

## **THE POLITICAL ECONOMY OF CAPITAL CONTROLS: ALESINA, GRILLI, & MILESI-FERRETTI REVISITED**

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In 1944, while World War II reached its zenith as the world's first truly global conflict, representatives from 44 nations met in Bretton Woods, New Hampshire. There they undertook the colossal task of designing a global financial system fit for the interconnected world revealed by the war. The principal organizer of the conference and lead British negotiator, John Maynard Keynes, envisioned a system that would further the liberalization of international trade while at the same time offering states autonomy in regulating capital flows so as to protect against the instability of unrestricted capital movement. Working alongside his US counterpart, American negotiator Harry Dexter White, Keynes introduced an agreement that would give states general autonomy in their implementation of capital control policies while simultaneously instituting policies aimed at the liberalization of the movement of goods (Helleiner, 1994).

The extent of state sovereignty over capital control policies as outlined in the Bretton Woods agreement has important implications for our present moment. As the world has grown exponentially more interconnected since 1944, the rapid movement of globalized capital flows challenge a state's capacity to enact meaningful restrictions on capital movement in the service of policy goals such as exchange rate stability and authority over monetary policy. In the wake of economic calamities such as the 2008 global recession or the Greek government-debt crisis, capital controls have been implemented and expanded by some states to ensure solvency and a taxable monetary base (Sfakianakis, 2013). Meanwhile, developing economies throughout the world have turned to capital control policies to ensure exchange rate consistency, to prevent speculative attacks, and to mitigate the destabilizing effects of "hot money" introduced into the economy (Glick & Hutchinson, 2005).

As such, capital control policy decisions represent a fertile ground for inquiry. The decision making process surrounding the implementation or liberalization of capital controls implies a number of relevant considerations concerning the political/administrative dimensions that vary from state to state, including the presence of veto-players within relevant political/administrative bodies, central bank autonomy, and transnational organizations such as the IMF who exercise varying levels of influence over the policymaking process (Kastner & Rector, 2004). These policymakers come with their own attached biases, political ideologies, and varying commitments to ethical and transparent government functioning that complicate the decision-making process (Johnson & Mitton, 2003; Alesina, Grilli, & Milesi-Ferretti, 1993). Furthermore, policymakers must weigh the implications of the international finance policy trilemma which dictates that a state may only choose two of three policy positions and must thereby sacrifice the third: a fixed foreign exchange rate, free capital flows (which implies the absence of capital controls), or monetary policy autonomy (Obstfeld, Shambaugh, & Taylor, 2006, see also Choi, 2020 for an excellent summation of the trilemma issue). All of this plays out against the backdrop of a rapidly globalizing financial system that stands more

interconnected today than ever before in human history. The pace of technological development has opened new pathways for capital movements and presents significant questions for the nation-state's sovereignty in determining capital flow policies.

This paper aims to investigate the political economy of capital controls—the political and institutional arrangements that give rise to a preference for the implementation or liberalization of capital control policies. Previous literature has discussed a number of factors that can influence a state's decision making process surrounding capital controls, particularly the independence of central banks as a policymaking authority as well as a longstanding trend towards policy liberalization preferences in developed economies. This paper seeks to contribute to that body of literature by investigating relevant institutional factors and political preferences in OECD countries to better understand the arrangements that impact policymaking decisions in this arena.

### **Literature Review and Research Framework**

A number of previous papers have attempted to investigate the capital control implementation process through a multitude of perspectives and unique areas of focus. However, because of the global financial establishment's general stance against capital controls in developed economies since the 1980s, this policy area has been largely ignored by mainstream economics research for much of the last two decades. Goodman and Pauly (1993) studied the case of Japan, Germany, Italy, and France between the 1970 and 1990 through the lens of restricting or encouraging foreign direct investment. Their research, with its focus on four developed economies, found that growing global financialization and central bank independence had created a trend of increasing irrelevance for political decision making in capital control policies as the Bretton Woods system continued to unravel. Their work points towards the importance of central bank independence as a neutral, largely disinterested, apparatus for making economic policy free from political interference.

Furthermore, Kastner and Rector (2003) studied the presence of domestic veto-players and their impact on capital control implementation. Veto-players, in this context, are individuals or groups within a parliamentary system capable of stopping legislation in a single move, akin to the president of the United States who may veto legislation passed by congress, triggering a re-vote process. Their study of 19 OECD parliamentary democracies between 1951 and 1998 found that states with higher numbers of veto-players were likely to enact fewer capital controls. Additionally, ideologically right-of-center governments were also likely to enact fewer capital controls and favor liberalization. However, their work suggests that these effects began to disappear after the mid-1980s as decisions about capital controls in OECD countries became the domain of more independent central banks. These findings appear to lend support to Goodman and Pauly's work.

