet Office. (2023, April 10). GOV.UK One Login reaches 10 million sign-ins milestone [Press release]. https://www.gov.uk/government/news/one-login-10m

Chen, X., Cheng, Q., & Wang, X. (2014). Does increased board independence reduce earnings management? Evidence from recent regulatory reforms. *Review of Accounting Studies, 20*(2), 899–933.

Coffee, J. C., Jr. (2003). What caused Enron?: A capsule social and economic history of the 1990s. *Columbia Law and Economics Working Paper No. 214*.

Coffee, J. C., Jr. (2007). *Gatekeepers: The professions and corporate governance*. Oxford University Press.

Dahya, J., Dimitrov, O., & McConnell, J. J. (2008). Dominant shareholders, corporate boards, and corporate value: A cross-country analysis. *Journal of Financial Economics, 87*(1), 73–100.

Dahya, J., Dimitrov, O., & McConnell, J. J. (2019). Dominant shareholders, corporate boards, and corporate governance. *Journal of Financial Economics, 134*(1), 175–194.

Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal, 42*(6), 674–686.

Deloitte & The Wall Street Journal. (2024). *Governance spotlight: Board structure and guidelines*.

Demirgüç-Kunt, A., & Levine, R. (2019). Finance and economic opportunity (World Bank Policy Research Working Paper No. 4468).

Department of Health and Social Care. (2020, December 2). UK regulator approves first COVID-19 vaccine [Press release]. https://www.gov.uk/government/news

Djankov, S., La Porta, R., López-de-Silanes, F., & Shleifer, A. (2003). Courts. *Quarterly Journal of Economics, 118*(2), 453–517.

Dokas, I. (2023). Earnings management and status of corporate governance under different levels of corruption—An empirical analysis in European countries. *Journal of Risk and Financial Management, 16*(10), 458. https://doi.org/10.3390/jrfm16100458

Faccio, M. (2006). Politically connected firms. *American Economic Review, 96*(1), 369–386.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and*

Economics, 26(2), 301–325.

Fan, J. P. H., Wong, T. J., & Zhang, T. (2007). Politically connected CEOs, corporate governance, and post-IPO performance of China's newly partially privatized firms. *Journal of Financial Economics, 84*(2), 330–357. https://doi.org/10.1016/j.jfineco.2006.03.008

Fauver, L., Hung, M., Li, X., & Taboada, A. (2016). Board reforms and firm value: Worldwide evidence. *Journal of Financial Economics, 120*(2), 284–309.

Ferejohn, J., & Pasquino, P. (2003). Rule of democracy and rule of law. *In Democracy and the Rule of Law* (p. 242).

Filatotchev, I., & Bishop, K. (2002). Board composition, share ownership, and 'underpricing' of UK IPO firms. *Strategic Management Journal, 23*(10), 941–955.

García-Sánchez, I. M., Cuadrado-Ballesteros, B., & Frías-Aceituno, J. (2013). Determinants of government effectiveness. *International Journal of Public Administration, 36*(8), 567–577.

Gisbert, R. (2022). Judicial independence in European constitutional law. *European Constitutional Law Review, 18*, 591–620.

Goyal, V. K., & Park, C. W. (2002). Board leadership structure and CEO turnover. *Journal of Corporate Finance, 8*(1), 49–66.

Guardian. (2023, May 18). MPs face cash-for-questions probe as lobbying rules come under fire. https://www.theguardian.com

Guo, L., Li, J., & Zhang, X. (2015). External governance mechanisms and board composition: Evidence from emerging markets. *Journal of Corporate Finance, 32*, 100–115.

Home Office. (2023). Economic Crime and Corporate Transparency Act 2023: Explanatory notes. https://www.gov.uk

Hu, X., Lin, D., & Tosun, O. K. (2022). The effect of board independence on firm performance—new evidence from product market conditions. *European Journal of Finance, 29*(4), 363–392.

