Impacts of Political Regimes' Pro-business Policies on Stock Market Performance in the United Kingdom

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ABSTRACT

This thesis investigates the impact of political regimes on the performance of the UK's stock market, focusing on the influence of the Conservative and Labour governments' pro-business policies. Using linear regression models to analyse yearly data and accounting for control variables such as monetary regimes, inflation, interest rates, wars, and GDP Per Capita. The findings revealed a positive correlation between the Conservative party's rule and the total returns of the UK stock market. These results underscore the importance of political factors in the stock market's performance.

Keywords: Stock Market Performance, Political Regimes, Pro-business policies, UK Financial Market

JEL codes: G18, G10, P16

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1   Introduction

Stock markets and the entire financial sector encapsulate one of the most important drivers and mediators of economic growth (Khan & Senhadji, 2000). Some empirical studies have indicated that political factors such as partisan competition, democratic principles, political stability, freedom, and political rights significantly influence the development of the capital markets and the financial system (Mlachila et al., 2020; Voghouei et al., 2020). The UK has a long history of democratic governance, and the Conservative and Labor parties have taken turns in power over the years. Both parties have different political and economic ideologies that significantly affect policy fundamentals that influence the performance of the financial markets, such as macroeconomic variables like interest rates and inflation. Notably, the Labor Party represents the left of the UK's political spectrum, while the Conservatives occupy the right side of the political divide (Jacobs & Hindmoor, 2022; Peele, 2021). This study examines political cycles' impact on the UK's stock market performance, comparing the performance during Conservative and Labor governments. The study will provide insights into the behaviour of market participants and the factors that drive market returns and contribute to the existing literature on the relationship between politics and finance by providing a comprehensive analysis of political cycles' impact on the UK's stock markets.

Several studies have examined the relationship between politics and political cycles and the development and performance of financial markets. Notably, Cioffi and Roe (2003) conducted a study that indicated that due to the prominent role that corporate governance plays in the interpretation of the development of financial markets, left-leaning governments are anti-investor while the right favours corporate governance and financial regulation that helps to safeguard minority shareholder protections that redound to financial market development (Pagano & Volpin, 2005). Moreover, Santa-Clara and Valkanov (2003) investigated the relationship between presidential elections and the US stock market, utilising data since 1927. The findings demonstrated that the average excess return of the value-weighted CRSP index over the three-month treasury bill rate was averaged at a rate of 2% under Republic presidents and 11% under Democratic presidents (Santa-Clara & Valkanov, 2003). A study by Pinto et al. (2010) explored the political determinants of stock market development in 85 countries from 1975 to 2004. The study examined the prevailing argument and assumption that left-leaning governments frightened investors, leading to the underperformance of the capital markets. However, Pinto et al. (2010) found evidence favouring the partisanship hypothesis, confirming that left-leaning governments are more likely to be associated with higher stock market capitalisation than their counterparts in the right and centre of the political spectrum. In addition, Mukherjee and Leblang (2007) demonstrated that traders in the stock market expect higher interest rates after elections during the incumbency of a left-wing government and in election years when they expect the left-wing party to win elections in the US.

Previous studies have suggested that the difference in excess returns between different political parties' governments is attributable to investor perception regarding the nature of protections that the government would provide. Moreover, recent studies on the relationship between politics and financial sector development have shown that stock markets perform differently under different political regimes. For example, Santa-Clara and Valkanov (2003) demonstrated significant differences in stock market returns between Democratic and Republican presidencies in the United States (US). However, most of these studies have focused on the US context, showing that excess return in the stock market is higher under Democrats than Republicans. There is little research that compares different political parties' governments' impact on the stock market in the UK. In addition, although empirical, many of these studies have been based on a cross-section of two or more countries, which means that they have been incapable of accounting for the effects of changing political partisanship in a single and large democracy. The study will seek to answer the following research question:

- Is there a significant difference in the UK's stock market performance between the Conservative and Labor governments?
- What factors drive the UK stock market performance difference between the Conservative and Labor governments?

The study's methodology involves analysing secondary data from the UK stock market and political archives to examine the impact of political cycles on capital market development in the UK. The study will cover the period from 1885 to 2015, including the terms of the Conservative and Labor governments. Stock market total returns data will be used as a dependent variable (Global Financial Data). Ruling party data will be used as an independent variable (Durkin & White, 2007). The ruling party will be defined as a dummy variable, with value = 1 if a Conservative prime minister is in office at a given year and 0 otherwise. This political index variable will be motivated by the partisan view of political cycles as advanced by Kayser (2009). Control variables will include interest rates (Office of National Statistics, 2022), inflation rates (Bank of England Database, 2022), major monetary regimes, and wars. The data collected will be subjected to statistical analysis to identify patterns and relationships between the variables. CLRM assumptions will be tested using statistical tests and visual analysis of plots. To account for the possibility of autocorrelation in the time-series data, Newey-West standard errors will be employed during regression analysis.

The study found a significant positive correlation between the Conservative party's rule and the total returns of the UK stock market, supporting Roe's view that left governments scare investors rather than attract them. The results indicate that when a Conservative-led government is in power in the UK, higher stock market returns are experienced, and vice versa.

2 Theoretical Framework

2.1 Overview of pro-business policies

Every government needs to implement sound strategies to help businesses succeed. In line with these, the pro-business policies are designed to shift resources towards entrepreneurs by implying that the government promotes the businesses. According to Moll and Itskhoki (2018), pro-business policies are a government intervention to accelerate the welfare of entrepreneurs in a financially constrained environment by helping shift resources towards entrepreneurs. Moll and Itskhoki (2018) outline that regimes' pro-business policies can ease borrowing limitations in the future through improved worker wages and labour productivity. These policies will likely cause short-term nuisances, like adverse effects on workers. However, their long-term benefits are apparent, for example, reduced working hours and increased wages in the future. Pro-business policies aim to create a favourable business environment by promoting investment, entrepreneurship, and economic growth. In pro-business policies, the consumers are not the deciding factors. Therefore, businesses are more inclined to the government for tax provisions, tariffs, loans, and grants. Some examples of pro-business policies implemented by the UK government include corporate tax cuts (Gov.uk, 2022; Madsen et al., 2021), money supply policies (Bank of England, 2023; Zhang, 2019), deregulation (Zhang, 2019; Department for Business and Trade & Badenoch, 2023), buying and investment incentives (HM Revenue and Customs, 2023), and infrastructure development (Infrastructure & Projects Authority, 2016)

