A Model of Politics and the Central Bank

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Abstract

We develop a model of the interaction between an independent central bank and a government seeking to win reelection. Voters' loss function is quadratic in unemployment and inflation. They observe economic outcomes generated by the incumbent government, make inferences about its competence, and reelect it only if they anticipate that it will deliver a smaller expected loss than an unknown challenger. We show that a hawkish central bank increases the incumbent's chance of reelection. This leads governments to prefer more inflation-averse central bankers than socially optimal, rationalizing the political success of inflation targeting. The incumbent's preference for an inflation-averse central bank arises from a desire to mitigate the inflation bias conditional on being re-elected, but to worsen unemployment uncertainty conditional on losing the election. Consistent with the model, cross-country evidence from developed countries and from the introduction of the Euro supports that incumbents are more likely to be re-elected when central banks have a strong price stability mandate.

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1 Introduction

Central bank independence (CBI) has been widely successful, and yet its success has appeared under threat in recent years. The global trend toward central bank independence (CBI) over the past several decades is often viewed as a successful institutional response to the problem of time-inconsistent monetary policy. Following the seminal work of Kydland and Prescott (1977) and Barro and Gordon (1983), economists recognized that governments are tempted to stimulate output through surprise inflation, particularly ahead of elections. To remedy this problem, many countries delegated monetary policy to independent central banks, ideally staffed by conservative policymakers in the spirit of Rogoff (1985) "inflation-averse central banker." The conventional narrative holds that elected officials recognized the economic benefits of CBI and voluntarily constrained their own discretion for the sake of macroeconomic stability.

Yet, this account leaves a crucial political economy question unexamined: do office-motivated politicians—who care about reelection and not social welfare—have genuine incentives to establish independent central banks and appoint appropriately hawkish central bankers? In practice, governments remain central actors in the appointment process, and recent episodes in countries such as Turkey or the U.S. suggest that CBI may be more fragile than once believed. This raises the question whether the observed wave of CBI was merely a technocratic success due to a coincidence of historical circumstances, or whether CBI can be viewed as a conscious choice made by politicians in the face of electoral pressures.

In this paper, we ask whether governments indeed have incentives to appoint appropriately hawkish central bankers. To do so, we revisit the canonical model of monetary policy delegation (Barro and Gordon, 1983; Rogoff, 1985), and combine it with a classic model of government competence and elections (Rogoff and Sibert, 1988; Rogoff, 1990). Crucially, we

focus on the government's choice of the central banker and assume that instead of maximizing social welfare, the government makes choices to maximize its reelection chances.

At the start of the game, the incumbent government appoints a central banker who is to conduct monetary policy for the rest of the game. The voters and the central bank have similar preferences, modeled as a classic quadratic loss function over inflation and unemployment fluctuations, but the relative weight on inflation vs. unemployment of the central banker is chosen by the government and may differ from that of the voters. We label a central banker with a high weight on inflation fluctuations *inflation-averse* or *hawkish* and a central banker with a low weight on inflation fluctuations as *unemployment-averse* or *dovish*.[2] Inflation and unemployment are linked via a forward-looking Phillips curve, where public inflation expectations are formed rationally. The main departure from Barro and Gordon (1983) and Rogoff (1985) is that the standard cost-push shock to unemployment in the Phillips curve reflects the government's competence. So a lower quality government tends to lead to higher inflation and higher unemployment on average.

In the first period, the incumbent's competence is drawn and observed only by the government and the central bank. Voters observe only unemployment, which is a function of the incumbent's competence and the monetary policy, and draw inferences about the incumbent's competence. They care about future economic outcomes and are risk-averse. Finally, the voters choose whether to re-elect the incumbent, in which case her competence persists to the second period. Alternatively, voters can elect a challenger, whose competence is unknown but drawn from a known distribution with zero mean. In the second period, the central bank again sets inflation, taking inflation expectations as given, inflation and

[2]While we refer to the "central banker" throughout, in practice the inflation hawkishness of course depends not only on the chair, but also on the committee, the formal monetary policy framework, and the overall institutional design. These additional determinants further strengthen our rationale to model the central banker's inflation weight as persistent throughout periods 1 and 2.

unemployment are realized, and the game ends.

In equilibrium, the voters re-elect only incumbents who are sufficiently competent, but the threshold competence for reelection is lower than the average competence. To understand why, note that the voters' electoral choice can be understood as a risk–return trade-off. They are comparing an incumbent of known quality, and hence with predictable economic outcomes, to a challenger of unknown competence, and hence risky economic outcomes. Not surprisingly, risk-averse voters are willing to tolerate the economic consequences of a moderately incompetent incumbent in exchange for avoiding the risk of an even worse challenger.

Our central results concern the relationship between the inflation-aversion of the central banker and the incumbent's probability of reelection. We show that *a more inflation-averse central banker increases the reelection chances of the incumbent.* Facing a more hawkish central bank modifies both sides of the risk-return trade-off faced by rational voters. Consider the marginal incumbent of below-average competence. Since this incumbent's competence is expected to persist and enters into period 2 inflation expectations, it leads to a strong inflation bias. A more inflation-averse central banker reduces this future inflation bias, making such an incumbent more attractive. By contrast, the challenger's unknown competence is mean-zero and hence does not lead to an inflation bias. However, an inflation-averse central banker is not expected to smooth the economic shocks coming from the uncertain competence of the challenger, making the challenger less attractive to the risk-averse voters. Our main result implies that if a strongly anti-inflationary central bank is the norm, voters become more tolerant of low-competence politicians known to follow inflation-inducing, unemployment-increasing policies such as tariffs, immigration restrictions, regulatory burdens, etc.

The relationship between central bank hawkishness and the reelection threshold leads to the second main result of the paper: an office-motivated incumbent *prefers a central banker who is as inflation-averse as possible*, or alternatively, a central banker inclined to follow strict inflation targeting, as such a central banker increases the incumbent's reelection chances. Our model hence provides a novel explanation for the political success of inflation-averse central banks.

Our model has two novel empirical predictions about the relationship between CBI and political stability, understood as the reelection probability of the incumbent. All else equal, political stability should be higher in countries in which the central banker has a stricter anti-inflation mandate and lower in countries in which the appointment of the central bank is not controlled by the executive. Note that these two institutional features are usually bundled together into a measure of CBI (Cukierman et al., 1992), but our model predicts that they have opposite effects on political stability. In contrast to the usual intuition that having the executive appoint the central banker directly is bad for monetary outcomes, our model predicts that it actually results in hawkish central bankers.

We provide suggestive evidence for the predicted relationships between CBI and the probability that a political leader is reelected, using a panel of 20 developed countries 1980-1998. Our key measure is "objectives independence", which measures the strength of the central bank's price stability mandate, and takes the highest value if price stability is the major or only objective in the central bank charter. Our second measure is "appointment independence", which takes its lowest value if the central banker is directly appointed by the executive and its highest value if the central banker is appointed by an independent committee.[3] We find that higher objectives independence is associated with a higher reelec-

[3]CBI measures are from Cukierman et al. (1992) and reelection variables are constructed following Brender and Drazen (2008).

tion probability, consistent with the model. A one-standard-deviation increase in objectives independence is associated with a 7.5 percentage point higher reelection probability for the political leader. Appointment independence is associated with a lower reelection probability, which is also consistent with the model, though this second relationship is less uniformly statistically significant. Since this evidence does not have a source of exogenous variation in CBI, omitted variables and reverse causality are naturally concerns. However, the most natural reverse causality concern, formulated by Cukierman (1994), proposes that low political stability regimes should prefer independent central bankers to tie the hands of their successor. This would suggest a negative relationship between CBI and political stability, and bias our main relationship between objectives independence and reelection probabilities towards zero.

We next exploit the introduction of the Euro as a change in CBI that is more plausibly exogenous. Euro countries that experienced a larger increase in objectives independence after the introduction of the Euro would be predicted to have a greater increase in reelection probabilities, and we confirm this prediction in the data. While this second empirical design addresses some endogeneity concerns, the introduction of the Euro was, of course, correlated with other important changes in Euro area countries, such as structural reforms. To partly address these concerns we show that the relationship with objectives independence is unchanged when we control for GDP growth, inflation, and government surplus as a percent of GDP. We also acknowledge that identification for major macroeconomic changes, such as central bank independence, are inherently difficult. Our empirical findings should therefore be interpreted as reduced-form relationships confirming the model, rather than as causal evidence.

Our prediction that incumbent governments favor inflation-averse central bankers may

seem in tension with episodes of intense pressure from governments to loosen monetary policy. We reconcile these two by emphasizing the difference between selecting a hawkish central banker to affect expectations and desiring looser monetary policy while in office. To explain this difference, we extend the model to allow the government to raise inflation before the election in ways that are not observed by the voters. Since voters infer the competence of the incumbent from unemployment, unexpectedly higher inflation lowers unemployment and hence raises voters' evaluation of the government's competence, thereby increasing its reelection chances. This creates a temptation to unexpectedly raise inflation. However, because voters correctly anticipate the incumbent's desire to do so, they are not fooled in equilibrium, and political turnover is unaffected. Hence, our model predicts that an office-motivated politician appoints an inflation-centric central banker but applies political pressure to loosen monetary policy before elections.

The conflicting incentives for a politician to appoint a hawkish central banker, but also covertly exert pressure, are well illustrated by the conquest of the "Great Inflation" in the U.S. in the early 1980s. President Ronald Reagan publicly supported Paul Volcker as chairman of the Federal Reserve as a well-known inflation hawk, reappointing him in 1983. At the same time, Reagan and his team pressured Volcker at least once not to raise interest rates prior to the midterm elections in 1982.[4] As inflation fell from double digits to close to 3%, Reagan got rewarded at the ballot box in his landslide reelection in 1984.

We next investigate what patterns of economic and political outcomes we should expect when monetary policy affects the reelection chances of incumbents. First, we find that the incumbent's first-period economic performance is exacerbated in the second period if re-elected: below-average incumbents deliver worse inflation and unemployment than they did

[4]See *Federal Reserve Board Oral History Project* (2008).

in their first term, while the opposite is true for above-average incumbents. Hence, we find the opposite of mean reversion. Second, a more inflation-averse central banker lowers average inflation, a prediction in line with standard models. Facilitating the reelection of below-average incumbents, a more inflation-averse central banker then increases unemployment on average, which is a novel prediction. Finally, the increased political stability means that a more inflation-averse central banker makes unemployment less variable over time. This prediction differs from a model without political turnover of Rogoff (1985), where a more inflation-averse central bank raises unemployment volatility, but can explain why Alesina and Summers (1993); Grilli et al. (1991) found the relationship between central bank hawkishness and real economic volatility ambiguous.

1.1 Literature

Our paper adds to a recent and growing literature on macroeconomics, political economy, and the role of the central bank (Dovis and Kirpalani (2021), Bianchi et al. (2023), Halac and Yared (2020)). While Afrouzi et al. (2024) consider an exogenous change in firms' market power, interpreted broadly as unionization, de-globalization, or fiscal profligacy, driving an increase in long-run inflation and a rise in unemployment, these forces arise endogenously in our model due to an increased willingness to vote for such policies when inflation appears to have been tamed. We also add to the broader literature studying the interaction of monetary and fiscal policy (Lucas Jr and Stokey (1983), Calvo (1978), Lustig et al. (2008), Schreger et al. (2024)). Different from the partisan model of Alesina and Gatti (1995), where the election probabilities are taken to be exogenous, political stability is the key endogenous outcome variable in our model and empirical analysis.

On the political economy side, our research contributes to the literature studying the

interaction between the executive and other branches of government. The executive's interaction with the legislature (e.g. Alesina and Rosenthal (1996), Alesina and Rosenthal (2000)), with the bureaucracy (Fiorina and Noll (1978), Acemoglu and Verdier (2000)), and with state-owned enterprises (Shleifer and Vishny (1994)) have been the subject of large literatures. Abstracting from political turnover, Bocola et al. (2025) model a fiscal authority's optimal choice to grant or rescind monetary policy independence.

The paper provides a complementary perspective to the literature on political business cycles (Nordhaus (1975), Persson et al. (2000), Lohmann (1998), Cukierman and Meltzer (1986), Rogoff (1990), Rogoff and Sibert (1988)). While our model is consistent with this earlier literature, it assumes an independent central bank, whose interaction with the executive acts through the appointment process, and this leads to distinct predictions for political turnover and economic outcomes.

There is a growing empirical literature studying how inflation shapes elections and, conversely, political pressure on central banks. Brender and Drazen (2005), and Brender and Drazen (2008) find that deficit spending in election years does not increase reelection chances, but low inflation and central bank independence do. Farvaque (2002) finds that bicameralism is positively correlated with CBI, while the strength of the Senate is negatively correlated with CBI, but does not study political stability as we do. Federle et al. (2024) show that higher inflation increases the election chances of populists, but do not provide a mechanism through which inflation or monetary policy change voter behavior. Binder (2024) argues that inflation outcomes have been an important determinant of election outcomes throughout U.S. history. Conversely, Bianchi et al. (2023) use high-frequency identification to argue that political pressure by the first Trump administration has moved interest rates, while Drechsel (2024) analyzes political pressure in the 1970s using a narrative approach. Binder

(2021) quantifies political pressures on central banks around the world using text-based analysis, finding that political pressure on central banks is the exception rather than the norm. Baerg et al. (2021) provide evidence of central bankers' desire to run for office using data from post-communist countries. Prior empirical work has found a positive but weak relationship between combined central bank independence and political stability (Dreher et al., 2010). Our model provides an explanation, predicting that different components of central bank independence should have opposite relationships with political stability. Our empirical results echo the results in De Haan and Van't Hag (1995), but provide new predictions and evidence for different components of central bank independence.