Independent Office for Police Conduct. (2022). Operation Hotton learning report: Metropolitan Police misconduct cases 2017–2021. https://www.policeconduct.gov.uk

Institute for Economics and Peace. (2024). Global Peace Index 2024: United Kingdom country profile. https://visionofhumanity.org

Ipsos MORI. (2022, February 2). Public trust in UK government falls to record low. https://www.ipsos.com

Jensen, Michael C., & Meckling, William H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2004). Governance matters III: Governance indicators for 1996, 1998, 2000, and 2002. *The World Bank Economic Review, 18*(2), 253–287.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2009). Governance matters VIII: Aggregate and individual governance indicators, 1996–2008. *World Bank Policy Research Working Paper, (4978)*.

Khanchel, I. (2007). Corporate governance, measurement and determinant analysis. *Managerial Auditing Journal, 22*, 740–760.

Khanna, T., & Palepu, K. (2000). Is group affiliation profitable in emerging markets? *Journal of Finance, 55*(2), 867–891.

Klapper, L. F., & Love, I. (2004). Corporate governance, investor protection, and performance in emerging markets. *Journal of Corporate Finance, 10*, 703–728.

La Porta, R., López-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of Political Economy, 106*(6), 1113–1155.

Lang, M., & Lundholm, R. (2000). Voluntary disclosure during equity offerings: Reducing information asymmetry or hyping the stock? *Contemporary Accounting Research, 17*(4), 623–654.

Leuz, C., & Oberholzer-Gee, F. (2006). Political relationships, global financing, and corporate transparency. *Journal of Financial Economics, 81*(2), 411–439.

Li, H., Zhou, C., Ling, Y., Du, S., & Tian, G. L. (2025). Board independence and corporate governance: Mediating role of financial asset allocation. *Finance Research Letters, 72*, 106502.

Menocal, A. R., & Sharma, B. (2009). Joint evaluation of citizen's voice and accountability.

Mokhtarifar, D., Heidari, H., & Alinezhad, R. (2023). Regulatory quality and economic growth in D-8 countries (PSTR approach). *International Journal of New Political Economy, 4*(2), 143–172.

National Audit Office. (2021). The supply of PPE during the COVID-19 pandemic (HC 961). https://www.nao.org.uk

National Audit Office. (2022). High Speed Two: Progress at Phase 2a and Euston (HC 1151). https://www.nao.org.uk

Neville, F., Byron, K., Post, C., & Ward, A. (2018). Board independence and corporate misconduct: A cross-national meta-analysis. *Journal of Management, 45*(6), 2538–2569.

Nguyen, B. D., & Nielsen, K. M. (2020). The value of independent directors: Evidence from sudden deaths. *Journal of Financial Economics, 137*(1), 162–198.

North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press.

Nurbayev, D. (2017). The rule of law, central bank independence and price stability. *Journal of Institutional Economics, 14*, 659–678.

OECD. (2022). *United Kingdom: FinTech and regulatory sandbox case study*. Organisation for Economic Co-operation and Development. https://www.oecd.org

OECD. (2022). *United Kingdom: Green recovery and levelling-up initiatives*. Organisation for Economic Co-operation and Development. https://www.oecd.org

Okhmatovskiy, I., & David, R. J. (2012). Setting your own standards: Internal corporate governance codes as a response to institutional pressure. *Organization Science, 23*(1), 155–176.

Ortas, E., Álvarez, I., & Zubeltzu, E. (2017). Firms' board independence and corporate social performance: A meta-analysis. *Sustainability, 9*, 1–26. https://doi.org/10.3390/SU9061006

Pavel, C. (2019). The international rule of law. *Critical Review of International Social and Political Philosophy, 23*, 332–351.

Powers, M. M., Brown, K. F., & Imhoff, E. A. (2013). Regulatory quality and corporate compliance: Evidence from board composition. *Corporate Governance: An International Review, 21*(5), 483–499.

Rahman, M. M., & Khatun, N. (2017). Quality of corporate governance: A review from the literature. *The Journal of Asian Finance, Economics and Business, 4*(1), 59–66.