2.2 Impact of Pro-Business Policies on The Stock Market

Analysis of pro-business policies has been a subject of consideration in much research. It has been a significant concern to help understand how their impact informs researchers, policymakers, and investors. Several studies have found a positive association between pro-business policies on the stock market's performance, and this section examines the existing literature. In their analysis of the benefits of cutting the corporate income tax rate, York (2020) found that pro-business policies have a positive relationship with higher stock market returns. Their study identified that deregulations and corporate tax cuts helped create a favourable climate for investment and attracted capital inflows (York, 2020). This led to enormous benefits for the stock market and stimulated economic growth. In addition, in chapter 6, "Empowering economic freedom by reducing regulatory burdens" (2021), while analysing the effect of reducing the regulatory burden to empower economic freedom, it identified that the policies reduce regulatory burden leading to lower stock market volatility and thus increase the investors' confidence. This leads to a business-friendly environment and a stable economic condition, which helps improve the stock market performance. In addition, pro-business policies stimulate economic growth. This is because deregulations and other policies reduce regulatory barriers and promote entrepreneurship, making the businesses thrive and positively impacting high stock market performance.

2.3 Factors Influencing the Relationship Between Stock Market Performance and Pro-Business Policies

Numerous factors directly impact the existing relationship between the performance of the stock market and pro-business policies in the UK. According to Allard et al. (2012), political stability is an essential factor that influences the impact of pro-business policies on the stock market's performance. In their research on the impact of pro-business market reforms and political instability on the national systems of innovation, Allard et al. (2012) identified that the national systems of innovation flourish in politically stable countries, while in unstable countries, they are less likely to prosper. Political stability is a precondition for a vibrant national innovation system, given that most countries with political stability tend to be highly developed and industrialised. Countries with political instability are likely to experience large-scale violence, civil war, and social unrest, which inhibit economic growth. According to Allard et al. (2012), these countries tend to be less predictable and hence cannot attract investors or nurture a rich ecology of innovation. Such politically unstable countries do not ensure fair market practices, investor protection, or transparency, thus reducing investors' confidence and increasing uncertainties. Therefore, this negatively impacts the relationship between pro-business policies and the stock market's performance by creating an unfavourable climate for stock market growth. Secondly, economic conditions are an essential factor that influences the impact of pro-business policies on the stock market's performance. In their research on effective policy mixes in entrepreneurial ecosystems, Wang et al. (2022) identified that policies have different impacts in different entrepreneurial stages. During the season of economic expansion, the policies may have a positive effect on stock market preference but may be dampened due to decreased investor confidence during the economic downturn. Lastly, global market conditions impact the relationship between stock market performance and pro-business policies. According to Agénor and Da Silva (2018), given the interconnectedness of the global market, the trade policies, financial crisis, and economic trends in one country lead to a spillover effect on other countries. Therefore, based on the previous literature, numerous factors must be understood to help identify how they influence the relationship between stock market performance and pro-business policies.

2.4 Gaps In the Existing Literature

Numerous literature has examined the impact of pro-business policies on the stock market's performance and shed light on the same, but numerous gaps exist. First, there is a need to examine the impact of these pro-business policies on the different sectors of the stock market, such as manufacturing, finance, and technology, to provide an in-depth understanding. This is because the impact of pro-business policies may vary across different sectors, and thus a sector-specific analysis would help assess how the policies affect the specific sectors. Secondly, there is a need for further research to examine the long-term effect of pro-business policies to help understand the impact over an extended period. This would help better understand their implication and effectiveness over time. In addition, although different literature examining the relationship between stock market performance and pro-business policies exist for the UK,

a gap exists in comparative studies analysing the impact across different countries. This can help enrich the understanding of best practices, differences, and similarities for pro-business policies in different national contexts. Lastly, there is a gap in the literature assessing the effectiveness of specific policy instruments that have the highest positive impact on the stock market's performance. This can help identify insights for the most effective policies in different circumstances and thus help policymakers and investors make informed decisions.

In conclusion, this literature review provides a superb review of literature highlighting the impact of pro-business policies on the stock market's performance. Based on this review, the finding from the literature is that a positive impact exists on stock market performance from pro-business policies such as market efficiency and increased trading volumes. However, a gap exists in the current literature, which can be addressed through further research and investigation. For instance, there is a need for further research on the long-term effect of pro-business policies on the performance of the stock market and the effectiveness of specific policy instruments that have the highest positive impact on the performance of the stock market. By addressing these gaps, the researchers will have a chance to contribute positively to the existing; literature by providing more information necessary to understand how pro-business policies impact the stock market's performance. This will be vital for stakeholders, investors, and policymakers to assist when making decisions.

2.5   Applicable theoretical frameworks

This paper employs several theoretical perspectives to better understand the impacts of pro-business policies on stock market performance in the United Kingdom. The theories provide an understanding of the underlying mechanisms that influence the interplay between finance and politics and expound on the existing dynamics that influence the stock market's performance. Next, we will explore partisan theory and public choice theory as frameworks to help provide a comprehensive understanding of the impacts of pro-business policies on stock market performance in the United Kingdom.

2.5.1   Partisan Theory

The partisan theory provides a perspective on the political parties' role in shaping ideologies and preferences. It identifies that every political party has different objectives and policy stances guided by their interest and ideological orientations. For instance, the Labor and Conservative parties are two distinct political parties with differences in their ideologies in terms of policy and economy. The Conservative party has greatly supported a pro-business environment and market-oriented policies emphasising low taxes and a free market with limited government intervention. This party encourages private sector-led growth with the support of neoliberalism. According to Gatwiri et al. (2020), neoliberalism is the ideology for limiting economic deregulation and state intervention by advocating free market capitalism.