We contribute to this literature by providing a simple, stylized, benchmark model where the monetary policy framework, and hence inflation outcomes, shift voters' behavior and electoral outcomes, and provide suggestive empirical evidence for this mechanism. This lends itself to various extensions, which we discuss in the Conclusion.

2 Model

There are three groups of agents: central bankers, politicians, and voters. At the start of the game, the first-period politician, or incumbent, acts as the government and appoints a central banker to oversee monetary policymaking for the rest of the game. After the appointment is made, the incumbent's competence is drawn exogenously from a prior distribution. The central banker observes the incumbent's competence and conducts monetary policy. Voters then observe the resulting unemployment, which is a function of the incumbent's competence and monetary policy, and decide whether to re-elect the incumbent for a second term or replace her with a challenger. In period 2, the elected politician's competence is either equal

to the incumbent's competence realized in the first period if the incumbent is re-elected or drawn from a known distribution if the challenger is elected. The central bank conducts monetary policy again, second-period inflation and unemployment are realized, and the game ends. Figure 1 illustrates the timeline of the model.

2.1 Monetary Policy

We assume the classical Barro and Gordon (1983) monetary policy problem.[5] Social welfare each period is represented by a loss function that is quadratic in unemployment, u_t, and inflation, π_t,

$$\mathcal{L}_t = \frac{(u_t - u^*)^2}{2} + \theta \frac{\pi_t^2}{2}, \tag{1}$$

where θ captures the social weight on inflation fluctuations. The socially optimal level of inflation is normalized to zero, and u^* is the socially optimal unemployment level. We assume that $u^* < 0$, capturing pre-existing economic distortions that lead to a steady-state unemployment level above the socially optimal one. An objective function of the form (1) can be microfounded as a log-quadratic expansion of the consumer welfare function in New Keynesian models (Woodford (2003)).

The central banker's loss function takes the same form as the social loss function, but the central banker's weight on inflation fluctuations, $\tilde{\theta}$, may be different from the social weight, θ:

$$\tilde{\mathcal{L}}_t = \frac{(u_t - u^*)^2}{2} + \tilde{\theta} \frac{\pi_t^2}{2}, \tag{2}$$

We call $\tilde{\theta}$ the central banker's *inflation-aversion*. If $\tilde{\theta}$ is large, we say that the central bank(er) is *inflation-averse*, and if $\tilde{\theta}$ is low, we say that the central bank(er) is *unemployment-averse*.

[5] See Drazen (2000) for a textbook exposition.

The central banker's inflation aversion is assumed to be common knowledge and is the same in both periods, consistent with the strong persistence of central bank frameworks and chairs in practice.

Each period, the central bank chooses inflation π_t and unemployment u_t to minimize $\tilde{\mathcal{L}}_t$ subject to a standard expectational Phillips curve

$$u_t = -(\pi_t - \pi_t^e) - g_t, \tag{3}$$

and the voters' inflation expectations π_t^e being rational. The Phillips forward-looking curve (3) captures firms' production decisions in the presence of price distortions, with g_t capturing a cost-push shock.

Different from a standard monetary policy model, but similar to the political business cycle literature (Persson et al. (2000), Lohmann (1998)), we assume that the shock g_t reflects government competence. For simplicity, we assume that government competence is the only shock to the Phillips curve. Indeed, financial markets priced supply shocks as dominant during the 1980s and 1990s, when central bank independence was enhanced in many countries around the world, and have again become relevant in recent years (Campbell et al. (2020), Pflueger (2025)). Government competence can therefore be thought of as policy-induced distortions to product and labor markets, such as tariffs, restrictions on wages, prices, labor mobility, or better or worse policy in the face of commodity price shocks. See a more detailed discussion of this assumption in Section 3.2.

Inflation expectations π_t^e are formed after the period t government is elected. The central bank chooses period t inflation and unemployment, knowing inflation expectations π_t^e and after learning the government quality g_t. We assume that the central bank minimizes its loss

function period by period, as is common in analyses of central bank inflation bias (Kydland and Prescott (1977), Rogoff (1985)). Since the central bank is assumed to be myopic, it has no preferences over election outcomes, as would be the case for an apolitical central bank, but this assumption turns out to be inconsequential.[6]

Our assumption that the socially optimal unemployment level is negative, $u^* < 0$ combined with (3), ensures that under a government with competence $g_t = 0$, the standard time-inconsistency problem arises. The central bank wants to generate unexpected inflation in order to bring unemployment u_t closer to the optimal level u^*. The standard argument shows that, in equilibrium, voters must anticipate this desire, which results in inflation bias, with inflation above the optimal level and no equilibrium benefit for unemployment. Low incumbent competence moves unemployment further away from u^*, exacerbating the inflation bias. This observation will play a crucial role in our results.

2.2 Elections

Period 1 starts with the incumbent government in power. The incumbent's competence is denoted by g_I, so $g_1 = g_I$. We assume that the quality of the incumbent is drawn from a distribution F, with corresponding probability density f. The distribution is assumed to have mean 0, variance σ_g^2, and the upper bound $-u^*$.[7] The upper bound on the quality of the government assures that no government fully eliminates all distortions in the economy, and that unemployment is always higher than socially optimal. We assume that g_I is not directly observed by the voters. Instead, at the time of the election, voters observe only

[6] In a previous version of this paper, we considered a central bank that maximizes the sum of social payoffs for both periods taking into account the effect of its monetary policy on the information it conveys to the voters and hence the electoral outcomes. The results remain unchanged.

[7] We normalize F to have zero mean, as a shift in the distribution for g_t is isomorphic to a change in the socially optimal level of unemployment u^*.

period 1 unemployment u_1. As the reader will see, whether voters observe inflation π_1 is irrelevant in the baseline version of the model.

The voters' problem at the end of period 1 is to choose whether to re-elect the incumbent, in which case the government's quality persists so $g_2 = g_I$, or to elect a challenger of unknown quality, in which case $g_2 = g_C$, where g_C is drawn from F. The competence of the incumbent and the challenger, g_I and g_C, are assumed to be uncorrelated.

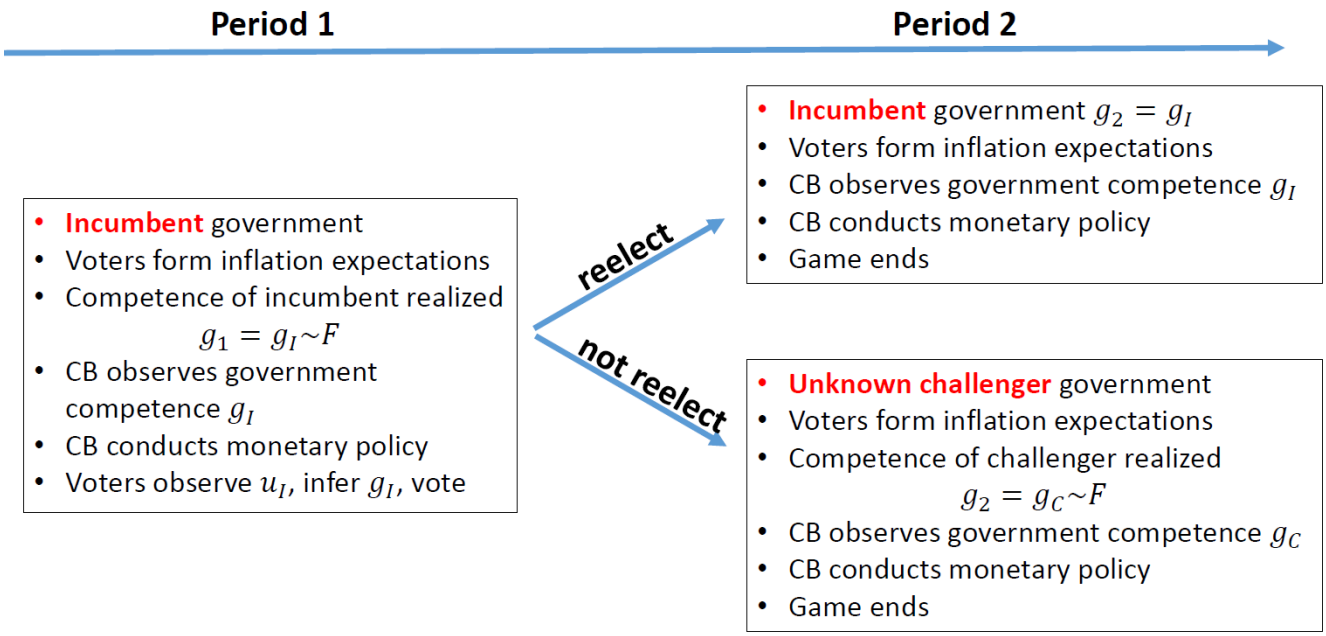
The voters' period utility function is the negative of the loss function (1). They re-elect the incumbent if and only if their expected utility from doing so is at least as large as the expected utility from electing the unknown challenger. When voting, voters recognize that in the second period the central bank will observe g_2 and choose inflation and unemployment to minimize its own loss function (2). After the loss in the second period is realized, the game ends.[8]

2.3 Discussion of Assumptions

Following Rogoff and Sibert (1988), Persson et al. (2000), and Lohmann (1998), we assume that voters face uncertainty about the challenger's competence and infer the incumbent's competence from economic outcomes, but we differ by assuming that inflation is set by an independent central bank. Our assumption that g_t reflects the government's competence and enters (3) is meant to capture the notion that incompetent governments engage in policies that raise unemployment and inflation, whereas competent governments engage in policies that lower those economic measures. We discuss the choice of modeling government competence as a supply shock in more detail in Section 3.2.

[8] Assuming homogeneous voters, our model of elections is based on government competence rather than partisan preferences over candidates, which would introduce additional complications. See Hibbs (1977), Alesina (1987), and Alesina and Roubini (1992) for theory and evidence of partisan business cycles.

Figure 1: **Model Timeline**



We assume that the central bank appointment is made under the veil of ignorance, i.e., before the incumbent politician knows her own type. This assumption is particularly plausible for appointments early in a politician's term, and simplifies the analysis because it allows us to abstract from signaling. Even though in practice some uncertainty about the central banker's type is inevitable, we believe that the assumption that the public knows $\tilde{\theta}$ is a useful and reasonable baseline. For example, appointed heads of central banks tend to have a long history of comments on monetary policy, revealing their philosophy, and their training and pedigree are well-known.

And finally, voters in our model are rational. They understand the objective function of the central bank and rationally anticipate its policy-making. In practice, voters' inflation expectations may also be influenced by non-rational components, e.g., the history of past

inflation. To the extent that non-rational components in inflation expectations act as noise in the voters' learning problem, the mechanism presented here will be present.

3 Political Outcomes in the Model

This section presents our main results. We analyze first how the inflation aversion of the central bank affects elections (Proposition 2), what this implies for the incumbent's decision about the appointment of the central banker (Corollary 1), and how the appointed central banker compares to the one a social planner would choose (Proposition 3).

3.1 Reelection Probability

We start by characterizing the voters' equilibrium reelection decision.

Proposition 1 ***(Political Turnover):*** *There exists* $\underline{g}(\tilde{\theta}) < 0$ *such that the incumbent is re-elected if and only if*

$$g_I \geq \underline{g}(\tilde{\theta}) := -u^* - \sqrt{(u^*)^2 + \left(\frac{\tilde{\theta}}{1+\tilde{\theta}}\right)^2 \sigma_g^2},$$

where $\underline{g}(\tilde{\theta}) < 0$ *for all* $\tilde{\theta}$.

The intuition for Proposition 1 is as follows. Voters like competence because it positively affects economic outcomes, and dislike uncertainty about competence because they are risk-averse over economic outcomes. Hence, they are willing to sacrifice competence in exchange for certainty about it. Since in our model voters learn about the incumbent's competence before the election, but are uncertain about the competence of the challenger, they optimally

choose to re-elect below-average incumbents. Intuitively, the marginal reelected incumbent is mediocre, with below-average competence. Voters prefer to re-elect such a mediocre incumbent over electing a risky challenger to avoid the possibility of drawing a challenger with much worse competence, even if the average expected challenger's competence is higher. As the saying goes, "better the devil you know than the devil you don't".[9]

Differentiating the reelection threshold $\underline{g}(\tilde{\theta})$ shows that the incumbent's reelection chances increase with the central bank's inflation aversion. This is our first main result.

Proposition 2 *The incumbent government's reelection probability increases with central bank inflation aversion:* $\frac{d\Pr\left(g_I \geq \underline{g}\right)}{d\tilde{\theta}} > 0$.

There are two complementary effects that drive Proposition 2. First, a more inflation-averse central bank decreases the inflation bias associated with the reelection of the below-average incumbent. Second, a more inflation-averse central bank increases uncertainty associated with electing a challenger of unknown competence.

To see the intuition behind the first effect, consider the voters facing an incumbent of below-average competence. The voters anticipate that the central bank will react to the policies of such an incumbent by easing the monetary policy in the second period. Hence, they form high inflation expectations, which in turn lead to high inflation but leave unemployment unaffected in equilibrium. When the central bank is highly inflation-averse, voters anticipate a relatively stricter monetary policy, lowering their inflation expectations, which leads to lower ensuing inflation.

To see the intuition behind the second effect, recall that the challenger's competence is unknown at the election time, leading to uncertainty about the unemployment that will

[9]The social inflation aversion θ drops out of the optimal reelection threshold. This means that despite $\tilde{\theta} \neq \theta$, the central bank and the voters agree on which quality incumbents should be re-elected, and hence the central bank has no incentive to try to change voters' perception of the incumbent's quality.

ensue. A more inflation-averse central bank is expected to mitigate the challenger-induced unemployment shocks less, rendering the challenger riskier for the voters.

