

The Persistence of Government Support in EU Countries

PETAR SORIĆ*

MARINA MATOŠEC

Faculty of Economics and Business
University of Zagreb
Zagreb, Croatia

Original scientific paper

UDK: 328.1(4-67EU)

doi: 10.3935/rsp.v32i2.1

Received: November 2023

Aiming to fill in the gaps in the existing body of political support research, we engage in an extensive analysis of its persistence in a multi-country setting. To be specific, this is an initial attempt to estimate the fractional integration order of government support across the so far neglected EU countries. Exploiting the benefits of the Comparative Political Data Set (CPDS), we reveal that the support of both left- and right-wing parties in national governments mostly exhibits limited memory and relatively low persistence. Our findings are robust across the EU countries (with very few exceptions) and are supported by two out of three fractional integration estimators. These results could inform scholars, politicians and EU policy-makers that extraordinary events (related to political support) are usually wiped out of the memory of the typical EU voter rather soon.

Key words: government support, political sentiment, persistence, fractional integration.

INTRODUCTION

Striving to inspect how different social phenomena change over time, social scientists have long been occupied with applying time series analysis to their research fields. Besides economics, political science has been an area particularly interested in time series analysis and modelling. Since many theories presume that processes from the political environment (e.g., political-business cycles, electoral cycles or war cycles) are dynamic and endure a dynamic response to various political, social and economic events, investigating temporal properties in the mentioned framework came almost naturally (Box-Steffensmeier and Smith 1998). Moreover, Clarke et al. (1998) imply that even some early efforts in detangling political support patterns through time gave evidence of both past and present conditions affecting future behaviour.

One of the central questions in this domain is whether a political time series, such as incumbents' popularity, tends to return to a steady state at some slow pace after a shock, or it equilibrates quickly, or even reacts permanently. Traditional time series analysis usually

* Petar Sorić, Faculty of Economics & Business, University of Zagreb, Trg J.F. Kennedy 6, HR-10000 Zagreb, Croatia / Ekonomski fakultet, Sveučilište u Zagrebu, Trg J.F. Kennedyja 6, 10 000 Zagreb, Hrvatska / psoric@efzg.hr

relies on distinguishing only between the two extremes: mean-reverting (stationary) processes with integration order of zero and persistent (nonstationary) series with integration order of one. However, during the last few decades, social scientists confronted the premise that processes should have integer orders of integration and evoked the concept of fractional integration (FI). Allowing time series to have a mix of stationary and unit root properties, fractional unit root tests laid new foundations for better understanding and modelling political variables.

Empirical studies of political sentiment in the FI setup have been particularly prolific in the US, even in the early years of FI development (e.g. Box-Steffensmeier and Smith, 1996; 1998; DeBoef and Granato, 1997). However, there is still a shortage of large-scale comparative studies of the persistence of political sentiment in a multi-country framework. This notion is particularly valid for EU countries. It should be noted that there are some studies dealing with the persistence of very specific EU political phenomena, such as Euroscepticism (Raunio, 2007; Usherwood and Startin, 2013; van Elsas, 2017), radical right parties (Lubbers, Gijsberts and Scheepers, 2002; Kitschelt, 2007; Elinas, 2015), and populism (Zulianello and Larsen, 2021). However, the literature is still silent on the issue of government support persistence, especially in a pan-European framework.

To that end, the goal of this study is to quantify the persistence of government support and support for the main left-wing and right-wing parliamentary parties in EU member states. Does history matter? In other words, do past values of political support influence present values, and if they do, how exactly? This issue is a prerequisite for a thorough understanding of the time dynamics of political sentiment.

Should it be found to have long memory (long decay after a socio-economic shock), this would enable easier predictability of election results. On the other hand, if political sentiment is a short memory process, that would imply less predictable political outcomes and higher overall political uncertainty. Since the existing literature has not provided a formal statistical test of the persistence of these phenomena, we make a pioneer effort to apply the FI unit root tests on the time series of government support for all EU member states. We build upon the Comparative Political Data Set (CPDS) to measure annual government support via parliamentary seats of parties in the national governments of EU countries. This unique dataset (Armingeon et al., 2022) has three very specific idiosyncrasies that allow us to differentiate it from previous literature. First, CPDS enables us to perform an in-depth comparative analysis (in a formal statistical sense) of the potential differences in the persistence of left-wing and right-wing parties. Although there are descriptive studies of this sort on the national level (Akarca and Başlevent, 2011; Saarts, 2015), no systematic effort has been made to draw conclusions in a broader multi-country context.