On the contrary, the labour party advocates for greater government involvement in economic policies. They advocate for more government involvement in protecting workers' rights, using redistributive measures, and engaging in more economic regulation. According to Jacobs & Hindmoor (2022), the party was established to achieve greater economic equality and promote the interest of labour. The party focuses most on ensuring the fair distribution of economic benefits and addressing social issues. Therefore, the contrasting stances between the two parties posit that when the conservative party is in power, more investors would positively influence the stock market because they may develop policies such as tax cuts or deregulation, which support business investment, growth, and entrepreneurship. However, when the labour party is in power, there would be decreased market performance given that there would be more measures aimed at regulating the market and promoting social justice to enhance workers' protections, thus leading to more costs and more concern among the investors thus negatively affecting the stock market. Hence, partisan theory offers an understanding of the relationship between the stock market, pro-business policies, and political parties by offering a better view of how ideological orientations, internal dynamics, and party platforms shape the implementation and formulations of different policies that impact the economy.

2.5.2 Public Choice Theory

The public choice theory is another framework that allows the analysis of the decision-making process with its influence on economic systems. The theory provides insights into the contrasting perspectives in pursuing self-interest within the government. According to Torgler (2022), the theory identifies that people such as bureaucrats and politicians are not immune to self-interest and thus are motivated by their desire to maximise theory benefits or their desire for power and personal goals. Considering the impacts of pro-business policies on stock market performance in the United Kingdom, the theory posits that policymakers for pro-business policies may be influenced by factors such as industry stakeholders, lobbying efforts, and campaign contributions. It posits that they would be incentivised to cater to the interest of influential groups that would support their campaigns financially. Hence, business policies may be directed in a manner that pleases and gain support from the business community. The theory also emphasises that special groups involved in policymaking, such as trade unions and business associations, engage in lobbying activities that drive more favour to them. They use the groups as a platform to exert pressure and advocate for policies that support their interest and thus have an impact on the stock market. However, where there is competing interest, the public choice theory identifies that people may obtain special privileges or protection from competition leading to a behaviour where some gain unfair advantages through political influence as opposed to having productive activities Dincă et al. (2021). Hence, this negatively impacts the stock market, given there is no market efficiency. Lastly, the theory perceives that some pro-business policies may be adopted based on the prevailing economic ideology of the electorate, especially in a democratic system where leaders are mainly accountable to the electorate. To secure reelection, the leader's policy choices may align with their voter's

preferences and public opinion. Therefore, the policies may be manipulated to cater to the voter's preferences even when they do not align with the broader economic benefit or long-term interest of the stock market, given that the voter's preferences may be imperfect at times.

2.6 Hypothesis

Based on researched literature and identified theoretical frameworks, the following hypothesis is proposed:

Hypothesis: The pro-business government policies represented by the Conservative political party in the UK affects the stock market's overall performance more positively than those of the Labour Party.

3 Data

3.1 Datasets

To test the hypothesis of whether the UK stock market performs better under the pro-business policies of the conservative party, several datasets were collected and prepared for analysis.

The analysis utilises yearly data due to difficulty finding reliable historical datasets with shorter time intervals.

UK Stock Market Total Returns Annual Percentage Change was collected from Global Financial Database (Global Financial Data, 2022). The dataset contains UK historical data going as far back as 1693 and includes both total returns in absolute terms as well as annual percentage changes. For the purpose of our research, however, we have only taken annual percentage change data points between 1885 and 2015.

UK party leadership data is the key independent variable in this research. This data was obtained from the UK government website (Durkin & White, 2007; UK Government, 2022). For the purpose of this research, we were only interested in grouping parties into two groups: conservative and others. Hence, we have introduced a dummy variable named "party" that has a value of 1 for years when the conservative party was in power in the UK and 0 otherwise. Only data points between 1885 and 2015 were taken.

Inflation is an integral variable to consider in the analysis of stock markets, as it influences both individual investment decisions and broader economic policy. A high inflation rate can erode the real value of returns on stocks, affecting investor behaviour, while low inflation might signal underlying economic problems that could influence stock market performance. Thus, we have included UK historical inflation rates in our analysis. These rates were measured via the Consumer Price Index (CPI) annual percentage change and were obtained from the UK's Office of National Statistics (Office of National Statistics, 2022). The dataset contains CPI yearly averages, as well as annual percentage changes, representing the rate of inflation. To align with the time frame of the other variables in our study, only data points between 1885 and 2015 were taken.

Interest rate can also influence investor decisions. For example, when interest rates are high, fixed-income investments such as bonds can become more attractive than the stock market. On the other hand, low interest rates can make stocks more appealing due to the potential for higher returns. Thus, we have included Consol (Long-Term Bond) annual yields as a proxy for UK interest rates. This dataset was obtained from the Bank of England (Bank of England, 2023). Only data points between 1885 and 2015 were taken.

As the studied historical period of 1885 to 2015 saw varying monetary regimes, which might have a different impact on stock markets, it was deemed necessary to account for this by introducing dummy variables for major monetary regimes: the gold standard, Bretton Woods, and floating exchange. Timelines for these periods were obtained from research by Michael Bordo (Bordo, 1993). Three dummy

variables were introduced for each of the above major monetary regimes, where each variable has a value of 1 for years where the relevant regime was active and 0 otherwise. Only data points between 1885 and 2015 were taken.

Wars can exert a profound impact on an economy, influencing not only the allocation of resources but also the confidence of investors and the overall market sentiment. In times of international military conflict, governments often redirect significant financial resources towards defence and military efforts, leading to changes in public spending in other areas. Additionally, the uncertainty and disruption caused by wars can affect international trade, currency exchange rates, and investor behaviour, often leading to increased market volatility. In the context of the UK, which has been actively involved in various international conflicts over the studied period, it was deemed necessary to account for these effects in our analysis. Thus, we have introduced a dummy variable, "war", that had a value of 1 whenever the UK was actively engaged in an international military conflict. Data about wars was obtained from an article on UK wars and conquests (Hacken, 2021). Only data points between 1885 and 2015 were taken.