From a different angle, Johnson and Mitton (2003) studied the implementation of capital controls in Malaysia in the late 1990s, specifically in the wake of the Asian financial crisis of 1997. They find that policies during that period were designed in such a way so as to benefit business owners with close ties to the prime minister. Furthermore, through the use of capital controls, the Malaysian government was able to maintain a large tax base, the benefits of which

were used to subsidize favored firms. Johnson and Mitton's work raises important questions about the politicization of capital controls as a tool for a potentially corrupt regime. Their investigation provides a case study in the abuse of capital control authority by a political body to favor personal, not economic, policy goals.

Meanwhile, Glick and Hutchinson (2005) investigate the usefulness of capital control policies as a tool for developing economies to prevent exchange rate instability. They study 69 developing economies between 1975 and 1997, a period that saw 160 currency crises, to test the likelihood of currency attacks and the imposition of capital controls. Contrary to the dominant narrative for much of the 1990s, they find that capital controls are not effective protection methods for developing economies against exchange rate instability. In fact, they find the opposite to be true—countries with more liberalized capital control policies are less prone to speculative attacks. As such, they recommend the abandonment of capital controls as a protective policy measures for developing economies.

With this body of literature in mind, the paper that primarily motivates my study is a 1993 paper by Alesina, Grilli, and Milesi-Ferretti entitled "The Political Economy of Capital Controls" (Alesina, et al., 1993; Alesina, et al., 1994). In their landmark research into the subject, they study 20 OECD countries between 1950 and 1989. They employ a methodology which examines each country's exchange rate regime, ideological orientation of government, parliamentary structure, political stability, central bank independence, and ratio of agricultural sector value to service sector value. Through their analysis, they reach three major conclusions: that capital controls are more likely to be imposed by strong governments that exercise significant control over monetary policy and lack an independent Central Bank, that capital controls are more likely to be introduced when a country's exchange rate is pegged or managed, and that left-wing governments are slightly more likely than other governments to prefer the implementation of capital controls.

Alesina et al. provides my general framework for approaching the subject of capital controls. Utilizing their methodology as a foundation, I adjust their approach to examine the general trends of capital control liberalization and central bank independence in developed economies suggested by Goodman & Pauly and Kastner & Rector. Furthermore, I extend the adjusted analysis to study developing economies in addition to the OECD countries used in Alesina et al.'s paper.

### **Data and Methodology Part One**

The dataset employed for this course of study represents a large number of indicators collected from a wide range of both economic and political science research. The data reflects observations for the years 1995 through 2012 collected for 19 of the OECD countries studied in Alesina, et al.: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, the United Kingdom, and the United States. Turkey, which was studied in Alesina, et al., has been excluded from this dataset due to political and economic instability in the intervening years which has resulted in incomplete data. Furthermore, the dataset includes separate observations for the years 1995 through 2012 for 10 developing countries selected due to the presence of a

parliament empowered to impact capital control decisions: Argentina, Brazil, Bulgaria, India, the Islamic Republic of Iran, Malaysia, Mexico, the Philippines, South Africa, and Uganda.

The foundational data for this study is an indicator of capital control policy implementation that yields a result between 0 and 1, wherein an observation of 0 represents absolute capital control liberalization in a given year and 1 represents full implementation of all capital control policies available. The data measures each country's annual average capital control implementation ( $ka$ ), annual average controls on capital inflows ( $kai$ ), and average controls on outflows ( $kao$ ) (Fernández et al., 2015).

I employ a dummy variable for each country's exchange rate regime ( $exr$ ) in which an observation of 0 represents a floating regime and a 1 represents any instance of a managed or pegged regime (Reinhart, 2016). I also use a measure of central bank independence ( $cbpn$ ) that fluctuates between 0 and 1 in which 0 represents low levels of independence from political pressures and 1 indicating the highest possible level of independent monetary policymaking from outside incursions (Garriga, 2016).