This niche leads us to the second contribution to the literature. To the best of our knowledge, a pan-European study of this sort has never been conducted so far. This wide scope enables us to perform a comparative analysis and inspect whether there are differences across the countries, e.g., two-party political systems vs. multi-party systems, or new EU member states vs. the EU core.

Third, CPDS consists of a rather long annual series of government support data, spanning (at most) from 1960 to 2019. This enables us to focus on the secular properties of political sentiment and ensures that the obtained results are not dom-

inantly influenced by short-run shocks and distortions (or lack thereof).

Our results indicate that government support is mostly a short-memory (mean-reverting) process across the EU. This finding is rather robust to the choice of FI estimator; it holds equally for two-party and multi-party systems, as well as for new and old EU member states. We find a single asymmetry in the examined dataset, i.e., political support of left-wing parties is significantly more persistent in new EU member states than in the EU core. The remainder of the paper is organized as follows. Section 2 reviews the related literature on the persistence of political sentiment. Section 3 covers data specificities and the assessed FI techniques, while Section 4 presents the obtained empirical results. Finally, Section 5 concludes the paper with implications and recommendations for future research.

LITERATURE REVIEW

Fractionally integrated processes are defined as long-term dependent models, or long memory series, with time dependence featured in a slowly declining autocorrelation structure (see e.g., Granger and Ding, 1996; Barkoulas and Baum, 1997; Box-Steffensmeier and Tomlinson, 2000; Mainardi, 2001). Being fractionally integrated, models are at once persistent and mean-reverting, which indicates shocks to such processes decay, although slowly.

Lebo et al. (2000) explicitly warned about the hazards of overlooking fractional dynamics since it defines many political time series such as presidential approval, consumer sentiment or macropartisanship. It seems that time dependence is an important property of both political theory and data, stemming from people's inclination to use the past data to determine present partisanship, or even from slightly evolving social norms (De-

Boef, 2000). Failing to control for FI is often misleading and induces less accurate modelling of the data-generating process (Lanier et al., 1998; Box-Steffensmeier and Tomlinson, 2000), as well as wrong inferences (Box-Steffensmeier and Smith, 1998). Lebo et al. (2000) hence called for reconsidering previously gained conclusions about the data-generating process of political support since FI increases the likelihood of proper model specifications. Moreover, it even has the potential to unify and simplify time series analysis (Box-Steffensmeier and Tomlinson, 2000).

Early FI models were established in the 1980s by Granger (1980) and Granger and Joyeux (1980), who concluded that, from a statistical perspective, aggregating heterogeneous individual-level behaviour produces FI. On the other hand, it is known that many political variables are generated by aggregating national survey data. Building on these premises, Box-Steffensmeier and Smith (1996 and 1998) take the lead in merging political science and FI with a direct intention to offer political scientists "an alternative to the current binary choice between models for stationary versus integrated data" (Box-Steffensmeier and Smith, 1998). Indeed, political scientists have soon and readily embraced this point of view and challenged the *knife-edged* distinction between the I(0) and I(1) models (e.g., DeBoef and Grano, 1997; Box-Steffensmeier et al., 1998; Lebo et al., 2000; Clarke and Lebo, 2003; Gil-Alana, 2008).

In the ground-breaking attempt to analyse aggregated partisanship, Box-Steffensmeier and Smith (1996) first reveal why macropartisanship is an ideal candidate to inspect from the fractional dynamics viewpoint. Namely, Box-Steffensmeier and Smith (1996) postulate that party affiliation is expected to persist over time

while it also exogenously determines voting behaviour. Applying novel diagnostic tests on the US data, they found that a shock to macropartisanship lasts several years before it finally fades away, making it a clear case of fractionally integrated time series. Further investigation on the properties of the US political data gave additional confirmation that FI is an inherent characteristic of macropartisanship (Box-Steffensmeier and Smith, 1998), as well as of macroideology (Box-Steffensmeier et al., 1998), presidential approval (DeBoef, 2000), congressional approval and economic expectations (Box-Steffensmeier and Tomlinson, 2000). In a genuinely comprehensive analysis of a wide range of political time series Lebo et al. (2000) establish that non-integer integration orders are 'quite common' in this context.