Ramachandraiah, R. K. (2022). Board independence and its influence on corporate decision making — An empirical view. *IJFANS International Journal of Food and Nutritional Sciences, 11*(7).

Rashid, M., & Hossain, S. (2021). Does board independence moderate the effect of politician directors on CSR disclosure? Evidence from the publicly listed banks in Bangladesh. *Social Responsibility Journal, 18*(3), 567–586.

Rodrigo, D., Allio, L., & Andres-Amo, P. (2009). Multi-level regulatory governance: Policies, institutions and tools for regulatory quality and policy coherence. *OECD Working Papers on Public Governance,* (13).

Rose-Ackerman, S., & Palifka, B. J. (2016). *Corruption and government: Causes, consequences, and reform* (2nd ed.). Cambridge University Press.

Scott, W. R. (2001). *Institutions and organizations: Ideas, interests, and identities* (2nd ed.). Sage Publications.

Sena, V., Duygun, M., Lubrano, G., Marra, M., & Shaban, M. (2018). Board independence, corruption and innovation: Some evidence on UK subsidiaries. *Journal of Corporate Finance*.

Shleifer, A., & Vishny, R. W. (1993). Corruption. *The Quarterly Journal of Economics, 108*(3), 599–617.

Standard & Poor's. (2022, October 5). *United Kingdom sovereign rating: Outlook revised to negative on policy predictability risks.* S&P Global Ratings.

Transparency International. (2024). Corruption Perceptions Index 2023: United Kingdom profile. https://www.transparency.org/en/cpi/2023/index/gbr

Turrent, G. D. C. B., & Ariza, L. R. (2016). Corporate governance ratings on listed companies: An institutional perspective in Latin America. *European Journal of Management and Business Economics, 25*(2), 63–75.

UK Supreme Court. (2019). R (Miller) v The

Prime Minister; Cherry v Advocate General for Scotland [2019] UKSC 41. https://www.supremecourt.uk/cases/docs/uksc-2019-0192-judgment.pdf

UK Supreme Court. (2023). AAA (Syria) & Ors v Secretary of State for the Home Department [2023] UKSC 42. https://www.supremecourt.uk/cases/docs/uksc-2023-0048-judgment.pdf

Wang, S., Liu, Y., & Chen, H. (2022). Substitution effects between external and internal governance: An analysis of board independence under varying institutional environments. *Corporate Governance: An International Review*, *30*(1), 45–62.

Wang, Y. (2018). Rule of law, localization of independent directors, and corporate misconduct. *Economic Research Journal*, *53*(3), 120–136.

World Bank. (2024). Worldwide Governance Indicators: Control of corruption—United Kingdom, 2013–2023 [Data set]. https://info.worldbank.org/governance/wgi/

World Bank. (2024). Worldwide Governance Indicators: Government effectiveness—United Kingdom, 2013–2023 [Data set]. https://info.worldbank.org/governance/wgi/

World Bank. (2024). Worldwide Governance Indicators: Political stability—United Kingdom, 2013–2023 [Data set]. https://info.worldbank.org/governance/wgi/

World Bank. (2024). Worldwide Governance Indicators: Regulatory quality—United Kingdom, 2013–2023 [Data set]. https://info.worldbank.org/governance/wgi/

World Bank. (2024). Worldwide Governance Indicators: Rule of law—United Kingdom, 2013–2023 [Data set]. https://info.worldbank.org/governance/wgi/

World Bank. (2024). Worldwide Governance Indicators: Voice and accountability—United Kingdom, 2013–2023 [Data set]. https://info.worldbank.org/governance/wgi/

Wu, C. (2021). On the moderating effects of country governance on the relationships between corporate governance and firm performance. *Journal of Risk and Financial Management*.

Wu, X., & Li, H. (2015). Board independence and the quality of board monitoring: Evidence from China. *International Journal of Managerial Finance, 11*, 308–328.

Zhang, I. (2005). Economic consequences of the Sarbanes-Oxley Act of 2002. *Journal of Accounting and Economics, 39*(1), 91–115.