Further, I employ six governance indicators developed by the World Bank to assess political conditions in each country during the time period. Each indicator is normalized to range from roughly -2.5 to 2.5 and records each of the following for comparison: overall control of corruption ( $corr$ ), composite government effectiveness ( $effect$ ), political stability and absence of violent regime changes ( $viol$ ), perceptions about regulatory quality ( $regqual$ ), confidence in the rule of law ( $law$ ), and the prevalence of citizen voice in government decision making through avenues such as elections and protests ( $voice$ ) (World Bank, 2018). It should be noted that these indicators from the World Bank have come under criticism in recent years as some commentators feel their methodology to be too reliant on subjective or opaque perceptions about governance. While economists and political scientists are far from consensus about the effectiveness of these indicators, recent scholarship appears to vindicate the measures insofar as I will employ them for the purposes of this paper (Kaufmann and Kraay, 2017).

Additionally, I record two economic indicators in each country throughout the period to control for economic conditions. I record GDP in trillions of 2017 US dollars ( $gdp$ ) (World Bank, 2018). I also record the annual change in the inflation rate as a percent change in the Consumer Price Index from the previous year ( $inflation$ ) (World Bank, 2018). The summary statistics for this dataset are recorded in Appendix A.

I employ an OLS regression to test the effects of the political and institutional factors in each country throughout the time period on the prevalence of capital control policy implementation. I run the following regression twice, once for the OECD countries and once for the developing countries.

$$ka_i = \beta_0 + \beta_1 * exr_i + \beta_2 * cbpn_i + \beta_3 * corr_i + \beta_4 * effect_i + \beta_5 * viol_i + \beta_6 * regqual_i + \beta_7 * law_i + \beta_8 * voice_i + \beta_9 * gdp_i + \beta_{10} * realgdpgr_i + \beta_{11} * inflation_i + e_i$$

**Results Part One**

The results of the two estimated OLS regressions are reported below.

OECD Countries			Developing Countries		
Variables	Coefficient	Standard Error	Variables	Coefficient	Standard Error
Exchange Rate	-0.09148***	0.0162886	Exchange Rate	-0.0813709	0.0556982
Central Bank Independence	-0.10102***	0.0262277	Central Bank Independence	-0.097705	0.142553
Control of Corruption	-0.02494	0.0321276	Control of Corruption	0.0638207	0.108215
Government Effectiveness	-0.06795**	0.0300772	Government Effectiveness	0.5419708***	0.0779804
Political Stability	-0.00732	0.0142225	Political Stability	-0.1734176***	0.0444972
Regulatory Quality	-0.02821	0.0281544	Regulatory Quality	-0.4386188***	0.0479602
Rule of Law	0.162048***	0.0403284	Rule of Law	0.1320869*	0.0778199
Voice and Accountability	0.083122*	0.0484322	Voice and Accountability	0.152563***	0.0357103
Real GDP Growth	-0.0031	0.0020427	Real GDP Growth	-0.0016624	0.0046169
Inflation Growth	0.010212**	0.0042051	Inflation Growth	-0.0010384	0.001484
N = 266 Adj R <sup>2</sup> = 0.1719  Notes: *** significant at 1% ** significant at 5% * significant at 10%			N = 140 Adj R <sup>2</sup> = 0.5897  Notes: *** significant at 1% ** significant at 5% * significant at 10%		

Based on the high statistical significance nested in central bank independence and the exchange rate for the set of OECD countries, the model implies that much of the weight for capital control policy decisions falls to the work of a strong and independent central bank, as predicted by the trends in Goodman and Pauly. Furthermore, the negative nature of both relationships indicates a firm stance of liberalization throughout those countries. Furthermore, the significance and positive nature of inflation rate growth indicates the use of capital control policies by those independent central banks as a monetary policy tool to combat inflation. Meanwhile, the significance of government effectiveness and the rule of law confirms Alesina et al.'s findings that strong governments with more effective policy implementation apparatuses are better able to effectively enforce the policy decisions of a central bank.

Meanwhile, in the set of developing countries, the opposite is observed. Significance is nested in the political indicators rather than in an independent central bank structure. The political indicators that come back significant return a mix of positive and negative relationships, demonstrating an unpredictable relationship between political decision making and capital control implementation. On the whole, it appears that politics, not an independent

policymaking body, is the greatest predictor of changes to capital control policies in developing countries.

Finally, voice and accountability is significant and positive in both models. This result appears to match a conjecture by Basinger and Hallerberg (2004) in which they theorize that during election years, governments with political sway in capital control decisions may be incentivized to implement controls on capital inflows in order to win more votes. While the voice and accountability variable does not explicitly account for election cycles, it does include elections as part of its calculation. Therefore, these results perhaps lend strength to that theory.