Proposition 2 implies the following.

Corollary 1 *The following holds:*

1. *An office-motivated incumbent prefers a central bank that focuses solely on inflation, i.e.,* $\tilde{\theta}_I = \infty$*;*

2. *An office-motivated challenger prefers a central bank that focuses solely on unemployment, i.e.,* $\tilde{\theta}_C = 0$*.*

Note that since the incumbent does not care about inflation and unemployment per se, her preference for an inflation-averse central bank in Corollary 1 does not result from a simple desire to improve economic welfare by resolving the well-known time-inconsistency problem of monetary policy. Instead, the incumbent appoints an inflation-averse central banker to improve economic outcomes conditional on being re-elected, but to worsen them conditional on losing the election.[10]

Our predictions contrast with the hypothesis proposed in Cukierman (1994), where political instability causes the government to prefer a conservative central bank. In his proposed channel, a government that expects not to remain in power delegates policy to a conservative central banker in order to tie the hands of the successor government. Our mechanism runs in the opposite direction, from central bank independence to political stability, and predicts the opposite sign for the empirical relationship. This argument, hence, suggests that reverse

[10]The assumption that incumbents are purely office-motivated leads to a stark result in Corollary 1, but it is not crucial for the qualitative result. As long as governments are partly motivated by reelection, the incumbent favors a more inflation-averse central bank than the challenger would prefer.

causality should bias us against finding a positive relationship between CBI and reelection probability, pushing instead toward a null or negative relationship.

3.2 Robustness of Results to Assumptions

Remark about the nature of the shocks: Several assumptions underlying Proposition 2 are made for analytical clarity and can be relaxed without overturning the main result. First, the assumption that incumbent competence is perfectly persistent across periods is not essential. What matters is that there is some degree of persistence, so that voters hold more precise beliefs about the incumbent's future performance than about the challenger's. For example, assuming that incumbent competence is partially mean-reverting would still leave the voters with more information about the incumbent's type than the challenger's, preserving the risk–return logic of Proposition 1 and the sign in Proposition 2, albeit weakening the magnitude of the effect. For the same reason, it is not necessary that the incumbent's competence be fully revealed to voters in period 1. If unemployment is a noisy signal of competence, for example, because there are additional exogenous shocks to the Phillips curve, the key mechanism survives provided that voters still learn relatively more about the incumbent than about the challenger before the election.

Second, the assumption that period 2 competence is observed by the central bank while remaining uncertain for voters should be understood as reflecting the timing of monetary policy, which is conducted throughout an election cycle after voters have cast their ballots.[11]

Finally, we assume that the politician's competence enters the Phillips curve as a supply shock. Recent U.S. policy debates illustrate that government quality may generate various

[11] There is also a large literature on the Fed information effect arguing that the central bank has superior information about the economy more broadly, owing to its extensive data collection and economic analysis. See Romer and Romer (2000) and Nakamura and Steinsson (2018).

shocks. Some policies, such as tax cuts or spending expansions, primarily shift demand. Others, such as tariffs, immigration restrictions, regulatory burdens, or supply-chain disruptions, change firms' costs, labor supply, or potential output. These latter channels shift the Phillips-curve trade-off and are therefore naturally modeled as cost-push shocks. Our model focuses on this second channel. First, both historically and in recent years, supply shocks have been an important driver of aggregate inflation, so it is natural to focus our analysis on such shocks. Second, it is well understood that supply shocks present a central bank with a much more difficult problem, because it is not possible to stabilize inflation and unemployment simultaneously after this type of shock. By contrast, if incumbent competence had also an aggregate-demand shock component, possibly correlated with the supply component, then as in the standard New Keynesian model, monetary policy would be able to fully offset the demand component and face only the trade-off from the supply shock (Clarida et al. (1999)). Consequently, as long as voters have a standard loss function over inflation and unemployment, adding an aggregate-demand component to government competence would leave voters' reelection decisions unchanged, depending only on the supply component, as in our baseline model.

Of course, demand shocks do matter in practice. However, understanding how elected politicians and the central bank interact in the face of demand shocks would require stepping further outside our model. For example, one could assume a broader social loss function that also features interest rates, fiscal variables, or distributional effects. Alternatively, if the central bank cannot distinguish between demand and supply shocks, it is no longer possible to fully offset demand shocks. To the extent that the incentive to appoint a conservative central banker is maximal in our model, it would likely be weakened in such an alternative setup. We leave the study of demand shocks under such frictions for future research.

Remark about challenger competence: Our results depend on the challenger's competence being uncertain at the time of the election, so that voters face the risk that the challenger's competence may fall below the threshold level $\underline{g}(\tilde{\theta})$. If, for example, the challenger could commit to a level of competence no lower than the incumbent's, she would be elected regardless of the central bank's hawkishness. One way in which a challenger might attempt to make such a commitment is by promising to continue the incumbent's policies. We believe, however, that even if such a commitment were possible, which is itself a nontrivial assumption, it would not eliminate all uncertainty about the challenger, and our results would continue to hold.

A challenger may pledge to uphold the same policies as the incumbent, for example, by committing to the same level of tariffs or immigration enforcement. However, the economic effects of such policies depend on their real-time implementation and on the adjustments made in response to changing circumstances. In addition, we view competence as a general ability to conduct policy. The issues facing the current government may differ from those facing the next government. A challenger's commitment to preserve, say, the incumbent's tariff policy does not tell voters how she would respond if, say, a war were to erupt and disrupt major shipping routes. Thus, it is plausible that even a challenger who commits to maintaining the incumbent's policies would still be riskier than the incumbent.

3.3 Socially Optimal Inflation Weight

In a model without political selection, Rogoff (1985) established that it is optimal for the society to select a central banker who is more inflation-averse than the citizens due to the classic time-inconsistency of monetary policy and the resulting inflation bias. Corollary 1 implies that a central banker who is selected by the executive will be more inflation-averse

than what is deemed optimal by the standard model.

The inflation-aversion highlighted by Rogoff (1985), however, ignores political selection, that is, the fact that the central banker's inflation aversion affects the electoral outcomes. Let $\tilde{\theta}_{iid}$ denote the inflation-aversion of Rogoff (1985) (i.e. minimizing $\mathbb{E}(\mathcal{L}_1 + \mathcal{L}_2)$ if g_1 and g_2 are drawn independently), let $\tilde{\theta}_I$ denote the inflation-aversion selected by the incumbent in our model, and let $\tilde{\theta}_{\text{planner}}$ denote the inflation aversion that would be chosen by a welfare maximizing social planner who recognizes the impact of $\tilde{\theta}$ on electoral outcomes and hence on the competence of the second-period politician (i.e. minimizing the ex ante expected social loss $\mathbb{E}(\mathcal{L}_1 + \mathcal{L}_2)$ with political turnover described in Proposition 2).

Proposition 3 ***(Social Planner)*** *The following holds:*

$$\theta < \tilde{\theta}_{iid} < \tilde{\theta}_{planner} < \tilde{\theta}_I = \infty. \tag{4}$$

That is,

1. *The incumbent government prefers a central bank that is more inflation-averse than is socially optimal;*

2. *The socially optimal inflation weight exceeds the optimal weight without political selection, and the latter exceeds the social inflation weight.*

The relationship between $\tilde{\theta}_{\text{iid}}$ and $\tilde{\theta}_{planner}$ requires an explanation. The standard Rogoff-optimal inflation aversion $\tilde{\theta}_{\text{iid}}$ attempts to mitigate the inflationary bias coming from exogenous economic distortions $u^* < 0$. In the model with political selection, the marginal re-elected politician has below-average competence and hence adds to the economic distortions,

increasing the inflationary pressures. This increases the benefit of having an inflation-averse central banker.

3.4 Discussion of Results

It is important to emphasize that the preferences of the incumbent over the central banker's inflation aversion act solely through the central banks' impact on the second period and voters' expectations. Hence, what is relevant for our result is that the incumbent chooses $\tilde{\theta}$ that binds for the second period. We view this assumption as highly realistic. Oftentimes, the tenure of the central banker extends beyond the tenure of the incumbent. In the U.S., for example, both tenures are four years, but the incumbent typically gets to appoint the chair of the Federal Reserve only well into her term, so she expects the same chair to be responsible for monetary policy at least at the beginning of the next term. Moreover, the members of the Federal Open Market Committee selected by the executive are appointed for 14-year terms.

Such institutional arrangements were arguably selected to increase the central bank's independence from the executive. Independence, however, could also be achieved by removing the appointment power from the executive.[12] Our model highlights the difference between these solutions: leaving the appointment power in the hands of the executive but making this appointment binding beyond the current term introduces incentives for the executive to appoint extremely inflation-averse central bankers.

Since we can interpret $\tilde{\theta}$ as also reflecting the central bank's mandate, Proposition 3 can be

[12]The Swedish Riksbank is one prominent example, where the executive board is appointed by a "General Council", consisting of former central bankers and members of the public. The "General Council" is, in turn, appointed by the Swedish parliament. This contrasts with the U.S., where the Federal Reserve chair is nominated by the President and confirmed by the Senate.

interpreted as the incumbent's preferences over such mandates. In that sense, our results help explain the sweeping adoption of inflation targeting since the 1990s and its continued political success, especially the support it receives from the executive branch. Moreover, they provide a different explanation for this success. Rather than benevolent politicians having newly understood the economic rationale for inflation-targeting, we propose that office-motivated incumbents have an incentive to appoint hawkish central bankers to maximize their reelection chances.

Proposition 3 reveals, however, a darker side of the apparent support of the executive for inflation-averse central bankers. Here, overly hawkish central banks arise in equilibrium, not due to a desire to increase economic welfare but due to incumbent governments' desire to get re-elected. Overall, in our model, leaving the appointment of the central banker to the executive is suboptimal, but for the opposite reason suggested by conventional wisdom, as it produces a central bank that places too much weight on inflation rather than too little.

4 Empirical Analysis

In our model, political stability increases with the strictness of the central bank's price stability mandate, though not necessarily with central bank independence more broadly. We predict that all else equal, political stability should be higher (1) when the inflation control mandate is stricter (higher $\tilde{\theta}$); and (2) when the executive appoints the central banker.[13]

Prediction (2) works through prediction (1). We predict that the executive has a preference for a maximally hawkish central banker, so appointment independence should be nega-

[13]The threshold in Proposition 2 varies with $\tilde{\theta}$ but that variation does not affect all incumbents equally. Those with above-average competence and the very incompetent will never be reelected. However, the empirical prediction does not require us to observe the incumbent's competence, as the unconditional probability of reelection should be positively correlated with the central bank hawkishness.

tively correlated with $\tilde{\theta}$, which via (1) creates a negative correlation with political turnover. Since (2) requires the additional assumption that the executive can appoint the central banker before learning her own type, and abstracts from the institutional tradition and constraints that help determine overall central bank hawkishness, it is natural to expect the second prediction to be noisier in the data.

Our empirical analysis proceeds in two steps. First, we confirm the predicted reduced-form relationships between reelection outcomes and CBI in a cross-country panel of developed countries 1980-1998. Second, we exploit changes in CBI around the introduction of the Euro. We use data on central bank independence (CBI) and its different components collected by Cukierman et al. (1992). We start our sample in 1980, when supply inflation was most clearly on voters' minds, and end with the introduction of the Euro, 1980-1998.[14] Central bank independence is measured in four separate categories: appointment, instrument, objectives, and fiscal independence. "Appointment independence" takes a lower numerical value if the central bank governor is appointed directly by the executive, a higher value if the governor is appointed by parliament, and an even higher value if the appointment is chosen by a committee within the central bank. "Objectives independence" measures the mandate of the central bank and takes the highest value if price stability is the major or only objective in the charter, and the central bank has the final word in case of conflict with other government objectives, and lower values if, for example, the central bank charter mentions several objectives. Finally, the remaining two components capture whether the central bank can set the policy rate without consultation with the executive ("instrument independence") and whether it is prohibited from lending to the government ("fiscal independence"). Com-

[14]We rely on these simple measures of CBI because they are available for a long historical sample covering the pre-Euro period, giving us a broad cross-section of developed countries with reelection data. For a more finely grained measure of central bank objectives available over a more recent sample, see Borio and Chavaz (2025).

bined CBI is defined as an average of these four categories. We use lagged CBI measures for our empirical analysis to at least partially mitigate endogeneity concerns.[15] Our key model predictions imply a positive relationship between objectives independence and reelection (prediction (1)), and a negative relationship between appointment independence and reelection (prediction (2)).

To measure election outcomes, we extend the data of Brender and Drazen (2008). The observation unit is a national election in country i and year t, and takes a value of one if the political leader gets re-elected and zero if not. The variable is based on the elections that determine the executive, i.e., the president or prime minister. In presidential systems, it is therefore based on presidential elections, and in parliamentary systems, on parliamentary elections.[16] We use Brender and Drazen (2008)'s expanded definition and their data for the pre-1998 period. Because Brender and Drazen (2008)'s data ends in 2003, for our Euro sample we manually collect additional data spanning to 2015 from the International Institute for Democracy and Electoral Assistance (IDEA) data set "Voter Turnout Since 1945", the International Foundation for Election Systems ELECTION GUIDE data set, Zárate's Political Collections (ZPC) and the Worldstatesmen online encyclopedia.

Our pre-1998 sample of countries consists of Australia, Austria, Belgium, Canada, Germany, Denmark, Spain, Finland, France, the United Kingdom, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway, New Zealand, Sweden, and the United States. This

[15]The CBI measures are extremely sticky across decades. Because Luxembourg had its monetary policy conducted by Belgium until the devaluation of the Belgian Franc in 1982, we use the Belgian lagged CBI for both Belgium and Luxembourg.