Economic growth and population income of the country can be contributing factors to stock market performance, reflecting the underlying health and dynamism of an economy. GDP per capita serves as a robust indicator of economic prosperity, capturing the average economic output per person. A rise in GDP per capita often signifies increased consumer spending power that can stimulate corporate profits and, in turn, bolster stock prices. Conversely, a decline in GDP per capita might signal economic distress, potentially leading to a downturn in the stock market. Therefore, we have included GDP per capita as a control variable in our model to account for this. This data was obtained from Maddison Database Project (Bolt & Van Zanden, 2020). Only data points for the UK between 1885 and 2015 were taken.

3.2   Summary Statistics

Table 1 below shows the descriptive statistics for the datasets used for analysis. For the purpose of reducing space and simplifying analysis, variables were given short names as follows:

- TR – UK Stock Markets Total Returns Annual Percentage Change.

- Party – 1 for years when the Conservative party was in power and 0 otherwise.

- Inflation – Measured as Annual Percentage Change of Consumer Price Index yearly average.

- BY – Bond Yield, measured as Consol annual yields in the United Kingdom

- GS – Dummy variable, with a value of 1 when the gold standard was the monetary regime in the United Kingdom and 0 otherwise.

- BW – Dummy variable, with a value of 1, when Bretton Woods was the monetary regime in the United Kingdom and 0 otherwise.

- FE – Dummy variable, with a value of 1, when the floating exchange was the monetary regime in the United Kingdom and 0 otherwise.

- War – Dummy variable, with a value of 1, when the UK was actively involved in a military conflict.

- GDPPC – UK GDP Per Capita

Table 1: Descriptive statistics

Predictors	Mean	Std.Dev	Min	Median	Max
TR	10.59	20.70	-51.75	9.16	152.12
Party	0.66	0.47	0	1	1
Inflation	3.83	5.85	-13.85	2.98	25.38
BY	5.33	3.03	2.26	4.40	15.17
GS	0.28	0.45	0	0	1
BW	0.20	0.40	0	0	1
FE	0.32	0.47	0	0	1
War	0.34	0.48	0	0	1
GDPPC	15824.74	9588.06	6132	11803.00	36941

Notes: Descriptive statistics of the dataset used for analysis. All data points had 131 observations between 1885 and 2015.

The above table provides a list of all 131 entries (1885 to 2015) for all variables. They include mean, median, highest value, lowest value, and standard deviation.

It is interesting to note that, based on the above, the UK was actively involved in an international conflict 34% of the studied time period, which sounds unreal, yet is true. Starting from Second Boer War that started in 1899 and up to War in Afghanistan that started in 2001, the UK has been an active participant in numerous international conflicts. The caveat here is that most of these conflicts, such as the War in Afghanistan or Iraq wars, were waged far from UK territory.

The Total Returns variable shows a large spread, with a mean of 10.59 and a substantial standard deviation of 20.70. The range, extending from a minimum of -51.75 to a maximum of 152.12, reveals significant volatility, indicating that the stock market has experienced both sharp declines and dramatic

upswings during the study period. The median value of 9.16, being slightly below the mean, might suggest a slight skewness in the distribution towards the higher returns.

Inflation also demonstrates an interesting distribution, with a mean of 3.83 and a standard deviation of 5.85. The wide range between a minimum of -13.85 and a maximum of 25.38 highlights periods of both deflation (negative inflation) and high inflation. The difference between the mean and median suggests that the inflation rate distribution is slightly skewed. The variability in inflation could reflect underlying economic fluctuations and policy changes that have occurred in the UK over the study period.

The GDP Per Capita shows a mean of 15824.74 with a standard deviation of 9588.06. The range between 6132 and 36941 is indicative of substantial growth in economic output per person over the years covered in the study. The median value of 11803.00, below the mean, might suggest some skewness towards higher values, possibly reflecting periods of rapid economic growth. This large spread in GDP Per Capita could be representative of different economic phases, such as industrialisation, technological advancement, and varying economic policies.

Our interest is to establish the relationship between market performance measured by Stock market Total Returns and pro-business government policies represented by a ruling political party with remaining factors as control variables.

4 Method

RStudio was used for the data preparation and analysis process (Posit Team, 2023). The datasets were merged utilising a shared "year" identifier to guarantee proper alignment of variables. The resulting dataset was checked for missing values, and any rows with missing values were removed.

4.1 Linear Regression Model

To analyse the collected data and test the hypothesis, we have used a linear regression model, where the dependent variable is the UK Stock Markets Total Return Annual Percentage Change, and the independent variable is the government party dummy variable. The following control variables discussed in Chapter 3 were included: War, Inflation, GDP Per Capita (GDPPC), Consol Bond Yield (BY), Gold Standard (GS), Bretton Woods (BW), and Floating Exchange (FE). Finally, to account for autocorrelation in total returns time series data, we have also included lagged total returns with a lag period of one year as a control variable. The resultant model can be expressed as follows:

$$TR = \beta_0 + \beta_1 * Party + \beta_2 * Inflation + \beta_3 * BY + \beta_4 * GS + \beta_5 * BW + \beta_6 * FE + \beta_7 * TR_{L1} + \beta_8 * War + \beta_9 * GDPPC + \varepsilon$$

The method of ordinary least squares (OLS) was used to estimate the parameters of the model.

4.2 Classical Linear Regression Model Assumptions

In order to guarantee the accuracy of our regression analysis, assumptions of the Classical Linear Regression Model (CLRM) need to be assessed.

To assess linearity, residuals vs fitted plot was investigated (Figure 1). As can be seen from the figure, the residual plot shows a minor fitted pattern, indicating some potential non-linearity. We can also observe the presence of some outliers.