## **Data and Methodology Part Two**

Given the high significance of central bank independence and relative insignificance of political factors in capital control decisions for the OECD countries, I expand my analysis to test for other instances of political arrangements impacting the policymaking process. Specifically, I investigate the ideological alignment and parliamentary structure of each government. I expand my data to include a second set of indicators that track the alignment and structure of each government studied. These indicators are recorded only for the set of OECD countries due to incomplete data for the developing countries. I employ three measures of government composition that work together to track partisan alignment: one that records the percentage of parliamentary seats occupied in a given year by right-wing aligned legislators (govright); another that records the same percentage for left-wing aligned legislators (govleft); and a final indicator for the percentage of centrist aligned legislators (govcent) (Armingeon et al., 2017).

The three measures work in tandem to give a percentage snapshot of the ideological skew present in each country's parliament during a given year. Furthermore, I employ seven dummy variables to control for government structure. Each records the structure of a given country's legislative apparatus in a given year and records a value of 1 if the structure is in place and a 0 if not. The seven structures are as follows; single party majority in which one party takes all government seats and has a parliamentary majority (major); a minimum winning coalition in which all participating parties are necessary for a majority (mincoa); a surplus coalition in which a coalition exceeds the minimum for a majority (surcoa); a single-party minority government in which the party ruling the government does not possess a majority (singlemin); a multi-party minority in which the ruling government does not possess a parliamentary majority (multimin); a caretaker government elected to simply maintain the structural status quo; and a technocratic government elected with a mandate to change the structural status quo (techno) (Armingeon et al., 2017).

The summary statistics for this expanded dataset is included in Appendix A. The expanded methodology utilizes an OLS regression that uses my first regression as a baseline while incorporating the ten additional variables. The OLS regression is as follows.

$$ka_i = \beta_0 + \beta_1 * \text{exr}_i + \beta_2 * \text{cbpn}_i + \beta_3 * \text{corr}_i + \beta_4 * \text{effect}_i + \beta_5 * \text{viol}_i + \beta_6 * \text{regqual}_i + \beta_7 * \text{law}_i + \beta_8 * \text{voice}_i + \beta_9 * \text{govright}_i + \beta_{10} * \text{govcent}_i + \beta_{11} * \text{govleft}_i + \beta_{12} * \text{major}_i + \beta_{13} * \text{mincoa}_i + \beta_{14} * \text{surcoa}_i + \beta_{15} * \text{singlemin}_i + \beta_{16} * \text{multimin}_i + \beta_{17} * \text{caretaker}_i + \beta_{18} * \text{techno}_i + \beta_{19} * \text{gdp}_i + \beta_{20} * \text{realgdpgr}_i + \beta_{21} * \text{inflation}_i + e_i$$

**Results Part Two**

The results of the expanded OLS regression estimate are reported below.

<b>OECD Countries Expanded Methodology</b>		
<b>Variables</b>	<b>Coefficient</b>	<b>Standard Error</b>
Exchange Rate	-0.0992682***	0.0185134
Central Bank Independence	-0.1222786***	0.0292674
Control of Corruption	-0.0129378	0.0337795
Government Effectiveness	-0.0458885	0.0319091
Political Stability	-0.0129917	0.0155699
Regulatory Quality	-0.0448158	0.0302031
Rule of Law	0.1411902***	0.0411904
Voice and Accountability	0.065838	0.0492406
Right-Wing Government	0.0011247	0.0020483
Centrist Government	0.0010019	0.0020676
Left-Wing Government	0.0013241	0.0020655
Majoritarian	-0.1269722	0.2179737
Minority Coalition	-0.1036521	0.2167544
Surplus Coalition	-0.1449301	0.2164964
Single-Party Minority	-0.1684304	0.2175324
Multi-Party Minority	-0.1370443	0.2137105
Caretaker	-0.1440326	0.220833
Techno (Collinear)	0	omitted
Real GDP Growth	-0.0027396	0.002045
Inflation Growth	0.0090475**	0.0043103
N = 266 Adj R <sup>2</sup> = 0.2015  Notes: *** significant at 1% ** significant at 5% * significant at 10%		

These results further strengthen the conclusions drawn from the initial model. Once again, significance is nested with an independent central bank and exchange rate regime, both of which indicate a preference for capital control liberalization, as well as the use of capital controls as a monetary policy tool to fight inflation. Furthermore, none of the additional political indicators for ideological orientation or parliamentary structure come back significant. This supports the findings in the first model, and in Goodman and Pauly, in the trend of a movement towards independent central bank control over capital control policies and a general depoliticization of the policymaking process in developed economies.