[16]We use the "expanded" definition, which includes cases in which a leader was substituted by another candidate from the same party under the following specific circumstances: (1) the leader died in the year before the elections; or (2) the leader could not run for reelection due to legal term limits. In these cases, the substitute leader (in the first case) or the candidate from the leader's party (in the second case) is treated as the incumbent. Additionally, leaders who quit their jobs within a year before the election are treated as having lost reelection.

gives us a total of 91 elections 1980-1998 in all developed countries and 51 elections over this sample period for the Euro sample.[17] The period ending in 2015 for the Euro sample is determined by the availability of election data. Treating each national election as an observation, we estimate:

$$Reelect_{i,t} = b_0 + b_1 CBI_{i,t-1} + \gamma X_{i,t} + \varepsilon_{i,t}, \tag{5}$$

where $CBI_{i,t-1}$ is a measure of central bank independence (either combined, objectives, or appointment) over the 1972-1979 period, and $X_{i,t}$ is a vector of control variables measured over an incumbent's term. Our control variables include real GDP growth over the incumbent's term, following Brender and Drazen (2008), measured as average real GDP growth between the current election year and the previous election year in constant 2015 USD from the World Development Indicators (WDI) database. We also include average GDP deflator inflation and government surplus as a percentage of GDP, again measured between the current election year and the previous election year. To the extent that GDP growth over the incumbent's term is correlated with incumbent competence, controlling for GDP growth should be expected to reduce noise in our empirical regressions, and thereby lead to a more precisely estimated relationship with CBI. Controlling for inflation and government surplus as a share of GDP may help pick up on factors that are outside our model, such as fiscal reforms, but that may be correlated with central bank independence in the data.

Table 1 starts by regressing the reelection variable onto combined, objectives, and appointment CBI. Panel A shows results for our full developed countries sample, while Panel B shows results for the Euro countries subsample. Starting with the first three columns in

[17] We include Denmark in the Euro sample, because it closely coordinates its monetary policy with the Eurozone and the Danish Krone is pegged to the Euro with a narrow band.

Table 1: Political Stability and Central Bank Independence (1980-1998)

Panel A: Developed	Dependent Variable: $Reelect_{i,t}$								
	Combined			Objectives			Appointment		
CBI	0.23	0.22	0.66	0.25**	0.25**	0.32**	-0.45	-0.52*	-0.41
	(0.29)	(0.28)	(0.38)	(0.11)	(0.11)	(0.14)	(0.30)	(0.28)	(0.31)
GDP Growth		0.07	0.05		0.07	0.04		0.07*	0.05
		(0.04)	(0.05)		(0.04)	(0.05)		(0.04)	(0.05)
Inflation			0.01			0.01			0.01
			(0.01)			(0.01)			(0.01)
Primary Surplus			0.04***			0.04***			0.03**
			(0.01)			(0.01)			(0.01)
N	91	91	88	91	91	88	91	91	88
R^2	0.01	0.04	0.11	0.02	0.06	0.11	0.02	0.06	0.09

Panel B: Euro Countries	Dependent Variable: $Reelect_{i,t}$								
	Combined			Objectives			Appointment		
CBI	0.30	0.25	0.64	0.53***	0.52***	0.51***	-0.77***	-0.94***	-0.83**
	(0.34)	(0.37)	(0.52)	(0.13)	(0.13)	(0.15)	(0.25)	(0.25)	(0.32)
GDP Growth		0.05	0.02		0.05	0.01		0.08	0.06
		(0.06)	(0.07)		(0.06)	(0.07)		(0.05)	(0.06)
Inflation			-0.01			-0.01			-0.01
			(0.02)			(0.02)			(0.02)
Primary Surplus			0.03			0.03			0.00
			(0.02)			(0.02)			(0.02)
N	51	51	48	51	51	48	51	51	48
R^2	0.01	0.03	0.10	0.08	0.10	0.14	0.08	0.13	0.13

Note: This table reports regressions of the form $Reelect_{i,t} = b_0 + b_1 CBI_{i,t-1} + \gamma X_{i,t} + \varepsilon_{i,t}$ from 1980 until 1998 for developed countries in Panel A and Euro countries in Panel B. The observation is at the country-election level, and $Reelect_{i,t}$ takes a value of one if the incumbent was re-elected and zero otherwise. $CBI_{i,t-1}$ is a measure of central bank independence for the period 1972-1979 (Cukierman et al., 1992), and can either be a combined index, objectives independence or appointment independence. Controls include real annualized GDP growth in percent over the leader's term, average GDP deflator inflation (WDI) and average Government primary balance, percent of GDP (% of GDP, IMF) between the current election year and the previous election year. A constant is included in all regressions. Standard errors clustered by year in parentheses. * p <0.10, ** p <0.05, *** p <0.01.

Panel A, we see that the combined index for CBI is only weakly related to a leader's probability of getting reelected. However, the decomposition of CBI into its distinct components paints a different picture. The next three columns show that "objectives independence" is significantly positively related to the political leader's reelection probabilities, consistent with the model predictions. The relationship is economically and statistically similar with or without controls. The magnitudes are also meaningful. A one standard deviation increase in central bank objectives independence equals 0.30, so a one-standard deviation increase in objectives independence tends to be associated with an increase in the probability of being re-elected of 7.5 percentage points. Magnitudes are even larger for the Euro sample, reported in Panel B. Figure 2, Panel B plots the raw relationship between central bank objectives independence and the reelection probability.

On the other hand, "appointment independence" enters negatively for both the developed countries and Euro samples, though it not as uniformly statistically significant as objectives independence. A one-standard-deviation increase in appointment independence is associated with a 15 percentage point decrease in the reelection probability for the Euro sample. The raw data of reelection probabilities vs. appointment independence is plotted in Figure 2, Panel A. Finally, the empirical relationships of reelection probabilities with instrument independence and fiscal independence are weak, consistent with the model not making strong predictions about these relationships, and are reported in Appendix Table A2. This baseline analysis does not have a source of exogenous variation, so the omitted variables and reverse causality are natural concerns. As discussed before, the main reverse causality concern would imply the opposite relationship between objectives independence and political stability, so, if anything, we should expect this to bias our main empirical coefficient towards

zero.[18] Controlling for GDP growth, inflation, and government surplus as a percent of GDP controls should also alleviate some omitted variable concerns. However, we acknowledge that we cannot fully rule out alternative mechanisms.

We next exploit the introduction of the Euro in 1999, which unified monetary policy across many European countries, leading to convergence in central bank independence and providing a plausibly more exogenous source of variation in central bank independence. While a supranational central bank does not directly map into our model, the simplest way to think about the introduction of the Euro is as all involved countries moving to having a central bank with a very large inflation weight, $\tilde{\theta}$. Taking the limit in our model of $\tilde{\theta} \to \infty$ yields the same reelection threshold as under exogenous monetary policy. In practice, the ECB is likely to account for unemployment and output in its considerations of how strongly to respond to inflation. However, because its mandate is Euro area inflation, the ability to respond to country-specific shocks is reduced, and the effective inflation weight from each country's point of view is plausibly very high.

Because countries started from different starting points that were largely exogenous, we predict that a larger increase in objectives independence should be associated with a larger increase in political stability. Conversely, we would expect that reelection probabilities decreased more in countries with larger increases in appointment independence. Our empirical CBI measures for the Euro sample are constant between 1980 and 1998, when the Euro was introduced. We also drop all non-Euro countries from this analysis. The Euro empirical analysis hence picks up only on the changes in CBI around the introduction of the Euro,

[18]De Haan and Van't Hag (1995) provide a survey of potential determinants of CBI suggested in the literature. They find that neither employment-motivated inflationary bias (u^* in our model) nor governments' borrowing needs are correlated with CBI, so omitting them from the regressions should not affect the coefficients. While they argue that experience with high inflation at the beginning of the 20th century increases CBI, it is not obvious why such experience would independently affect political stability half a century later and hence bias our results.

with fixed effects capturing country-specific levels.[19] While the use of the Euro introduction helps mitigate concerns about the endogenous nature of CBI, we recognize that some omitted variable concerns remain. For example, structural reforms associated with the Euro may have affected political stability separately from the channel proposed in our model. We include GDP growth and government surplus to control for this to the best of our ability, but we acknowledge that all macroeconomic controls in this setup are necessarily imperfect.

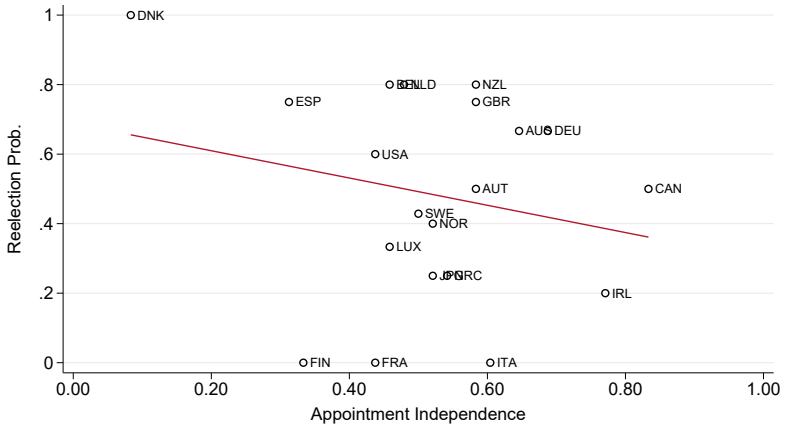
Table 2 shows that similar empirical relationships hold around the Euro introduction. Objectives independence enters positively and significantly, similar to Table 1, consistent with prediction (1). All regressions include a post-1999 dummy to control for possible joint time trends in the probability of reelection. The regressions with country fixed effects only exploit time variation within countries, thereby exploiting the change in CBI around the introduction of the Euro. Country fixed effects might, for example, reflect that some countries have persistently higher political turnover for reasons unrelated to central bank independence. The next set of columns shows that appointment independence enters negatively and quantitatively similarly to Table 1, consistent with prediction (2), though now this relationship is largely not statistically significant. The empirical relationships of reelection probabilities with instrument independence and fiscal independence are again weak and largely statistically insignificant, in line with the previous panel regressions, and are reported in Appendix Table A3.

Overall, evidence from a broad set of developed countries and around the Euro introduction is consistent with the model's prediction that a stronger central bank focus on price stability is associated with greater political stability. This is not true for other components

[19]The CBI measure by Crowe and Meade (2007) incorporates data up to and including 2003. However, the ECB's legal setup was locked in by the Maastricht Treaty of 1992. We can therefore reasonably treat the Crowe and Meade (2007) CBI measures for the Eurozone as valid for the entire post-1998 period.

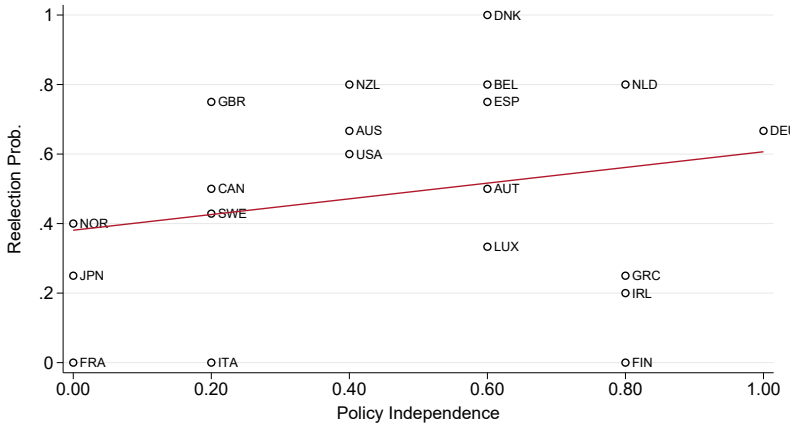
Figure 2: Political Stability and Central Bank Independence 1980-1998

Panel A: Appointment Independence



Central bank board appoints ← → Executive appoints

Panel B: Objectives Independence



Several conflicting objectives ← → Single price stability objective

Note: This figure plots the average probability of reelection on the y-axis against aspects of central bank independence on the x-axis. A fitted regression line is shown in red solid. Reelection probabilities are averages for the period 1980-1998. The developed country sample is defined as in Table 1.

Table 2: Political Stability and Central Bank Independence: Euro Introduction

	Dependent Variable: $Reelect_{i,t}$											
	Combined				Objectives				Appointment			
CBI	0.21	0.19	0.17	0.42	0.40**	0.35*	0.38**	0.31*	-0.34	-0.27	-0.45	-0.40
	(0.24)	(0.27)	(0.29)	(0.30)	(0.15)	(0.19)	(0.17)	(0.18)	(0.24)	(0.63)	(0.61)	(0.64)
GDP Growth			0.08***	0.07**			0.08***	0.07**			0.08***	0.06**
			(0.02)	(0.03)			(0.02)	(0.03)			(0.02)	(0.03)
Inflation				0.01				0.01				0.00
				(0.02)				(0.02)				(0.02)
Primary Surplus				0.02				0.02				0.02*
				(0.01)				(0.01)				(0.01)
Country FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Post-1999 FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	105	105	105	102	105	105	105	102	105	105	105	102
R^2	0.01	0.20	0.28	0.31	0.03	0.21	0.29	0.31	0.01	0.20	0.28	0.30

Note: This table reports regressions of the form $Reelect_{i,t} = b_0 + b_1 CBI_{i,t} + c_i + I_{t \geq 1999} + \gamma X_{i,t} + \varepsilon_{i,t}$ from 1980 until 2015, where the observation is at the country i election year t level. Here $I_{t \geq 1999}$ is a dummy taking a value of one if $t \geq 1999$ and zero otherwise and $X_{i,t}$ is a vector of control variables measured between the current election year and the previous election year. The sample consists of all original Euro countries plus Denmark 1980-2015. For 1999-2015, we use the updated CBI measures by Crowe and Meade (2008). All other measures are as in Table 1. Standard errors clustered by year in parentheses. * p <0.10, ** p <0.05, *** p <0.01.

of central bank independence. In particular, we find some suggestive evidence that appointment independence is even negatively related to political stability, consistent with our model. These findings are in line with our model, where a hawkish central bank increases the reelection probability for the political incumbent, and incumbents prefer hawkish central bankers.