Political science acquires a somewhat small but important body of research using FI approaches (Gil-Alana, 2008), and it is primarily oriented toward democratic and more complex political systems of the Western world. Aside from the US, another strand of the literature focuses on the advanced European states, with the UK at the centre of attention. For example, Byers et al. (1997, 2000) were among the first to assess stochastic properties of the UK macropartisanship using the monthly survey data on voting intentions and discovered that the assessed time series is fractionally integrated, with an integration order of around 0.75. Later on, Clarke and Lebo (2003) empirically identified characteristics of British governing party support, prime ministerial approval and subjective evaluations of national and personal economic conditions. All mentioned time series were found to exhibit long memory dynamics. Further relevant work was done by Davidson (2005), who also proved that government support, measured by the quarterly opinion poll lead of UK governments, embodies fractional

dynamics (with integration order significantly over 0.5).

Yet, the literature analysing the rest of Europe (let alone the world) is rather scarce. A rare multi-country study to be singled out here is Hellwig's (2007) research on the volatility of aggregate government evaluation in the UK, Denmark, France, and the US. In this context, the most important inference is that aggregate popularity is again proved to be highly (but not entirely) persistent. Integration orders took values over 0.8 in all countries, albeit being higher in the US than in Europe. Another rejuvenating comparative analysis has recently been done by Ohmura (2021), who examined the differences in macropartisanship persistence in *de facto* two-party systems (the US, the UK, Japan) versus the multiparty systems (Germany and Denmark). Interestingly, macropartisanship in two-party systems dominantly exhibits long memory, while in multiparty systems it tends to be stationary, frequently updated and therefore less stable (Ohmura, 2021).

This short overview of relevant literature shows that a vast majority of authors primarily attempt to determine the memory of (macro)partisanship when assessing political support persistence. In other words, political sentiment is rarely, if at all, measured by other variables such as the number of seats in the parliament. The potential persistence of the congressional seats might nevertheless be just as informative and thought-provoking. For example, Ansolabehere and Gerber (1997) convey that the Democratic Party in the US House of Representatives had the majority of seats throughout the second half of the 20th century. Such persistence of the legislative majority could imply that the Democrats had a consistently higher probability of retaining their seats than the Republicans (Fiorina, 1992) or could

be explained as a repercussion of the incumbency advantage phenomenon (Ansolabehere and Gerber, 1997). To the best of our knowledge, no study determines the FI order for the number of parliamentary seats nor looks for the specifics of political time series and compares them across all European democracies.

Even though the research on the stochastic properties of political processes was most prolific at the turn of the century, being somewhat silent since, Gil-Alana (2008) states that modelling time series in political science is still a matter of dispute. Determining the degree of political persistence is nonetheless crucial from the statistical and economic point of view since it might have important policy implications (Gil-Alana, 2008). Besides, it says a lot about the potential election outcomes and trends in public opinion (Box-Steffensmeier and Smith, 1996) as well as the general stability of the country's party system (Box-Steffensmeier et al., 1998; Ohmura, 2021).

METHODOLOGY AND DATA

Let us first assess the methodological framework of this study.

Fractional integration tests

Any time series can be observed either in the time domain or in the frequency domain. Both frameworks are based on the same information set, but presented in a different way. The former approach focuses on observing how a process develops over time, while the latter focuses on the frequency components of the time series, i.e. how patterns repeat periodically over time. A straightforward analogy can be utilized for the case of a musical composition. In the time domain, the listener observes the dynamics of the composition as it plays. In the frequency domain, the

musical piece is decomposed into individual notes (frequencies), each one of potentially different loudness (amplitude). For a meticulous review of frequency domain analysis in social sciences, readers may consult Steehouwer (2010), or see Keil et al. (2022) for a very useful non-technical description of the main categories.