## **Conclusion**

In 1993, Alesina et al. reached the conclusion that in OECD countries, capital controls are more likely to be imposed by strong governments with low central bank independence, controls are more likely to be introduced when a country's exchange rate is pegged or managed, and that left-wing governments are slightly more likely than other governments to prefer the implementation of capital controls. My course of study, while not necessarily a direct expansion of their work, uses their research as a framework through which to approach the question of the political economy of capital controls. I find that OECD countries are more likely to rely on independent central bank policymaking rather than politics to make determinations about capital controls, as predicted in Goodman and Pauly. Furthermore, in these countries, strong governments with high central bank independence are less likely to impose capital controls, indicating a preference for liberalization that matches general global trends. Additionally, states with pegged or managed exchange rates are in fact less likely to impose capital controls, furthermore indicating a preference for capital control liberalization in developed economies. Finally, analysis of governmental ideological orientation indicates no significant relationship between ideological sway and control implementation, further supporting the general trend of politically independent policymaking in developed economies.

Additionally, my analysis implies that developing countries rely far more heavily on political processes, rather than an independent central bank, to make decisions about capital control policies. The political conditions in those countries yield mixed results in terms of predicting implementation or liberalization. However, the relationship has important implications for understanding the use and value of capital controls as a defensive measure in developing economies. My analysis here, while not specifically designed to do so, perhaps lends support to Glick and Hutchinson's conclusion that capital control policies are not useful capital insulators because of their highly politicized nature in developing economies.

Clearly, my analysis here is far from a complete understanding of the political economy of capital controls. My study only encompasses 29 total countries, a limitation similarly acknowledged by Alesina, et al. in their work. While these countries provide a useful starting point for understanding capital control decisions, they are far from representative of the global use of capital controls. Further study could and should account for more developing countries. Furthermore, my study does not explicitly take veto-players into account. While the dummy variables for parliamentary structures does implicitly have some controlling power for veto-players inherent in those systems, Kastner and Rector's work is an important area of analysis



that bears greater consideration in future research. Finally, as previously discussed, my data does not explicitly account for election cycles. Basinger and Hallerberg's theorization about the impact of election cycles on capital control implementation is similarly fertile ground for future study. With those limitations acknowledged however, this course of study provides a useful understanding of the trends in capital control decision making over the last two decades and the global trends towards control liberalization in developed economies.

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### **Dataset Citations**

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**Appendix A: Summary Statistics**

Summary Statistics: OECD Countries					
Variable	Obs	Mean	Std. Dev.	Min	Max
ka	342	0.0721004	0.083488	0	0.35
kai	342	0.0698668	0.0776284	0	0.35
kao	342	0.074334	0.1158787	0	0.35
exr	342	0.1578947	0.3651765	0	1
cbpn	342	0.6452919	0.2337232	0.1379539	0.8565
corr	342	1.622264	0.5909455	-0.1892218	2.469991
effect	342	1.585672	0.4548466	0.1976259	2.353998
viol	342	0.9189501	0.4459138	-0.4737767	1.760102
regqual	380	1.426493	0.3409555	0.4964582	2.098008
law	342	1.542286	0.3891343	0.3876202	2.01373
voice	342	1.345699	0.2041163	0.7007905	1.800992
govright	342	37.44307	40.53494	0	100
govcent	342	23.45596	32.98668	0	100
govleft	342	38.35547	40.75254	0	100
major	342	0.2280702	0.4202029	0	1
mincoa	342	0.2982456	0.4581582	0	1
surcoa	342	0.2046784	0.4040576	0	1
singlemin	342	0.1374269	0.3448019	0	1
multimin	342	0.1169591	0.3218424	0	1
caretake	342	0.0087719	0.0933835	0	1
techno	342	0.005848	0.0763597	0	1
realgdpgr	342	2.14	2.60	-9.17	10.63
inflation	342	2.104559	1.338784	-4.478103	8.934514