Figure 1: Residuals vs Fitted.
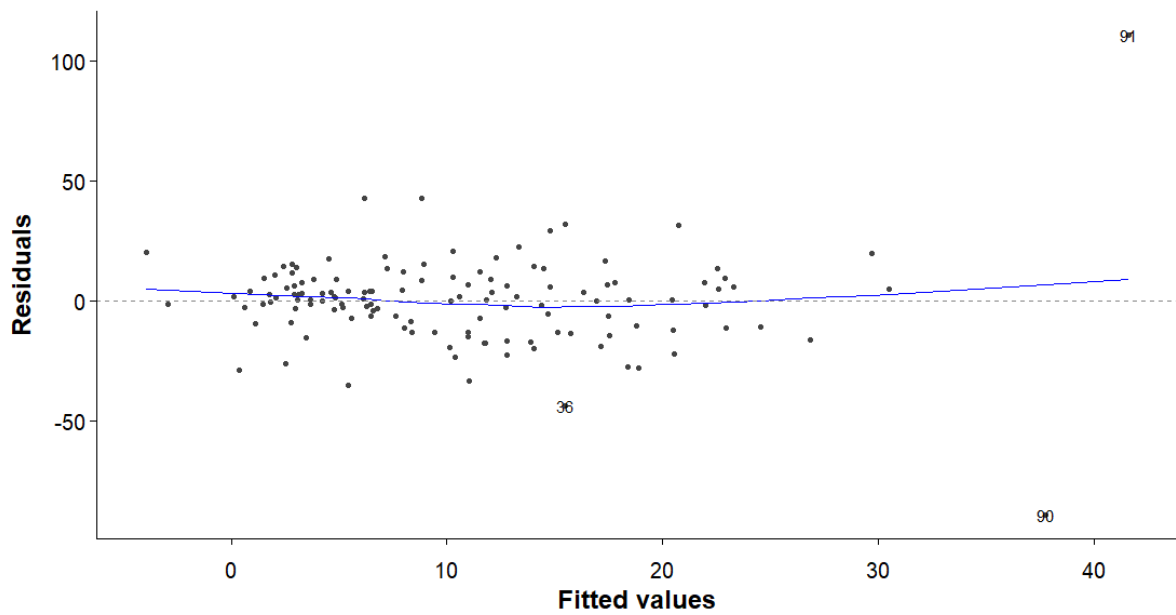
Notes: Residuals vs Fitted graph for linear regression model of UK Total Returns. Notice that the blue line slightly deviates from the horizontal axis, indicating a minor presence of non-linearity.

To assess the homogeneity of variance, a scale-location plot can be investigated (Figure 2). As can be seen, from the figure, we observe heteroscedasticity in the residuals' errors, which indicates that we might need to use Newey-West standard errors to account for that. To account for heteroscedasticity and autocorrelation in the model errors, we used Newey-West robust standard errors.

Figure 2: Scale-Location plot
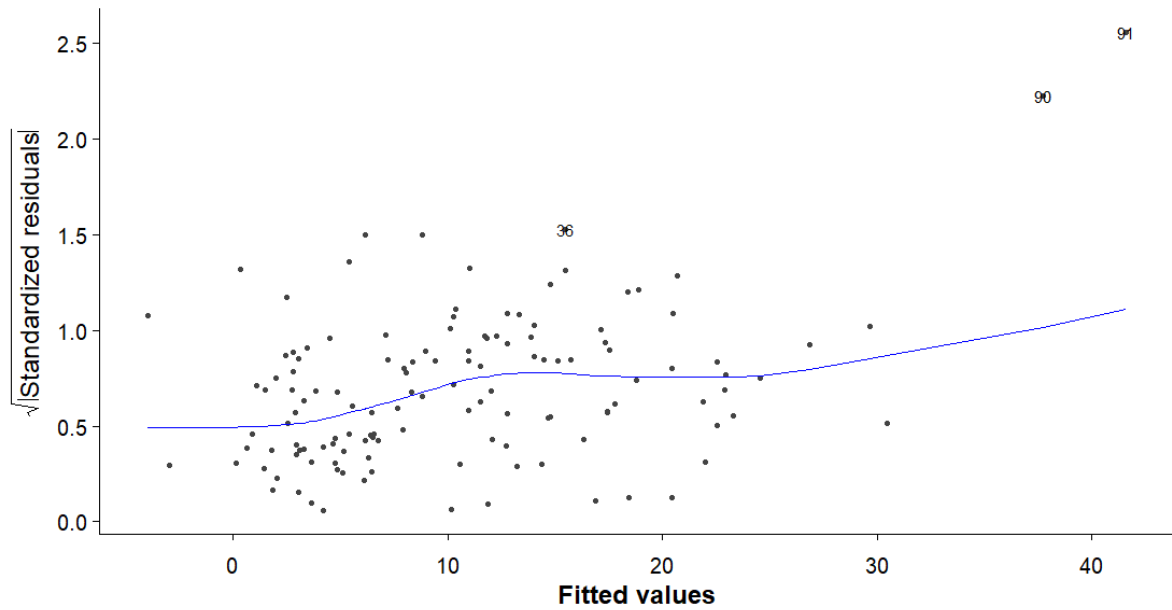
Notes: Scale-Location plot of the linear regression model that shows whether residuals are spread equally along the input range. Notice that the line is not horizontal, indicating the presence of heteroscedasticity.

To evaluate the normality of residuals, a histogram of residuals (Figure 3) can be evaluated. As can be seen from the histogram, there is a visible skewness to the right, indicating a lack of normality.

Figure 3: Histogram of Residuals
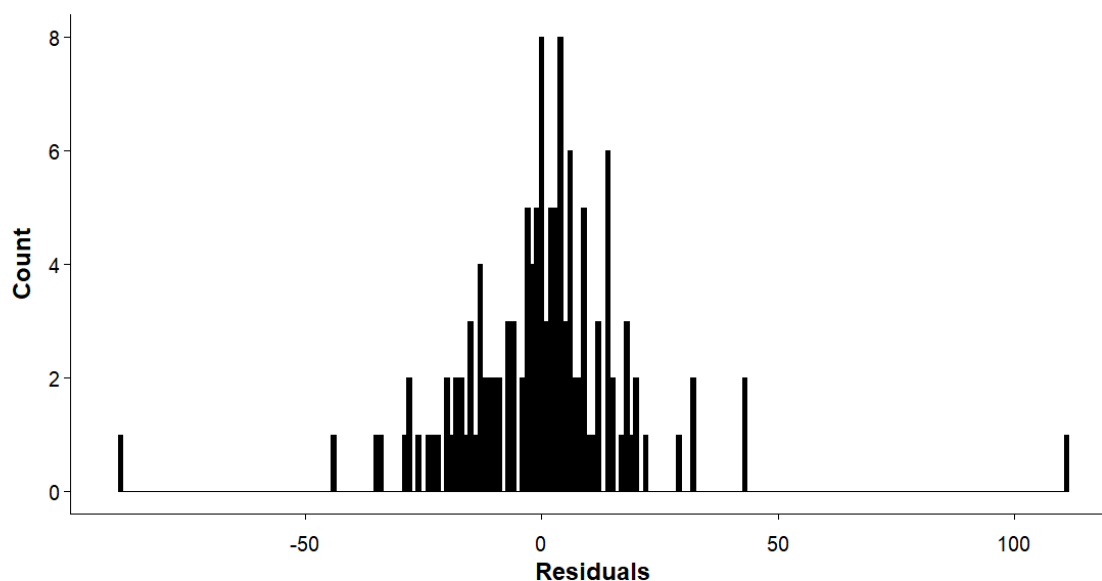
Notes: Histogram of residuals of the linear regression model. Notice the skewness to the right that indicates a lack of normality in residual distribution.