When inspecting the trending properties of societal phenomena, economists and political scientists often apply unit root tests on time series data. This branch of empirical research conventionally employs standard unit root tests such as the Augmented Dickey-Fuller (ADF) test, Kwiatkowski-Phillips-Schmidt-Shin (KPSS) or the Phillips-Perron (PP) test. All of these tests depict a dichotomous universe of stationary vs. nonstationary time series. The main idea of these tests comes down to a basic autoregressive model of first order:

$$y_t = c_t + \phi y_{t-1} + \varepsilon_t, \quad (1)$$

where y_t is the time series of interest, c_t is the constant term, ϕ is the autoregressive parameter, and ε_t is the white noise error term. The basic idea of this setup is that the process at hand has some sort of memory, i.e., that it is conditioned by its own past values (social scientists sometimes refer to this concept as *path dependency*). If $0 < \phi < 1$, the process is called stationary, and any type of shock in would have merely short-run (transitory) effects on the assessed variable. Statistical properties of stationary processes do not change over time as their mean and variance remain constant. If $\phi = 1$, the aforementioned shocks would have permanent effects, and y_t would be deemed nonstationary. The difference between the two types of processes is illustrated in Figure 1. An expansionary shock in period t_1 dies out and the process Y returns to its long-term

trend (panel a), as opposed to the path of process (panel b) where a shock has permanent effects. Figure 1 is closely related to the ideas of Nelson and Plosser (1982), whose work was one of the first notable and influential applications of the time series statistical properties to economics. Instantly after their seminal paper, the unit root concept (i.e., testing for (non)stationarity) has become one of the cornerstones of macroeconomic research, and has been further integrated in other social sciences.

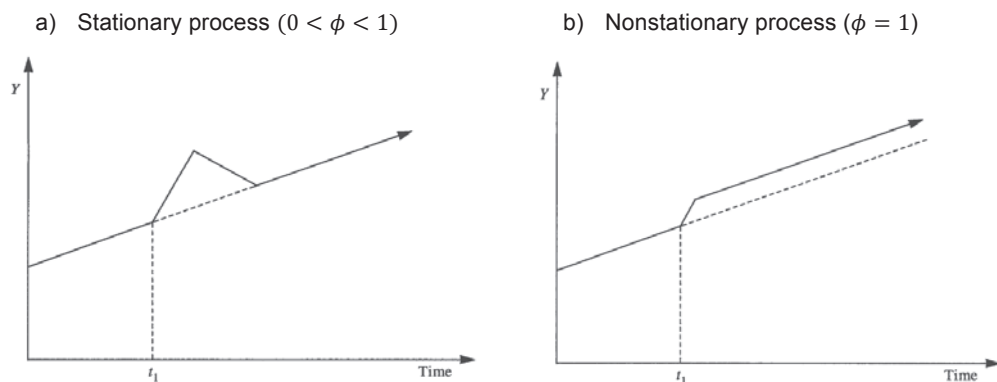
Taking the traditional Autoregressive Moving Average (ARMA) models a step further, the workhorse model of the fractional integration setup is the Autoregressive Fractionally Integrated Moving Average (ARFIMA) model:

$$\Phi(L)(1-L)^d y_t = \Theta(L)\varepsilon_t, \quad (2)$$

where L is the lag operator, $\Phi(L) = 1 - \phi_1 L - \phi_2 L^2 - \phi_3 L^3 - \dots - \phi_p L^p$ and

Figure 1

The path of stationary vs. nonstationary process



Source: Snowdon, B. & Vane, H. R. (2005). Modern macroeconomics. Cheltenham: E. Elgar

In the time series literature, the term *order of integration* ($I(d)$) refers to the number of times a time series needs to be differenced before it becomes stationary. As opposed to these two dichotomous cases of stationarity ($I(0)$) (and nonstationarity ($I(1)$)), there is a separate literature strand dealing with FI. Instead of the binary setup (allowing for the integration order d to be either $d=1$ or $d=0$), this framework allows d to take any real value. Moreover, this framework enables us to obtain a more nuanced perspective on the long memory characteristics of the assessed time series.