4.1 Evidence on the Nature of Economic Shocks

Our model predicts that when politicians' competence affects economic outcomes via a supply shock, hawkish central bankers increase incumbents' reelection chances, and hence the latter favor extremely hawkish central bankers. As argued before, in a model without additional frictions, if politicians' competence enters only via demand side shocks, central bank hawkishness would not affect the reelection probabilities, nor would politicians necessarily prefer extremely hawkish central bankers.[20] This implies that our empirical regularities should be less pronounced in periods when voters did not expect supply-side shocks.

Appendix Table A4 provides evidence for the relevance of supply shocks in generating a meaningful interaction with central bank hawkishness. There, we show that the relationships between political stability with objectives independence and appointment independence are strongest after 1979, the time of the second oil price shock, and significantly weaker before then. This is consistent with our model, if after 1979, voters worldwide were aware of the ongoing supply shock volatility and voted accordingly. When supply shocks are volatile, one could imagine that politician competence acts more similar to a supply shock, either because some politicians are better at negotiating with OPEC and navigating geopolitical tensions,

[20]For example, a broader objective including financial and interest rate stability (as in Stein and Sunderam (2018)) could imply a desire to smooth interest rates more over time, providing a motive to allow for longer time horizons in bringing inflation back to target.

or because they have different domestic economic responses to supply frictions. As the dominance of supply shocks again declined during the 2000s and 2010s, such considerations likely declined in importance, providing a potential explanation why there was increased pressure on central banks to adopt objectives for the real economy (Borio and Chavaz, 2025).

5 Extension: Hidden Inflationary Pressure

Our model predicts that office-motivated incumbents should select central bankers committed primarily to fighting inflation. This may explain the political survival of CBI and the tradition of selecting inflation-averse central bankers. Nevertheless, history is also full of examples of the executive pressuring the central bank to ease monetary policy. Such examples might at first appear to be in contrast to our model predictions.

We now present an extension of our model, where the incumbent government's incentive to appoint a hawkish central banker coexists with an incentive to pressure monetary policy to provide inflationary economic stimulus.[21] These two incentives coexist because the appointment of a central banker acts by shaping expectations for the next period, while inflationary pressure changes the voters' inference problem in the current period. Hence, our main model insights are consistent with repeated attempts by politicians to influence monetary policy in a more dovish direction, while also appointing hawkish central bankers.

The model extension relies on two additional assumptions. First, following Lohmann (1998), we now assume that inflation is not observed prior to the election. Second, nesting

[21] See, for example, the following episode recalled by Paul Volcker: "President Reagan didn't say anything. Baker said, "The President wants to give you an order," which startled me. [Laughter] He said the President didn't want interest rates to go up before the election, which left me absolutely speechless, because at that time I had no thoughts of tightening." (*Federal Reserve Board Oral History Project* (2008)).

the canonical political business cycle incentive (Nordhaus, 1975), we assume that after the central bank has chosen its action but before the election, the politician is able to influence inflation. We interpret this assumption as capturing incumbents' ability to covertly exert "political pressure" on the central bank, like in Drazen (2001).

Formally, we assume that the incumbent can change inflation by $b_1 \in \left[\underline{b}, \bar{b}\right]$ after the central bank has made its decision. That is, if π_t^* denotes inflation chosen by the central banker, the resulting inflation is

$$\pi_t = \pi_t^* + b_t. \tag{6}$$

The resulting inflation π_t then enters the Philips curve (3). We further assume that b_t is not observed by the voters, and that when choosing π_t^*, the central banker anticipates the government's choice of b_t.

Proposition 4 describes the equilibrium outcome.

Proposition 4 ***(Political Pressure):***

1. *An office-motivated incumbent optimally sets inflation as high as possible, i.e.,* $b_1 = \bar{b}$.
2. *Voters perfectly learn the incumbent's type.*
3. *Equilibrium inflation and unemployment are the same as in the previous model.*
4. *Voters' threshold to re-elect the incumbent is the same as in the previous model.*

To understand 1., note that voters use observed unemployment to infer the incumbent's quality. If the government raises inflation unexpectedly, equation (3) implies that unemployment goes down. For any given voters' inflation expectations, this decrease in unemployment is attributed to higher government competence g_I. So an office-motivated incumbent has an incentive to generate unexpected inflation.

However, in equilibrium, voters understand that the incumbent engages in this action, and correctly invert the relationship between unemployment and the incumbent's quality, thereby leaving the reelection threshold unchanged compared to our baseline model. The independent central bank, rationally anticipating the politician's inflation action, chooses a more anti-inflationary policy, so equilibrium inflation is also unchanged from before.[22]

The politician engages in maximal political pressure to raise inflation, but the political and macroeconomic equilibria are unchanged. It follows that the incumbent's incentive to appoint a conservative central banker is also unchanged.

6 Economic Outcomes in the Model

In this section, we characterize the economic implications of our model. Since the direct economic consequences of an inflation-averse central banker are well known, we focus on the new economic effects from electoral selection, i.e., which incumbent gets reelected. Since period 1 is unaffected by elections, we isolate the elections channel by comparing economic outcomes in period 2 relative to period 1. We first characterize the average effect of elections on inflation and unemployment (Proposition 5) and then how the appointment of an inflation-averse central banker affects this effect (Proposition 6).

Proposition 5 ***(Economic Outcomes due to Political Selection)***

1. *On average, inflation and unemployment are lower in the second period:*
   $\mathbb{E}(\pi_2 - \pi_1) < 0$ *and* $\mathbb{E}(u_2 - u_1) < 0$.

[22]The equilibrium with a hidden inflation action is a pure "signal jamming" equilibrium similar to Stein (1989).

2. *Conditional on the incumbent being re-elected,* $\pi_2 - \pi_1 > 0$ *and* $u_2 - u_1 > 0$ *if* $g_I < 0$, *and* $\pi_2 - \pi_1 < 0$ *and* $u_2 - u_1 < 0$ *if* $g_I > 0$.

Proposition 5.1 states that on average, political selection is beneficial, lowering period 2 unemployment and inflation relative to period 1. Voters vote the incumbent out of office if her quality is too low, thereby benefiting both inflation and employment.

Proposition 5.2, however, captures an interesting heterogeneity when we restrict attention to the performance of re-elected incumbents. When the incumbent is re-elected, her quality remains unchanged. However, because voters learn about the incumbent's quality, monetary policy is less able to mitigate the effects of the government's competence in period 2. As a result, above-average governments (i.e. $g_I > 0$) perform better and below-average governments (i.e. $g_I < 0$) perform worse in their second terms. To our knowledge, this is a novel prediction. Instead of reversion to the mean in the second period, the model predicts that the incumbent's performance is more extreme in the second term than in the first.

We now characterize how an inflation-averse central banker affects the results of Proposition 5.

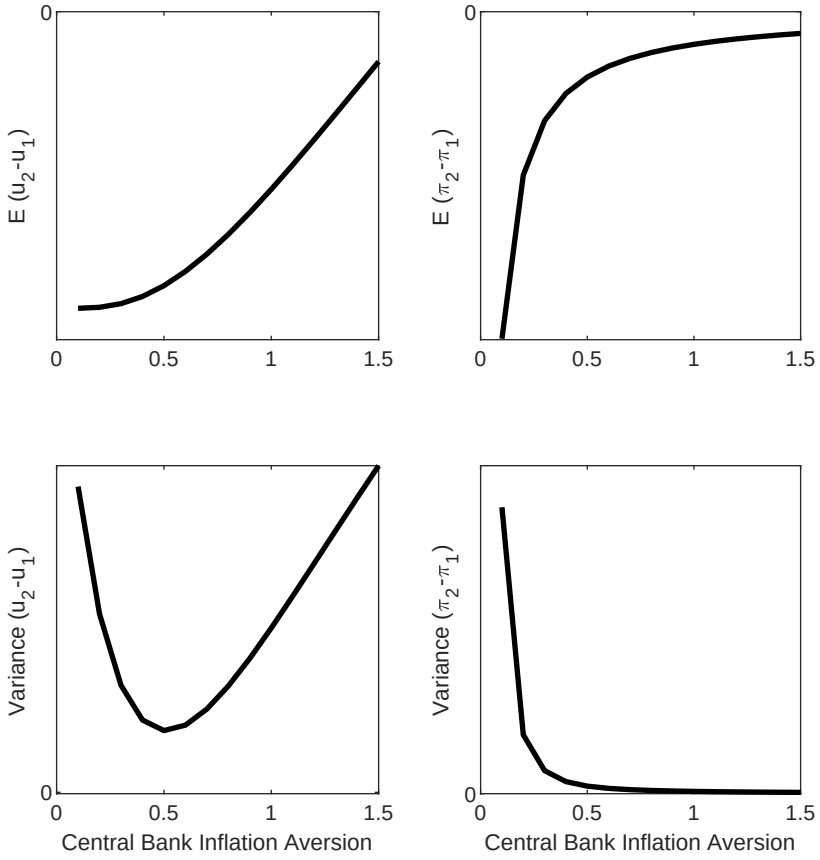
Proposition 6 ***(Economic Outcomes and Central Bank)***

1. *An inflation-averse central bank lowers average inflation, but raises average unemployment:* $\frac{\mathbb{E}(u_2+u_1)}{d\tilde{\theta}} > 0$, *and if* $\max_g f(g)$ *is not too large then* $\frac{\mathbb{E}(\pi_2+\pi_1)}{d\tilde{\theta}} < 0$;

2. *An inflation-averse central bank raises the average second-period inflation and unemployment relative to period* 1: $\frac{d\mathbb{E}(\pi_2-\pi_1)}{d\tilde{\theta}} > 0$ *and* $\frac{d\mathbb{E}(u_2-u_1)}{d\tilde{\theta}} > 0$.

3. *Inflation and unemployment variability decline with the central bank's inflation weight* $\tilde{\theta}$ *when* $\tilde{\theta}$ *is small:* $\frac{d\mathbb{V}(\pi_2-\pi_1)}{d\tilde{\theta}} < 0$ *and* $\frac{d\mathbb{V}(u_2-u_1)}{d\tilde{\theta}} < 0$.

Figure 3: **Economic outcomes against central bank inflation aversion**



This figure shows the difference between period 2 and period 1 unemployment (left panels) and inflation (right panels) as a function of the central bank inflation weight $\tilde{\theta}$ for $\sigma_g = 1$ and $u^* = -2$. The upper panels show the average (Proposition 6.2), and the lower panels show the variance (Proposition.6.3). To generate those plots, we assume that F is a normal distribution, even though technically this distribution does not satisfy our assumptions that g has an upper bound. However, for the chosen parameter values, the probability that $g > -u^*$ is very small.

Proposition 6.1 shows that, in contrast to standard models of time-inconsistency, appointing an inflation-averse central banker is costly for average unemployment, as an inflation-averse central bank increases the reelection chances of low-competence incumbents. Similarly to the standard model without political selection, having a more inflation-averse central banker lowers average inflation.[23]

Proposition 6.2 shows that an inflation-averse central bank mitigates the beneficial effects of political selection on unemployment and inflation identified in Proposition 5. The upper panels of Figure 3 visualize the effect of the elections channel on average unemployment and inflation against central bank inflation-aversion. The top panels show that increasing the central bank's inflation weight raises unemployment and inflation in period 2 through the political selection effect. The bottom panels show that the variability of the period 2 minus period 1 unemployment and inflation initially fall with the central bank's inflation weight, i.e., near $\tilde{\theta} = 0$. Furthermore, in this example, the volatility of the change in inflation declines with the central bank inflation weight globally, whereas the variance of the unemployment change reaches a minimum and eventually increases with the central bank inflation weight. The intuition is that when the central bank is singularly focused on inflation, this can raise unemployment volatility, dominating the political selection effect.

Proposition 6.3 shows that, similarly to Alesina and Gatti (1995), our non-partisan model with political selection can rationalize the ambiguous empirical relationship between central bank independence and real economic volatility (Alesina and Summers, 1993; Grilli et al., 1991; Bhalla et al., 2023). This is different from the standard model without political se-

[23]The decrease in average inflation is driven by the standard forces present in the time-inconsistency literature, though the proof shows that this standard effect is weakened by the fact that a more inflation-averse central bank leads to the election of lower-competence, and hence more inflationary, incumbents. The condition on $\max_g f(g)$ needed for this result assures that a small change in the central bank's inflation aversion does not lead to a disproportionately large change in the mass of incumbents that get reelected.

lection, which implies that an inflation-averse central bank has a real economic cost by increasing real economic volatility. Proposition 6.3 states that this can be explained by political selection. A more inflation-averse central bank increases the probability that the incumbent is re-elected, thereby reducing unemployment volatility. The lower left panel of Figure 3 illustrates the u-shaped relationship between central bank inflation aversion and the volatility of unemployment in our model for a particular distribution F.

7 Conclusion

The interaction of the central bank and politics is clearly a first-order question in the face of high and increasing political uncertainty, and the post-pandemic experience of high inflation. We present a fully rational framework of this interaction, building on the classic framework of Barro and Gordon (1983) and Rogoff (1985) on the monetary policy side, and a simple model of non-partisan political turnover (Ferejohn, 1986) on the political economy side.