To evaluate the autocorrelation assumption, we have conducted Durbin-Watson Test (Table 2). Results indicate that there is no significant evidence of autocorrelation in the residuals.

Table 2: Durbin-Watson Autocorrelation Test Results

DW	p-value
2.184	0.6803

Notes: Durbin-Watson test results of the linear regression model. This test checks for the presence of autocorrelation in the residuals. Durbin Watson (DW) statistics of 2.184, which is close to 2, and a p-value greater than 0.05 both suggest no significant evidence of autocorrelation.

To evaluate the correlation between predictor variables, a correlation matrix was constructed (See Table 3). We can observe a moderate positive correlation between Inflation and Bond Yield, as well as between Bond Yield and Floating Exchange.

Table 3: Correlation matrix for predictor variables

	Inflation	Party	BY	GS	BW	FE	TR_L1	War	GDPPC
Inflation	1.00	-0.03	**0.52**	-0.42	0.05	0.25	0.11	0.19	0.16
Party	-0.03	1.00	-0.03	0.05	-0.13	-0.13	0.05	-0.03	-0.20
BY	**0.52**	-0.03	1.00	-0.46	0.00	**0.60**	0.25	-0.13	0.41

	Inflation	Party	BY	GS	BW	FE	TR_L1	War	GDPPC
GS	-0.42	0.05	-0.46	1.00	-0.31	-0.43	-0.17	-0.28	**-0.55**
BW	0.05	-0.13	0.00	-0.31	1.00	-0.34	0.04	-0.16	-0.12
FE	0.25	-0.13	**0.60**	-0.43	-0.34	1.00	0.14	0.33	**0.89**
TR_L1	0.11	0.05	0.25	-0.17	0.04	0.14	1.00	-0.12	0.11
War	0.19	-0.03	-0.13	-0.28	-0.16	0.33	-0.12	1.00	0.45
GDPPC	0.16	-0.20	0.41	**-0.55**	-0.12	**0.89**	0.11	0.45	1.00

Notes: The correlation matrix for predictor variables shows a correlation between each pair of predictor variables used in the linear regression model. Correlations with absolute value > 0.5 are highlighted in bold.

As can be seen from the table, there is a moderately positive correlation between Bond Yield and Inflation, as well as between Bond Yield and Floating Exchange. There is also a strong positive correlation between GDPPC and FE and a strong negative correlation between GDPPC and GS, which can be explained by the fact that GDPPC tends to increase over time; hence newer regimes will have a naturally higher positive correlation than old monetary regimes.

5 Results & Discussion

5.1 Results

As a first step, we have excluded the variable of interest (Party) from the model to see how the remaining control variables correlate with the outcome.

Two simple linear regression models were evaluated, one with a full dataset and the other with outliers winsorised. For the second one, values for all data points that fell into the top or bottom 5% were replaced with corresponding 95th and 5th percentiles. The results of both models are summarised in Table 4. As can be seen from the table, both models indicate that the Floating Exchange monetary regime is strongly positively correlated with higher total returns. There are some differences, though, as the first model also suggests a strong negative correlation with lagged Total Return, whereas this correlation becomes insignificant after winsorising, suggesting that the negative correlation might have been a result of outlier impact. On the other hand, the gold standard monetary regime has a strong negative correlation in the second model, while it was insignificant in the first.

It is also interesting to note that while GDP Per Capita has a strong correlation, the estimate is close to 0, indicating that it has a negligible effect on the Total Returns.

Table 4: Linear Regression Models without Party Comparison

Predictors	Without winsorising				With winsorising			
	Estimates	std. Error	t	p	Estimates	std. Error	t	p
Constant	23.16	9.47	2.45	0.016**	19.81	6.47	3.06	0.003***
Inflation	0.24	0.40	0.61	0.541	-0.50	0.34	-1.47	0.144
BY	-0.21	1.08	-0.19	0.850	0.38	0.77	0.49	0.622
GS	-9.22	5.86	-1.57	0.118	-10.80	4.10	-2.63	0.010**
BW	8.63	6.15	1.40	0.163	3.92	4.13	0.95	0.344
FE	28.37	13.03	2.18	0.031**	17.55	8.59	2.04	0.043**
TR L1	-0.17	0.09	-1.95	0.053*	-0.01	0.09	-0.10	0.920
War	-5.21	5.01	-1.04	0.300	-1.00	3.36	-0.30	0.767
GDPPC	-0.00	0.00	-1.92	0.057*	-0.00	0.00	-2.09	0.039**
Observations	131				131			

Notes: Comparison table of linear regression models without Party variable. The first model (Without Winsorizing) is computed using all available data points as is, while the second model (With Winsorizing) is computed after

winsorising outlier data points, where outlier data points are the ones that breach the 5th or 95th percentiles. Significant predictors are marked with asterisk symbols next to the p-value.

*: p < 0.1

**: p < 0.05

***: p < 0.01

As a next step, we have added party into the model. Moreover, since heteroscedasticity was identified, we used Newey-West standard errors to address this issue. The utilisation of robust standard errors in the estimation process should help account for heteroscedasticity and autocorrelation consistency, resulting in more reliable confidence intervals and p values.