Summary Statistics: Developing Countries					
Variable	Obs	Mean	Std. Dev.	Min	Max
ka	180	0.5901367	0.2900755	0.05	1
kai	180	0.5407716	0.2929483	0	1
kao	180	0.6339462	0.3237828	0	1
exr	180	0.4333333	0.4969179	0	1
cbpn	180	0.5128724	0.1716221	0.2548816	0.8025526
corr	180	-0.2674469	0.3890147	-0.9884557	0.7329274
effect	180	0.0581122	0.4619978	-0.6878501	1.267115
viol	180	-0.4999849	0.6480488	-1.778313	0.5766617
regqual	180	-0.0499307	0.63186	-1.72011	0.8042418
law	180	-0.2376658	0.3966328	-1.022496	0.5239099
voice	180	0.0255452	0.6192841	-1.606163	0.8469778
realgdpgr	180	4.150028	3.784553	-10.89448	11.52324
inflation	180	15.69746	80.08855	-0.7908838	1058.374

## **Appendix B: Glossary of Variables**

Each variable collected between 1995 and 2012.

Variables collected for 19 OECD economies: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Netherlands, Norway, Portugal, Spain, Sweden, the United Kingdom, and the United States.

Variables collected for 10 developing economies: Argentina, Brazil, Bulgaria, India, the Islamic Republic of Iran, Malaysia, Mexico, the Philippines, South Africa, and Uganda.

**Capital Control Implementation (ka):** indicator ranging between 0 and 1 that measures the average capital control policy implantation in a given year, 1 representing implantation of every policy measure available to a country and 0 representing complete liberalization.

**Exchange Rate (exr):** dummy variable for exchange rate regime. 0 represents free floating regime and 1 represents any sort of peg or management.

**Central Bank Independence (cbpn):** indicator ranging between 0 and 1 that measure central bank independence from political pressures and control by existing governmental regime. 0 represents no independence and 1 represents full independence.

**Control of Corruption (corr):** indicator ranging from roughly -2.5 to 2.5. Measures the control of corruption in a given regime.

**Government Effectiveness (effect):** indicator ranging from -2.5 to 2.5. Measures the quality of public services and civil service independence from political pressures in a regime.

**Political Stability and Absence of Violent Regime Change (viol):** indicator ranging from -2.5 to 2.5. Measures the stability of a regime as well as the absence of violent changes to the government.

**Regulatory Quality (regqual):** indicator ranging from -2.5 to 2.5. Measures the ability of a government to formulate and implement effective regulations.

**Rule of Law (law):** indicator ranging from -2.5 to 2.5. Measures the confidence that government agents abide by law.

**Voice and Accountability (voice):** indicator ranging from -2.5 to 2.5. Measures the responsiveness of a government to the voice of citizens, whether through formal means such as elections or through informal means such as protests and lobbying.

**Government Orientation Right (govright):** indicator ranging from 0 to 100. Measures the relative power position of right-wing parties in a government based on the percentage of the share of seats in parliament occupied by a right-wing aligned legislator. Weighted by the number of days in office in a given year.

**Government Orientation Center (govcent):** indicator ranging from 0 to 100. Measures the relative power position of centrist parties in a government based on the percentage of the share of seats in parliament occupied by a centrist aligned legislator. Weighted by the number of days in office in a given year.

**Government Orientation Left (govleft):** indicator ranging from 0 to 100. Measures the relative power position of left-wing parties in a government based on the percentage of the share of seats in parliament occupied by a left-wing aligned legislator. Weighted by the number of days in office in a given year.

**Majoritarian Government (major):** dummy variable for government structure. Indicates the presence of a single-party majority government in which one party takes all government seats and has a parliamentary majority.

**Minimum Winning Coalition (mincoa):** dummy variable for government structure. Indicates the presence of a government in which all participating parties are necessary to form a majority government.

**Surplus Coalition (surcoa):** dummy variable for government structure. Indicates a coalition government which exceeds the minimal-winning criterion.

**Single-Party Minority Government (singlemin):** dummy variable for government structure. Indicates that the party in government does not possess a majority in parliament.

**Multi-Party Minority Government (multimin):** dummy variable for government structure. Indicates that the parties in government do not possess a majority in parliament.

**Caretaker Government (caretake):** dummy variable for government structure. Indicates a government elected to maintain the status quo.

**Technocratic Government (techno):** dummy variable for government structure. Indicates a government led by a technocratic prime minister and consists of a majority of technocratic ministers with an overall mandate to change the status quo.

**Real GDP Growth (realgdpgr):** growth of real GDP measured in percent change from the previous year.

**Inflation Growth (inflation):** growth in harmonized consumer price index (CPI) measured in percent change from the previous year.