Our framework shows that governments may have socially excessive political incentives to institute an inflation-targeting central bank. At the same time, they have an incentive to pressure the central bank to loosen monetary policy to lower unemployment ahead of elections. The model generates unique predictions about the political implications of a politician's ability to appoint the central banker, and the nature of the central bank's objective, which we verify in the data.

Given that our model presents a simple benchmark model combining a standard time-inconsistency model of monetary policy with non-partisan political turnover, this opens the door to several new avenues of research. First, we assumed an apolitical central bank, which minimizes its loss function period by period without taking into account the implications of

its monetary policy for elections. This raises the question under what conditions the central bank may have an incentive to affect electoral outcomes.

Another potential avenue of research could shed light on political incentives when inflation is potentially misperceived or even subject to systematic biases, as documented by Malmendier and Nagel (2016). One could imagine that having an electorate that is more attuned to inflation, maybe due to its own personal experiences, would increase the government's incentive to build inflation credibility and strengthen our main channel. On the other hand, erosion of institutions and norms might increase the government's incentive to pressure the central bank, increasing inflation bias without mitigating the negative effects of political selection.

Finally, it could be fruitful to investigate moral hazard and partisan incentives in future research. Having delegated inflation control to a hawkish central bank, governments might face weaker incentives to implement other valuable reforms to raise productivity and lower inflation. While not investigated in this study, the regularly scheduled central bank framework reviews may provide additional points of interaction between the political process and central banks. While our model considers a non-partisan model of political turnover, the significant distributional consequences of inflation make it natural to ask how governments with different preferences would optimally choose to appoint a central banker and shape monetary policy institutions more broadly.

References

Acemoglu, D., and Verdier, T. (2000), "The choice between market failures and corruption," *American Economic Review*, 90(1), 194–211.

Afrouzi, H., Halac, M., Rogoff, K., and Yared, P. (2024), "Changing central bank pressures and inflation," *Brookings Papers on Economic Activity*, 2024(1), 205–241.

Alesina, A. (1987), "Macroeconomic Policy in a Two-Party System as a Repeated Game," *Quarterly Journal of Economics*, 102(3), 651–678.

Alesina, A., and Gatti, R. (1995), "Independent central banks: Low inflation at no cost?," *American Economic Review: Papers and Proceedings*, 85(2), 196–200.

Alesina, A., and Rosenthal, H. (1996), "A theory of divided government," *Econometrica*, 64(6), 1311–1341.

Alesina, A., and Rosenthal, H. (2000), "Polarized platforms and moderate policies with checks and balances," *Journal of Public Economics*, 75(1), 1–20.

Alesina, A., and Roubini, N. (1992), "Political Cycles in OECD Economies," *Review of Economic Studies*, 59(4), 663–688.

Alesina, A., and Summers, L. H. (1993), "Central Bank Independence and Macroeconomic Performance: Some Comparative Evidence," *Journal of Money, Credit and Banking*, 25(2), 151–162.

Baerg, N. R., Gray, J., and Willisch, J. (2021), "Opportunistic, not optimal delegation: The Political Origins of Central Bank Independence," *Comparative Political Studies*, 54(6), 956–988.

Barro, R. J., and Gordon, D. B. (1983), "Rules, Discretion and Reputation in a Model of Monetary Policy," *Journal of Monetary Economics*, 12(1), 101–121.

Bhalla, S., Bhasin, K., and Loungani, M. P. (2023), *Macro effects of formal adoption of inflation targeting* International Monetary Fund, 2023/007. DOI: 10.5089/9798400229169.001.

Bianchi, F., Gómez-Cram, R., Kind, T., and Kung, H. (2023), "Threats to central bank independence: High-frequency identification with Twitter," *Journal of Monetary Economics*, 135, 37–54.

Binder, C. C. (2021), "Political Pressure on Central Banks," *Journal of Money, Credit and Banking*, 53(4), 715–744.

Binder, C. C. (2024), *Shock Values: Prices and Inflation in American Democracy*, Chicago and London: University of Chicago Press.

Bocola, L., Chaumont, G., Dovis, A., and Kirpalani, R. (2025), "Accounting for credibility: Monetary-fiscal interactions and the credibility of the central bank mandate," *Stanford, Rochester, University, University of Pennsylvania, and Wisconsin*, .

Borio, C., and Chavaz, M. (2025), "Moving targets? Inflation targeting frameworks, 1990–2025," *BIS Quarterly Review March 2025*, pp. 31–52.

Brender, A., and Drazen, A. (2005), "Political budget cycles in new versus established democracies," *Journal of Monetary Economics*, 52(7), 1271–1295.

Brender, A., and Drazen, A. (2008), "How do budget deficits and economic growth affect reelection prospects? Evidence from a large panel of countries," *American Economic Review*, 98(5), 2203–20.

Calvo, G. A. (1978), "On the Time Consistency of Optimal Policy in a Monetary Economy," *Econometrica*, 46(6), 1411–1428.

Campbell, J. Y., Pflueger, C., and Viceira, L. M. (2020), "Macroeconomic drivers of bond and equity risks," *Journal of Political Economy*, 128(8), 3148–3185.

Clarida, R., Galí, J., and Gertler, M. (1999), "The Science of Monetary Policy: A New Keynesian Perspective," *Journal of Economic Literature*, 37, 1661–1707.

Crowe, C., and Meade, E. E. (2007), "The Evolution of Central Bank Governance around the World," *Journal of Economic Perspectives*, 21(4), 69–90.

Crowe, C., and Meade, E. E. (2008), "Central bank independence and transparency: Evolution and effectiveness," *European Journal of Political Economy*, 24(4), 763–777.

Cukierman, A. (1994), "Commitment through Delegation, Political Influence and Central Bank Independence," in *A Framework for Monetary Stability: Papers and Proceedings of an International Conference organised by De Nederlandsche Bank and the CentER for Economic Research at Amsterdam*, eds. J. O. De Beaufort Wijnholds, S. C. W. Eijffinger, and L. H. Hoogduin, Dordrecht: Springer Netherlands, pp. 55–74.

Cukierman, A., and Meltzer, A. H. (1986), "A positive theory of discretionary policy, the cost of democratic government and the benefits of a constitution," *Economic Inquiry*, 24(3), 367–388.

Cukierman, A., Web, S. B., and Neyapti, B. (1992), "Measuring the independence of central banks and its effect on policy outcomes," *The World Bank Economic Review*, 6(3), 353–398.

De Haan, J., and Van't Hag, G. J. (1995), "Variation in central bank independence across countries: some provisional empirical evidence," *Public Choice*, 85(3), 335–351.

Dovis, A., and Kirpalani, R. (2021), "Rules without Commitment: Reputation and Incentives," *Review of Economic Studies*, 88(6), 2833–2856.

Drazen, A. (2000), *Political Economy in Macroeconomics*, Princeton, NJ: Princeton University Press.

Drazen, A. (2001), "Laying low during elections: Political pressure and monetary accommodation," *Manuscript, University of Maryland*, .

Drechsel, T. (2024), "Estimating the Effects of Political Pressure on the Fed: A Narrative Approach with New Data," *National Bureau of Economic Research Working Paper wp 32461*, .

Dreher, A., Sturm, J.-E., and De Haan, J. (2010), "When is a central bank governor replaced? Evidence based on a new data set," *Journal of Macroeconomics*, 32(3), 766–781.

Farvaque, E. (2002), "Political determinants of central bank independence," *Economics Letters*, 77(1), 131–135.

Federal Reserve Board Oral History Project (2008)*Board of Governors of the Federal Reserve System*, . Accessed: 2025-07-31.

Federle, J.-J., Mohr, C., and Schularick, M. (2024), "Inflation Surprises and Election Outcomes," *Working Paper, Kiel Institute for the World Economy (IfW Kiel)*, .

Ferejohn, J. (1986), "Incumbent performance and electoral control," *Public choice*, pp. 5–25.

Fiorina, M. P., and Noll, R. G. (1978), "Voters, legislators and bureaucracy: Institutional design in the public sector," *American Economic Review*, 68(2), 256–260.

Grilli, V., Masciandaro, D., and Tabellini, G. (1991), "Political and Monetary Institutions and Public Financial Policies in the Industrial Countries," *Economic Policy*, 6(13), 341–392.

Halac, M., and Yared, P. (2020), "Inflation Targeting under Political Pressure," in *Independence, Credibility, and Communication of Central Banking*, eds. E. Pasten, and R. Reis, Santiago: Central Bank of Chile:.

Hibbs, D. A. (1977), "Political Parties and Macroeconomic Policy," in *The Political Economy of Inflation*, eds. F. Hirsch, and J. H. Goldthorpe Harvard University Press, pp. pp. 213–242.

Kydland, F. E., and Prescott, E. C. (1977), "Rules Rather than Discretion: The Inconsistency of Optimal Plans," *Journal of Political Economy*, pp. 473–491.

Lohmann, S. (1998), "Rationalizing the political business cycle: A workhorse model," *Economics & Politics*, 10(1), 1–17.

Lucas Jr, R. E., and Stokey, N. L. (1983), "Optimal Fiscal and Monetary Policy in an Economy without Capital," *Journal of Monetary Economics*, 12(1), 55–93.

Lustig, H., Sleet, C., and Yeltekin, Ş. (2008), "Fiscal hedging with nominal assets," *Journal of Monetary Economics*, 55(4), 710–727.

Malmendier, U., and Nagel, S. (2016), "Learning from Inflation Experiences," *The Quarterly Journal of Economics*, 131(1), 53–87.

Nakamura, E., and Steinsson, J. (2018), "High-Frequency Identification of Monetary Non-Neutrality: The Information Effect," *Quarterly Journal of Economics*, 133(3), 1283–1330.

Nordhaus, W. D. (1975), "The Political Business Cycle," *Review of Economic Studies*, 42(2), 169–190.

Persson, T., Roland, G., and Tabellini, G. (2000), "Comparative politics and public finance," *Journal of Political Economy*, 108(6), 1121–1161.

Pflueger, C. (2025), "Back to the 1980s or not? The drivers of inflation and real risks in Treasury bonds," *Journal of Financial Economics*, 167, 104027.

Rogoff, K. (1985), "The Optimal Degree of Commitment to an Intermediate Monetary Target," *Quarterly Journal of Economics*, pp. 1169–1189.

Rogoff, K. (1990), "Equilibrium Political Budget Cycles," *American Economic Review*, pp. 21–36.

Rogoff, K., and Sibert, A. (1988), "Elections and macroeconomic policy cycles," *Review of Economic Studies*, 55(1), 1–16.

Romer, C. D., and Romer, D. H. (2000), "Federal Reserve Information and the Behavior of Interest Rates," *American Economic Review*, 90(3), 429–457.

Schreger, J., Yared, P., and Zaratiegui, E. (2024), "Central bank credibility and fiscal responsibility," *American Economic Review: Insights*, 6(3), 377–394.

Shleifer, A., and Vishny, R. W. (1994), "Politicians and firms," *Quarterly Journal of Economics*, 109(4), 995–1025.

Stein, J. C. (1989), "Efficient capital markets, inefficient firms: A model of myopic corporate behavior," *Quarterly Journal of Economics*, 104(4), 655–669.

Stein, J. C., and Sunderam, A. (2018), "The Fed, the bond market, and gradualism in monetary policy," *Journal of Finance*, 73(3), 1015–1060.

Woodford, M. (2003), *Interest and Prices*, Princeton, NJ: Princeton University Press.

Online Appendix: A Model of Politics and the Central Bank

Wioletta Dziuda and Carolin Pflueger

A Model Proofs

Within-Period Equilibrium: The within-period problem of the central bank is completely standard. Plugging the Phillips curve into the central bank's objective function and minimizing it with respect to π_t delivers:

$$\pi_t = \frac{1}{1+\tilde{\theta}} \left(\pi_t^e - g_t - u^*\right). \tag{A.1}$$

Imposing that voters' expectations are rational in (A.1) gives

$$\pi_t^e = -\frac{1}{\tilde{\theta}} \left(\mathbb{E}\left(g_t \,|I_t\right) + u^*\right). \tag{A.2}$$

Using (A.2) in (A.1) we obtain

$$\pi_t - \pi_t^e = -\frac{1}{1+\tilde{\theta}} \left(g_t - \mathbb{E}\left(g_t \,|I_t\right)\right). \tag{A.3}$$

Substituting (A.3) into the Phillips Curve (3) delivers that in period t, equilibrium inflation and unemployment are given by

$$\pi_t = -\frac{1}{\tilde{\theta}} u^* - \frac{1}{\tilde{\theta}} \mathbb{E}\left(g_t \,|I_t\right) - \frac{1}{1+\tilde{\theta}} \left(g_t - \left(\mathbb{E}\left(g_t \,|I_t\right)\right)\right) \tag{A.4}$$

$$u_t = -\mathbb{E}\left(g_t \,|I_t\right) - \frac{\tilde{\theta}}{1+\tilde{\theta}} \left(g_t - \mathbb{E}\left(g_t \,|I_t\right)\right), \tag{A.5}$$

where I_t denotes information that voters have at the beginning of period t once the election outcome is known. So $I_1 = \emptyset$ and $I_2 = \{u_1\}$.