Just as before, both models with and without winsorising were evaluated using Newey West Standard errors (Table 5). As can be seen, the model, where outliers were winsorised, has significantly different results from the first model. In both models, monetary regimes are shown to have a significant correlation, with Floating Exchange and Bretton Woods having a positive correlation, while Gold Standard having a negative correlation. Both models also highlight GDP Per Capita as having a strong correlation, but with the estimate being near zero, this essentially means that GDP Per Capita has almost no effect on Total Returns.

In the first model, we also see a strong negative correlation in war and lagged total returns variables, but this correlation disappears after outliers are winsorised, indicating that this correlation might have been caused by the disproportionate impact of outliers.

On the other hand, Party and Inflation variables only have a strong positive correlation once outliers are winsorised.

Table 5: Linear Regression Models with Party and Newey West SE Comparison

	Without Winsorizing				With Winsorizing			
Predictors	*Estimates*	*Std.Error*	*t*	*p*	*Estimates*	*Std. Error*	*t*	*p*
Constant	20.65	5.07	4.07	<0.001***	15.82	4.28	3.70	<0.001***
Party	2.51	2.53	0.99	0.322	4.24	1.59	2.66	0.009***
Inflation	0.27	0.37	0.72	0.470	-0.43	0.17	-2.52	0.013**
BY	-0.25	0.51	-0.49	0.627	0.25	0.42	0.60	0.548
GS	-8.65	1.29	-6.72	<0.001***	-9.89	1.98	-4.99	<0.001***
BW	9.34	2.11	4.42	<0.001***	5.13	2.01	2.55	0.012**
FE	28.45	4.47	6.36	<0.001***	17.80	3.51	5.07	<0.001***
TR L1	-0.17	0.06	-2.90	0.004***	-0.03	0.08	-0.39	0.695
War	-5.50	2.26	-2.43	0.016**	-1.68	2.04	-0.82	0.413

GDPPC	-0.00	0.00	-6.36	<0.001***	-0.00	0.00	-4.99	<0.001***
Number of observations		131				131		

Notes: Comparison table of linear regression models with Newey-West Standard Errors. The first model (Without Winsorizing) is computed using all available data points, while the second model (With Winsorizing) is computed after modifying outlier data points, where outlier data points are the ones that breach the 5th and 95th percentiles.

*: $p < 0.1$

**: $p < 0.05$

***: $p < 0.01$

It is worth noting that while Newey-West standard errors should mitigate heteroskedasticity and autocorrelation issues, it does not address the violation of the normality assumption. However, as our sample size is 131, it was deemed acceptable, as per Central Limit Theorem, to accept this violation.

5.2 Discussion

The objective of this analysis was to examine the relationship between governmental leadership and the UK stock market's performance. The statistical analysis indicates that the variable of government leadership, specifically the ruling party (Conservatives), has a significant correlation with the overall returns of the UK stock market. The regression analysis showed a positive coefficient for the government variable, suggesting that the UK stock market's total returns are higher during conservative party leadership in comparison to left-wing leadership (Labour). These results might suggest that beneath conservative party authority, there may be a potential affiliation towards pro-business policies that favour stock markets. A strong correlation was also observed between total returns and various monetary regimes, with Gold Standard having a negative correlation and Bretton Woods and Floating Exchange having a positive correlation. This might be an indicator that reducing government control over currency exchange rates has an overall positive impact on the stock market.

It is worth noting that due to difficulty finding historical datasets, only a limited number of control variables were used, which might not be sufficient to account for stock market performance. Furthermore, we were only able to collect yearly data points, missing an opportunity to significantly increase dataset sizes by utilising monthly or quarterly data. This reduces the reliability of the conclusions of this analysis and suggests that a more robust analysis might be required that also accounts for other factors, both internal and external to the UK, as well as utilising shorter time periods.

The finding provides essential insight into the relationship between pro-business policies and the stock market performance in the UK. Using regression analysis, a connection between pro-business policies based on the specific ruling political party and stock market total returns is evident even with the introduction of multiple control variables. It is worth noting, however, that this connection is only evident when the disproportionate impact of outlier data points is accounted for using winsorising.

Results indicate that when the Conservative party forms the government, there is an average increase in stock market total returns. The finding supports the predictions of the partisan theory, indicating that whenever the conservative regime is in power, they tend to promote pro-business policies leading to a positive response from the investors who might perceive the policies as favourable for market performance.

Furthermore, these results align with the public choice theory, which posits that elected officials are influenced by their supporters and voters. As Conservatives are historically more aligned with business and capital interests, it is expected that they would promote pro-business policies that would positively influence stock markets. Conversely, Labour is typically supported by worker unions and the population that depends on social support, suggesting that they might favour policies that redistribute wealth and might negatively impact business and stock markets.

Hence, this study finding provides empirical evidence supporting both the public choice and the partisan theories. They highlight the essence of considering political factors such as the party in power when analysing the impact of pro-business policies on stock market performance. This prompts further investigation into the specific dynamics and mechanisms that govern the relationship between political regimes, pro-business policies, and stock market performance in the UK.

6 Conclusion

This study examined the impact of political cycles on the UK's stock market performance, comparing the performances under Conservative and Labour governments. This was achieved by building a linear regression model where UK Stock Markets Total Return was an independent variable, and UK governing party was a dependent variable. Additional control variables such as Inflation, Interest Rates, War, GDP Per Capita, as well as major monetary regimes we used to account for the effect of other factors.

The findings provide empirical evidence that aligns with both the public choice theory and the partisan theory. Notably, the study found a positive correlation between the Conservative party's rule and the total returns of the UK stock market. This suggests that the Conservative party's pro-business policies, historically more aligned with business and capital interests, may lead to higher stock market returns.

Monetary regimes also showed significant correlations with total returns, with the Gold Standard negatively correlated and Bretton Woods and Floating Exchange regimes positively correlated. This finding could imply that reducing government control over currency exchange rates has an overall positive impact on the stock market.

While this study provides essential insights into the relationship between pro-business policies and stock market performance in the UK, it is important to note its limitations. The difficulty in finding historical datasets and the use of a limited number of control variables may not sufficiently account for stock market performance. Furthermore, only yearly data points were used, which may limit the robustness of the conclusions. Future research could benefit from a more comprehensive analysis that includes more control variables, considers both internal and external factors to the UK, and uses data collected over shorter time periods.