In $t = 1$, voters have only their prior about the first period government's quality, so

$\mathbb{E}(g_1 | I_1) = 0$, and hence equations (A.4) and (A.5) become

$$\pi_1 = -\frac{1}{\tilde{\theta}} u^* - \frac{1}{1+\tilde{\theta}} g_I, \tag{A.6}$$

$$u_1 = -\frac{\tilde{\theta}}{1+\tilde{\theta}} g_I. \tag{A.7}$$

Period 2 inflation and unemployment are different depending on whether the incumbent or the challenger wins the election. Note that if the incumbent is re-elected, voters can use (A.7) to infer its quality from u_1, so $\mathbb{E}(g_2 | I_2) = g_I$. Hence conditional on the incumbent being re-elected, period 2 inflation and unemployment are given by

$$\pi_2 = -\frac{1}{\tilde{\theta}} u^* - \frac{1}{\tilde{\theta}} g_I, \tag{A.8}$$

$$u_2 = -g_I. \tag{A.9}$$

By contrast, if the challenger is elected, $\mathbb{E}(g_2 | I_2) = \mathbb{E}(g_C) = 0$, so period 2 inflation and unemployment are given by

$$\pi_2 = -\frac{1}{\tilde{\theta}} u^* - \frac{1}{1+\tilde{\theta}} g_C, \tag{A.10}$$

$$u_2 = -\frac{\tilde{\theta}}{1+\tilde{\theta}} g_C. \tag{A.11}$$

Proof of Proposition 1. Taking the expectation of (2), we obtain

$$\mathbb{E}(\mathcal{L}_t | I_t) = \frac{1}{2}\left(\mathbb{V}(u_t | I_t) + (\mathbb{E}(u_t | I_t) - u^*)^2\right) + \frac{\theta}{2}\left(\mathbb{V}(\pi_t | I_t) + (\mathbb{E}(\pi_t | I_t))^2\right),$$

and using (A.7) and (A.6) in the above, we obtain

$$\begin{aligned}
\mathbb{E}(\mathcal{L}_t | I_t) &= \frac{1}{2}\left(\left(\frac{\tilde{\theta}}{1+\tilde{\theta}}\right)^2 \mathbb{V}(g_t | I_t) + (\mathbb{E}(g_t | I_t) + u^*)^2\right) \\
&+ \frac{\theta}{2}\left(\left(\frac{1}{1+\tilde{\theta}}\right)^2 \mathbb{V}(g_t | I_t) + \left(\frac{1}{\tilde{\theta}}\right)^2 (\mathbb{E}(g_t | I_t) + u^*)^2\right) = \\
&= \frac{\tilde{\theta}^2 + \theta}{2\left(1+\tilde{\theta}\right)^2} \mathbb{V}(g_t | I_t) + \frac{\tilde{\theta}^2 + \theta}{2\tilde{\theta}^2} (\mathbb{E}(g_t | I_t) + u^*)^2,
\end{aligned}$$

which shows that

$$\mathbb{E}\left(\mathcal{L}_t \,|I_t\right) = \frac{\tilde{\theta}^2+\theta}{2\left(1+\tilde{\theta}\right)^2}\mathbb{V}\left(g_t \,|I_t\right) + \frac{\tilde{\theta}^2+\theta}{2\tilde{\theta}^2}\left(\mathbb{E}\left(g_t \,|I_t\right)+u^*\right)^2. \tag{A.12}$$

For $t=2$, $\mathbb{V}\left(g_2 \,|I_2\right)=0$ and $\mathbb{E}\left(g_2 \,|I_2\right)=g_I$ if the incumbent is re-elected and $\mathbb{V}\left(g_2 \,|I_2\right)=\sigma_g^2$ and $\mathbb{E}\left(g_2 \,|I_2\right)=0$ if the challenger wins. Comparing voters' expected loss if the incumbent is re-elected and if the challenger wins, we obtain that voters reelect the incumbent if and only if:

$$\left(g_I+u^*\right)^2-\left(u^*\right)^2 \leq \left(\frac{\tilde{\theta}}{1+\tilde{\theta}}\right)^2\sigma_g^2. \tag{A.13}$$

Since $g_I < -u^*$ by assumption, this implies that the incumbent is re-elected iff $g_I > \underline{g}$, where

$$\underline{g} = -u^* - \sqrt{(u^*)^2+\left(\frac{\tilde{\theta}}{1+\tilde{\theta}}\right)^2\sigma_g^2} < 0. \tag{A.14}$$

It is immediate that $\frac{\partial \underline{g}}{\partial \sigma_g^2} < 0$ and $\frac{\partial \underline{g}}{\partial u^*} < 0$. As $u^* \to -\infty$, voters' loss function becomes more steeply sloped in the level of unemployment, so more negative u^* can be interpreted as a decline in voter risk aversion. This leads to Proposition 1. ■

Proof of Proposition 2. Differentiating (A.14) with respect to $\tilde{\theta}$, one obtains

$$\frac{d\underline{g}}{d\tilde{\theta}} = -\frac{\frac{\tilde{\theta}}{\left(1+\tilde{\theta}\right)^3}\sigma_g^2}{\sqrt{(u^*)^2+\left(\frac{\tilde{\theta}}{1+\tilde{\theta}}\right)^2\sigma_g^2}} < 0. \tag{A.15}$$

■

Proof of Proposition 3. We start with the Rogoff case, where shocks across periods are assumed to be iid. From equation (A.12), the expected period 1 loss equals

$$\mathbb{E}\left(\mathcal{L}_1\right) = \frac{1}{2}\frac{\tilde{\theta}^2+\theta}{\left(1+\tilde{\theta}\right)^2}\sigma_g^2 + \frac{1}{2}\frac{\tilde{\theta}^2+\theta}{\tilde{\theta}^2}(u^*)^2. \tag{A.16}$$

The optimal $\tilde{\theta}_{\text{iid}}$ is given by the first-order condition for $\mathbb{E}\left(\mathcal{L}_1\right)$ with respect to $\tilde{\theta}$, where

$$\frac{d\mathbb{E}\left(\mathcal{L}_1\right)}{d\tilde{\theta}} = \left(\frac{\tilde{\theta}-\theta}{(1+\tilde{\theta})^3}\sigma_g^2 - \frac{\theta}{\tilde{\theta}^3}(u^*)^2\right). \tag{A.17}$$

When $\tilde{\theta} = \theta$, this derivative is clearly negative. As $\tilde{\theta} \to \infty$, the positive terms in (A.17) dominate. Together, this shows that $\theta < \tilde{\theta}_{\text{iid}}$.

Now we turn to the case with political turnover. The first period loss function as well as the loss function conditional on the challenger being elected is the same as in (A.16). Conditional on the incumbent being re-elected, (A.12) gives

$$\mathbb{E}\left(\mathcal{L}_2 \left| \text{incumbent} \right.\right) = \frac{1}{2}\frac{\tilde{\theta}^2 + \theta}{\tilde{\theta}^2}\left(g_I + u^*\right)^2.$$

Hence

$$\mathbb{E}\left(\mathcal{L}_1 + \mathcal{L}_2\right) = \left(1 + F\left(\underline{g}\right)\right)\left(\frac{1}{2}\frac{\tilde{\theta}^2 + \theta}{\left(1+\tilde{\theta}\right)^2}\sigma_g^2 + \frac{1}{2}\frac{\tilde{\theta}^2 + \theta}{\tilde{\theta}^2}(u^*)^2\right) + \int_{\underline{g}}^{\infty}\frac{1}{2}\frac{\tilde{\theta}^2 + \theta}{\tilde{\theta}^2}\left(g_I + u^*\right)^2 f(g_I)dg_I.$$

Using the Leibniz rule to differentiate integrals, we obtain

$$\begin{aligned}\frac{d\mathbb{E}\left(\mathcal{L}_1 + \mathcal{L}_2\right)}{d\tilde{\theta}} &= \left(1 + F\left(\underline{g}\right)\right)\left(\frac{\tilde{\theta} - \theta}{(1+\tilde{\theta})^3}\sigma_g^2 - \frac{\theta}{\tilde{\theta}^3}(u^*)^2\right) + \left(\frac{1}{2}\frac{\tilde{\theta}^2 + \theta}{\left(1+\tilde{\theta}\right)^2}\sigma_g^2 + \frac{1}{2}\frac{\tilde{\theta}^2 + \theta}{\tilde{\theta}^2}(u^*)^2\right) f\left(\underline{g}\right)\frac{d\underline{g}}{d\tilde{\theta}} \\ &\quad -\frac{1}{2}\frac{\tilde{\theta}^2 + \theta}{\tilde{\theta}^2}\left(\underline{g} + u^*\right)^2 f(\underline{g})\frac{d\underline{g}}{d\tilde{\theta}} - \int_{\underline{g}}^{\infty}\frac{\theta}{\tilde{\theta}^3}\left(g_I + u^*\right)^2 f(g_I)dg_I.\end{aligned}$$

Using the fact that at $g_I = \underline{g}$, the expected loss from the challenger and the incumbent is the same, that is, $\frac{\tilde{\theta}^2+\theta}{\left(1+\tilde{\theta}\right)^2}\sigma_g^2 + \frac{\tilde{\theta}^2+\theta}{\tilde{\theta}^2}(u^*)^2 = \frac{\tilde{\theta}^2+\theta}{\tilde{\theta}^2}\left(\underline{g} + u^*\right)^2$, we obtain

$$\frac{d\mathbb{E}\left(\mathcal{L}_1 + \mathcal{L}_2\right)}{d\tilde{\theta}} = \left(1 + F\left(\underline{g}\right)\right)\left(\frac{\tilde{\theta} - \theta}{(1+\tilde{\theta})^3}\sigma_g^2 - \frac{\theta}{\tilde{\theta}^3}(u^*)^2\right) - \int_{\underline{g}}^{\infty}\frac{\theta}{\tilde{\theta}^3}\left(g_I + u^*\right)^2 f(g_I)dg_I. \quad \text{(A.18)}$$

For $\tilde{\theta}$ close to 0 this entire expression is clearly negative, and by definition, the first term equals 0 at $\tilde{\theta} = \tilde{\theta}_{\text{iid}}$. As $\tilde{\theta} \to \infty$ the positive terms dominate in (A.18), giving $\tilde{\theta}_{\text{iid}} < \tilde{\theta}_{\text{planner}} < \infty$. ■

Proof of Proposition 4. Inflation and unemployment are now described by

$$\begin{aligned}\pi_t &= \pi_t^* + b_t, &\text{(A.19)}\\ u_t &= -(\pi_t - \pi_t^e) - g_t, &\text{(A.20)}\end{aligned}$$

where π_t^* is the inflation level targeted by the central bank and the action b_t is taken after

the central bank has chosen π_t^*. The central bank's objective function is still given by

$$\tilde{\mathcal{L}}_t = \frac{(u_t - u^*)^2}{2} + \tilde{\theta}\frac{\pi_t^2}{2}. \tag{A.21}$$

Voters make their choice between the incumbent and the challenger after observing u_1 but not π_1.

Period 1 Equilibrium: Taking the expectations of b^e and π^e as given, the central bank chooses π_t^* to minimize

$$\frac{(-(\pi_t^* + b_t^e - \pi_t^e) - g_t - u^*)^2}{2} + \tilde{\theta}\frac{(\pi_t^* + b_t^e)^2}{2} \tag{A.22}$$

Taking the first-order condition with respect to $\pi^* + b_t^e$ and setting the expected value to zero implies that the central bank chooses

$$\pi_t^* + b_t^e = \frac{1}{1+\tilde{\theta}}(\pi_t^e - g_t - u^*) \tag{A.23}$$

and rational inflation expectations satisfy

$$\pi_t^e = -\frac{1}{\tilde{\theta}}(E(g_t|I_t) + u^*). \tag{A.24}$$

Realized inflation then satisfies

$$\pi_t - \pi_t^e = -\frac{1}{1+\tilde{\theta}}(g_t - E(g_t|I_t)) + (b_t - b_t^e), \tag{A.25}$$

and period 1 unemployment equals

$$u_1 = -\frac{\tilde{\theta}}{1+\tilde{\theta}}g_I - (b_t - b_t^e). \tag{A.26}$$

Voters' perceived quality of the incumbent after observing period 1 unemployment is

$$E(g_I|u_1) = -\frac{1+\tilde{\theta}}{\tilde{\theta}}u_1 \tag{A.27}$$

For an incumbent seeking to maximize the probability of being re-elected it is hence never optimal to set $b_1 < \bar{b}$, as this would lower the perceived average quality of the incumbent without affecting the variance, thereby unambiguously lowering the chance of being re-elected. ■

Proof of Proposition 5.

Using (A.6), (A.7), (A.8), (A.9), (A.10), and (A.11) we obtain second-period inflation and unemployment as functions of g_I and g_C

$$\pi_2(g_I, g_C) = \begin{cases} -\frac{1}{\tilde{\theta}}u^* - \frac{1}{\tilde{\theta}}g_I \text{ if } g_I \geq \underline{g} \\ -\frac{1}{\tilde{\theta}}u^* - \frac{1}{1+\tilde{\theta}}g_C \text{ if } g_I < \underline{g} \end{cases}$$

$$u_2(g_I, g_C) = \begin{cases} -g_I \text{ if } g_I \geq \underline{g} \\ -\frac{\tilde{\theta}}{1+\tilde{\theta}}g_C \text{ if } g_I < \underline{g} \end{cases}$$

Subtracting period 1 inflation and unemployment shows that ex ante, before the realization of g_I and g_C, we have

$$\begin{aligned} \mathbb{E}[\pi_2 - \pi_1] &= \int\int_{g_I \geq \underline{g}} \left[-\frac{1}{\tilde{\theta}}g_I + \frac{1}{1+\tilde{\theta}}g_I\right] f(g_I)\, dg_I f(g_C)\, dg_C \\ &\quad + \int\int_{g_I < \underline{g}} \left[-\frac{1}{1+\tilde{\theta}}g_C + \frac{1}{1+\tilde{\theta}}g_I\right] f(g_I)\, dg_I f(g_C)\, dg_C \\ &= -\frac{1}{\tilde{\theta}}\int_{g_I \geq \underline{g}} g_I f(g_I)\, dg_I < 0. \end{aligned} \tag{A.28}$$

This last inequality follows because g_I is assumed to have mean zero, and we have already shown that $\underline{g} < 0$.