These findings underscore the importance of considering political factors when analysing the impact of pro-business policies on stock market performance. It prompts further investigation into the specific dynamics and mechanisms governing the relationship between political regimes, pro-business policies, and stock market performance in the UK. This could potentially provide investors, policymakers, and other stakeholders with valuable insights to inform their decision-making processes.

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nd%20selling%20bonds

APPENDIX A – R Code

```r
# Load the required packages
library(readxl)
library(rempsyc)
library(car)
library(sandwich)
library(lmtest)
library(estimatr)
library(forecast)
library(tseries)
library(flextable)
library(broom)
library(report)
library(effectsize)
library(GGally)
library(officer)
library(tidyverse)
library(ggfortify)
library(ggplot2)
library(sjPlot)
library(sjmisc)
library(sjlabelled)


# Read the datasets
bond_yield_dataset <- read_excel("~/Analysis/bond_yield_dataset.xlsx")
cpi_dataset <- read_excel("~/Analysis/cpi_dataset.xlsx")
gfd_dataset <- read_excel("~/Analysis/gfd_dataset.xlsx")
government_dataset <- read_excel("~/Analysis/government_dataset.xlsx")
monetary_regimes_dataset <- read_excel("~/Analysis/monetary_regimes_dataset.xlsx")
war_dataset <- read_excel("~/Analysis/war_dataset.xlsx")
gdp_dataset <- read_excel("~/Analysis/gdp_dataset.xlsx")
# Merge datasets
merged_data <- merge(gfd_dataset, government_dataset, by = "Year", all.x = TRUE)
merged_data <- merge(merged_data, cpi_dataset, by = "Year", all.x = TRUE)
merged_data <- merge(merged_data, bond_yield_dataset, by = "Year", all.x = TRUE)
merged_data <- merge(merged_data, monetary_regimes_dataset, by = "Year", all.x = TRUE)
```

```
merged_data <- merge(merged_data, war_dataset, by = "Year", all.x = TRUE)
merged_data <- merge(merged_data, gdp_dataset, by = "Year", all.x = TRUE)


# Data cleaning - checking for missing values
missing_values <- sum(is.na(merged_data))
if (missing_values > 0) {
  merged_data <- na.omit(merged_data)  # Exclude rows with missing values
}


# Variable transformation and cleanup
transformed_data <- merged_data
colnames(transformed_data)[colnames(transformed_data) == "Annual_Percent_Change"] ="TR"
colnames(transformed_data)[colnames(transformed_data) == "Annual_Percent_Change_Lag_1"] ="TR_L1"
colnames(transformed_data)[colnames(transformed_data) == "Bond_Yield"] ="BY"
colnames(transformed_data)[colnames(transformed_data) == "Gold Standard"] ="GS"
colnames(transformed_data)[colnames(transformed_data) == "Floating Exchange"] ="FE"
colnames(transformed_data)[colnames(transformed_data) == "Bretton Woods"] ="BW"
transformed_data$Year <- as.integer(transformed_data$Year)
transformed_data$Party <- as.integer(transformed_data$Party)
transformed_data$GS <- as.integer(transformed_data$GS)
transformed_data$FE <- as.integer(transformed_data$FE)
transformed_data$BW <- as.integer(transformed_data$BW)
transformed_data$War <- as.integer(transformed_data$War)


# Viewing sample of the dataset
nice_table(head(transformed_data), title=c("Sample of merged data"))


# Viewing descriptive statistics
descr(transformed_data)


# Model Specification without Party variable
model <- lm(TR ~ Party + Inflation + BY + GS + BW + FE + TR_L1 + War + GDPPC, data = transformed_data)


# Checking linearity assumption by looking at the "Residuals vs Fitted" plot
```

```
autoplot(model, 1)
```

 # Checking homogeneity of variance by looking at the "Scale-Location" plot

```
autoplot(model, 3)
```

 # Checking normality of residuals

```
ggplot(transformed_data, aes(residuals(model))) +
geom_histogram(binwidth = 1, fill = 'black', color = 'black') +
labs(x = "Residuals", y = "Count", title = "Histogram of Residuals") # Check histogram of residuals
```

 # Checking autocorrelation of residuals

```
dwtest(model)
```

 # View correlation matrix
```
cor_matrix <- cor(transformed_data[, c("Inflation", "Party", "BY", "GS", "BW", "FE", "TR_L1", "War",
"GDPPC")])
cor_df <- as.data.frame(cor_matrix)
print(nice_table(cor_df), preview = 'docx')
```

 # Winsorising outliers
```
winsorized_data <- transformed_data
winsorized_data$Inflation <- Winsorize(winsorized_data$Inflation, probs = c(0.05, 0.95))
winsorized_data$BY <- Winsorize(winsorized_data$BY, probs = c(0.05, 0.95))
winsorized_data$TR <- Winsorize(winsorized_data$TR, probs = c(0.05, 0.95))
winsorized_data$TR_L1 <- Winsorize(winsorized_data$TR_L1, probs = c(0.05, 0.95))
winsorized_data$GDPPC <- Winsorize(winsorized_data$GDPPC, probs = c(0.05, 0.95))
model_winsorized <- lm(TR ~ Party + Inflation + BY + GS + BW + FE + TR_L1 + War + GDPPC, data
= winsorized_data)
```

 # Comparing models
```
tab_model(model, model_winsorized, dv.labels = c("Without winsorizing", "With winsorizing"), show.r2
= FALSE, show.ci = FALSE, string.intercept = 'Constant', emph.p = TRUE, show.se = TRUE, show.stat
= TRUE, string.stat = 't')
```

 # Using Newey-West standard errors

tab_model(model, vcov.fun = NeweyWest(model), show.r2 = FALSE, show.ci = FALSE, string.intercept = 'Constant', show.se = TRUE, show.stat = TRUE)

tab_model(model_winsorized, vcov.fun = NeweyWest(model_winsorized), show.r2 = FALSE, show.ci = FALSE, string.intercept = 'Constant', show.se = TRUE, show.stat = TRUE)

 # Using Newey-West standard errors