For the average change in unemployment between periods 2 and 1:

$$\begin{aligned} \mathbb{E}[u_2 - u_1] &= \int\int_{g_I \geq \underline{g}} \left(\frac{\tilde{\theta}}{1+\tilde{\theta}}g_I - g_I\right) f(g_I)\, dg_I f(g_C)\, dg_C \\ &\quad + \int\int_{g_I < \underline{g}} \left(\frac{\tilde{\theta}}{1+\tilde{\theta}}g_I - \frac{\tilde{\theta}}{1+\tilde{\theta}}g_C\right) f(g_I)\, dg_I f(g_C)\, dg_C \\ &= -\int_{g_I \geq \underline{g}} g_I f(g_I)\, dg_I < 0, \end{aligned} \tag{A.29}$$

which proves part a. Part b is straightforward and proved in the main text. ■

Proof of Proposition 6.

Differentiating (A.28) and (A.29), we obtain

$$\frac{d\mathbb{E}[\pi_2 - \pi_1]}{d\tilde{\theta}} = \frac{1}{\tilde{\theta}^2}\int_{g_I \geq \underline{g}} g_I f(g_I)\, dg_I + \frac{1}{\tilde{\theta}}\underline{g} f\left(\underline{g}\right)\frac{d\underline{g}}{d\tilde{\theta}} > 0,$$

$$\frac{d\mathbb{E}\left[u_2-u_1\right]}{d\tilde{\theta}}=\underline{g}f\left(\underline{g}\right)\frac{d\underline{g}}{d\tilde{\theta}}>0,$$

proving Proposition 6.2. To prove Proposition 6.1 note that

$$\mathbb{E}\left[u_1+u_2\right]=\mathbb{E}\left[2u_1+u_2-u_1\right]=\mathbb{E}\left[u_2-u_1\right],$$

and we have already shown that the last expression increases with $\tilde{\theta}$. Now use (A.6) and (A.7) and (A.28) to obtain that

$$\mathbb{E}\left[\pi_1+\pi_2\right]=\mathbb{E}\left[2\pi_1+\pi_2-\pi_1\right]=-\frac{2}{\tilde{\theta}}u^*+\mathbb{E}\left[\pi_2-\pi_1\right]=-\frac{2}{\tilde{\theta}}u^*-\frac{1}{\tilde{\theta}}\int_{g_I\geq\underline{g}}g_If\left(g_I\right)dg_I. \quad \text{(A.30)}$$

Using (A.30), we have

$$\frac{d\mathbb{E}\left[\pi_1+\pi_2\right]}{d\tilde{\theta}}=\frac{2}{\tilde{\theta}^2}u^*+\frac{1}{\tilde{\theta}^2}\int_{g_I\geq\underline{g}}g_If\left(g_I\right)dg_I+\frac{1}{\tilde{\theta}}\underline{g}f\left(\underline{g}\right)\frac{d\underline{g}}{d\tilde{\theta}}.$$

Since $g_I<-u^*$, we have $\frac{d\mathbb{E}[\pi_1+\pi_2]}{d\tilde{\theta}}<\frac{1}{\tilde{\theta}^2}u^*+\frac{1}{\tilde{\theta}}\underline{g}f\left(\underline{g}\right)\frac{d\underline{g}}{d\tilde{\theta}}$. From (A.15), we have

$$\frac{d\mathbb{E}\left[\pi_1+\pi_2\right]}{d\tilde{\theta}}<\frac{1}{\tilde{\theta}}\left(\frac{1}{\tilde{\theta}}u^*-\frac{\frac{\tilde{\theta}}{\left(1+\tilde{\theta}\right)^3}\sigma_g^2}{\sqrt{\left(u^*\right)^2+\left(\frac{\tilde{\theta}}{1+\tilde{\theta}}\right)^2\sigma_g^2}}\underline{g}f\left(\underline{g}\right)\right).$$

and the last expression is negative if and only if $f\left(\cdot\right)$ is sufficiently small.

To prove Proposition 6.3, note that

$$\begin{aligned}E\left[\left(u_2-u_1\right)^2\right] &= \left(\frac{1}{1+\tilde{\theta}}\right)^2\int_{g_I\geq\underline{g}}\left(g_I\right)^2f\left(g_I\right)dg_I+\\ &\quad+\left(\frac{\tilde{\theta}}{1+\tilde{\theta}}\right)^2\int\int_{g_I<\underline{g}}\left(g_C^2+g_I^2\right)f\left(g_C\right)dg_Cf\left(g_C\right)dg_C,\end{aligned}$$

which can be rewritten as

$$\begin{aligned}E\left[\left(u_2-u_1\right)^2\right] &= \left(\frac{1}{1+\tilde{\theta}}\right)^2\int_{g_I\geq\underline{g}}\left(g_I\right)^2f\left(g_I\right)dg_I\\ &\quad+\left(\frac{\tilde{\theta}}{1+\tilde{\theta}}\right)^2\int_{g_I<\underline{g}}\left(\left(g_I\right)^2+\sigma_g^2\right)f\left(g_I\right)dg_I.\end{aligned}$$

Using this and (A.29), we obtain

$$\begin{aligned}\mathbb{V}(u_2-u_1) &= \left(\frac{1}{1+\tilde{\theta}}\right)^2\int_{g_I\geq\underline{g}}(g_I)^2 f(g_I)dg_I \\ &\quad+\left(\frac{\tilde{\theta}}{1+\tilde{\theta}}\right)^2\int_{g_I<\underline{g}}\left((g_I)^2+\sigma_g^2\right)f(g_I)dg_I \\ &\quad-\left(\int_{g_I\geq\underline{g}}g_I f(g_I)dg_I\right)^2\end{aligned}$$

$$\begin{aligned}\frac{d\mathbb{V}(u_2-u_1)}{d\tilde{\theta}} &= -2\frac{1}{\left(1+\tilde{\theta}\right)^3}\int_{g_I\geq\underline{g}}(g_I)^2 f(g_I)dg_I \\ &\quad+2\left(\frac{\tilde{\theta}}{\left(1+\tilde{\theta}\right)^3}\right)\int_{g_I<\underline{g}}\left((g_I)^2+\sigma_g^2\right)f(g_I)dg_I \\ &\quad+\left(2\left(\int_{g_I\geq\underline{g}}g_I f(g_I)dg_I\right)\underline{g}+\left(\frac{\tilde{\theta}}{1+\tilde{\theta}}\right)^2\left(\left(\underline{g}\right)^2+\sigma_g^2\right)-\left(\frac{1}{1+\tilde{\theta}}\right)^2\left(\underline{g}\right)^2\right)f(\underline{g})\frac{d\underline{g}}{d\tilde{\theta}}\end{aligned}$$

Evaluated at $\tilde{\theta}=0$, and hence $\underline{g}=0$, we obtain

$$\frac{d\mathbb{V}(u_2-u_1)}{d\tilde{\theta}}=-2\int_{g_I\geq 0}(g_I)^2 f(g_I)dg_I<0.$$

To prove the corresponding result for inflation, note that

$$\begin{aligned}\pi_2\left(g_I,g_C\right)-\pi_1 &= \begin{cases}-\frac{1}{\tilde{\theta}}g_I+\frac{1}{1+\tilde{\theta}}g_I \text{ if } g_I\geq\underline{g}\\ -\frac{1}{1+\tilde{\theta}}g_C+\frac{1}{1+\tilde{\theta}}g_I \text{ if } g_I<\underline{g}\end{cases} \\ &= \frac{1}{\tilde{\theta}}\left(u_2-u_1\right).\end{aligned}$$

The proof for $\frac{d\mathbb{V}(\pi_2-\pi_1)}{d\tilde{\theta}}<0$ then uses the fact that

$$\frac{d\mathbb{V}(\pi_2-\pi_1)}{d\tilde{\theta}}=-\frac{2}{\tilde{\theta}^3}\mathbb{V}(u_2-u_1)+\frac{1}{\tilde{\theta}^2}\frac{d\mathbb{V}(u_2-u_1)}{d\tilde{\theta}},$$

which implies that $\frac{d\mathbb{V}(\pi_2-\pi_1)}{d\tilde{\theta}}<0$ for $\tilde{\theta}$ close to 0. ■

B Additional Empirical Results

This Section reports robustness and additional empirical results. Table A1 reports summary statistics for our 1980-1998 sample of developed countries.

Table A1: Summary Statistics 1980-1998 Developed Countries

	N	Mean	Std	Min	Max
$Reelect_{i,t}$	91	.5054945	.5027397	0	1
$CBI_{i,t}$	91	.3702111	.1701433	.1366319	.8638889
"Appointment Independence"	91	.532967	.1556568	.0833333	.8333333
"Instrument Independence"	91	.2410256	.2599657	0	.6666667
"Objectives Independence"	91	.4593407	.3018381	0	1
"Fiscal Independence"	91	.3456349	.2228063	.0777778	.9999999
Avg. GDP Growth	91	2.122766	1.396807	-1.191635	6.608286
Avg. Inflation	91	5.544214	4.118232	-.2608086	20.44495
Avg. Primary Surplus/GDP	88	.9769997	3.361881	-7.47139	9.958611

Table A2: Political Stability and Central Bank Independence (1980-1998): Additional CBI Components

Panel A: Developed Dependent Variable: $Reelect_{i,t}$

	Fiscal			Instrument		
CBI	0.18	0.18	0.51*	0.13	0.12	0.30
	(0.21)	(0.21)	(0.28)	(0.20)	(0.20)	(0.28)
GDP Growth		0.07	0.06		0.07	0.05
		(0.04)	(0.05)		(0.04)	(0.05)
Inflation			0.01			0.01
			(0.01)			(0.01)
Primary Surplus			0.04***			0.03***
			(0.01)			(0.01)
N	91	91	88	91	91	88
R^2	0.01	0.04	0.11	0.00	0.04	0.09

Panel B: Euro Countries Dependent Variable: $Reelect_{i,t}$

	Fiscal			Instrument		
CBI	0.28	0.25	0.60	0.33	0.33	0.60
	(0.26)	(0.28)	(0.41)	(0.25)	(0.26)	(0.36)
GDP Growth		0.05	0.03		0.05	0.05
		(0.06)	(0.07)		(0.06)	(0.07)
Inflation			-0.01			-0.00
			(0.02)			(0.02)
Primary Surplus			0.02			0.02
			(0.02)			(0.02)
N	51	51	48	51	51	48
R^2	0.02	0.04	0.11	0.04	0.06	0.14

Note: This table is analogous to Table 1, but uses the fiscal and instrument independence measures as left-hand-side variables. A constant is included in all regressions. Standard errors clustered by year in parentheses. * p <0.10, ** p <0.05, *** p <0.01.

Table A3: Political Stability and Central Bank Independence: Euro Introduction: Additional CBI Components

	Dependent Variable: $Reelect_{i,t}$							
	Fiscal				Instrument			
CBI	0.21	0.17	0.16	0.36	0.33	0.14	0.13	0.47*
	(0.19)	(0.20)	(0.22)	(0.23)	(0.24)	(0.22)	(0.23)	(0.27)
GDP Growth			0.08***	0.07**			0.08***	0.06**
			(0.02)	(0.03)			(0.02)	(0.03)
Inflation				0.01				0.01
				(0.02)				(0.02)
Primary Surplus				0.02				0.02
				(0.01)				(0.01)
Country FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Post-1999 FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	105	105	105	102	105	105	105	102
R^2	0.01	0.20	0.28	0.32	0.02	0.20	0.28	0.32

Note: This table is analogous to Table 2, but uses the fiscal and instrument independence measures as left-hand-side variables. A constant is included in all regressions. * p <0.10, ** p <0.05, *** p <0.01.

Table A4: Political Stability and Central Bank Independence, Pre- vs. Post-1979

	Dependent Variable: $Reelect_{i,t}$									
	Combined		Appointment		Instrument		Objectives		Fiscal	
CBI	0.24	0.22	-0.95***	-0.50*	0.33	0.12	0.51***	0.25**	0.25	0.18
	(0.68)	(0.79)	(-3.81)	(-1.82)	(1.31)	(0.61)	(4.17)	(2.38)	(0.90)	(0.86)
CBI × Pre-1979	-0.32	-0.34	0.74*	0.68	-0.03	-0.16	-1.05***	-0.67***	-0.18	-0.17
	(-0.49)	(-0.60)	(1.83)	(1.54)	(-0.08)	(-0.48)	(-2.97)	(-2.81)	(-0.37)	(-0.42)
GDP Growth	0.06	0.05	0.09**	0.05*	0.07*	0.05	0.06	0.06*	0.07	0.05
	(1.45)	(1.65)	(2.11)	(1.76)	(1.71)	(1.67)	(1.32)	(1.91)	(1.51)	(1.66)
Pre-1979	-0.03	0.04	-0.58**	-0.45*	-0.17	-0.05	0.51*	0.21	-0.10	-0.03
	(-0.09)	(0.14)	(-2.50)	(-1.75)	(-0.88)	(-0.37)	(1.94)	(1.31)	(-0.38)	(-0.16)
Const.	0.32	0.47*	0.11	0.15	0.05	0.38**	0.58*	0.59***	0.22	0.39*
	(0.96)	(1.81)	(0.44)	(0.65)	(0.26)	(2.55)	(1.90)	(3.64)	(0.86)	(1.91)
N	86	159	86	159	86	159	86	159	86	159
R^2	0.05	0.03	0.11	0.04	0.07	0.03	0.12	0.08	0.05	0.03

Note: This table is analogous to Tables 1 and A2 with a pre-1979 dummy and its interaction with CBI included. The start of the sample period is 1960. Standard errors clustered by year in parentheses. * p <0.10, ** p <0.05, *** p <0.01.