$\Theta(L) = 1 + \theta_1 L + \theta_2 L^2 + \dots + \theta_q L^q$. The idea behind the model is that the process at hand depends both on its past values within the autoregressive polynomial $\Phi(L)$, and the moving average polynomial $\Theta(L)$ that is used to smooth out random noise. The $(1-L)^d$ is the fractionally integrated operator defined with

$$(1-L)^d = \sum_{k=0}^{\infty} \frac{\Gamma(k-d)}{\Gamma(-k)\Gamma(k+1)} L^k, \quad (3)$$

where $\Gamma(\cdot)$ is the gamma function that allows the model to work with non-integer

differencing and assess complex autoregressive dependencies.

Geweke and Porter-Hudak (GPH hereinafter) (1983) introduce a semi-non-parametric estimator of d in an ARFIMA framework through a spectral least squares regression model:

$$\log \log \left(I(\lambda_j) \right) = c - d \log \log \left| 1 - e^{i\lambda_j} \right|^2 + \eta_j, \quad j = 1, \dots, n, \quad (4)$$

where fundamental frequencies are $\lambda_j = \frac{2\pi j}{n}$, $j = 1, 2, \dots, m < n$, and η_j is a white noise process. Frequency domain techniques usually employ Fourier transform functions to decompose a time series into a set of sine and cosine waves of various frequencies. Here the discrete Fourier transform of y_t is used as:

$$\omega(\lambda_j) = \frac{1}{\sqrt{2\pi n}} \sum_{t=1}^n y_t e^{it\lambda_j} \quad (5)$$

and $I(\lambda_j) = \omega(\lambda_j) \omega(\lambda_j)^*$ is the periodogram¹. GPH then estimate the fractional integration order as:

$$\hat{d} = \frac{\sum_{j=1}^m I(\lambda_j) \log \log \left| 1 - e^{i\lambda_j} \right|}{2 \sum_{j=1}^m \left| 1 - e^{i\lambda_j} \right|}. \quad (6)$$

The estimator in (6) is directly influenced by the choice of m . Conditional on a proper choice of m , the asymptotic distribution of \hat{d} is independent of the AR and MA specification of model (2), as well as of the distribution of the error term in the same model (Geweke, Porter and Hudak,

1983). Therefore, we follow the conventional approach and set m as $m = T^{0.5}$.

Phillips (1999, 2007) provides the modified log periodogram regression estimator (MOD hereinafter), as an extension of the GPH estimator. Namely, Phillips (1999, 2007) modifies the dependent variable to reflect the distribution of d under the null hypothesis that $d=1$ (Baum and Wiggins, 2000). He modifies the discrete Fourier transformation in (5) to include the unit root case:

$$\omega'(\lambda_j) = \frac{\omega(\lambda_j)}{1 - e^{i\lambda_j}} - \frac{e^{i\lambda_j}}{1 - e^{i\lambda_j}} \frac{y_n}{\sqrt{2\pi n}} \quad (7)$$

and

$$v(\lambda_j) = \omega'(\lambda_j) + \frac{e^{i\lambda_j}}{1 - e^{i\lambda_j}} \frac{y_n}{\sqrt{2\pi n}}, \quad (8)$$

while the corresponding periodogram ordinates now become $I_v(\lambda_j) = v(\lambda_j) v(\lambda_j)^*$.

Robinson (1995) introduced the third estimator of fractional integration order utilized in this paper (ROB hereinafter). He also modifies the GPH approach through a semi-parametric estimator that provides some efficiency gains in comparison to GPH (Robinson, 1995: 1052). His procedure applied to a general context of G assessed time series, which easily nests the univariate specification for $G=1$. The periodogram for variable $y_t^{(g)}$, $g = 1, 2, \dots, G$ equals:

$$I_g(\lambda_j) = \frac{1}{2\pi n} \left| \sum_{t=1}^n y_t^{(g)} e^{it\lambda_j} \right|^2 \quad (9)$$

and the vector of related fractional integration orders d is estimated through

¹ A periodogram is a graphical tool used in frequency analysis (vaguely comparable to a bar chart) to depict how much power each frequency has.

$$\hat{c} \hat{d} = \text{vec} \left\{ Y'Z(Z'Z)^{-1} \right\}, \quad (10)$$

where $c = (c_1, \dots, c_G)'$ are constants, $d = (d_1, \dots, d_G)'$, $Z = (Z_1, \dots, Z_T)'$ and $Z_j = (1, -2\log\log \lambda_j)'$.

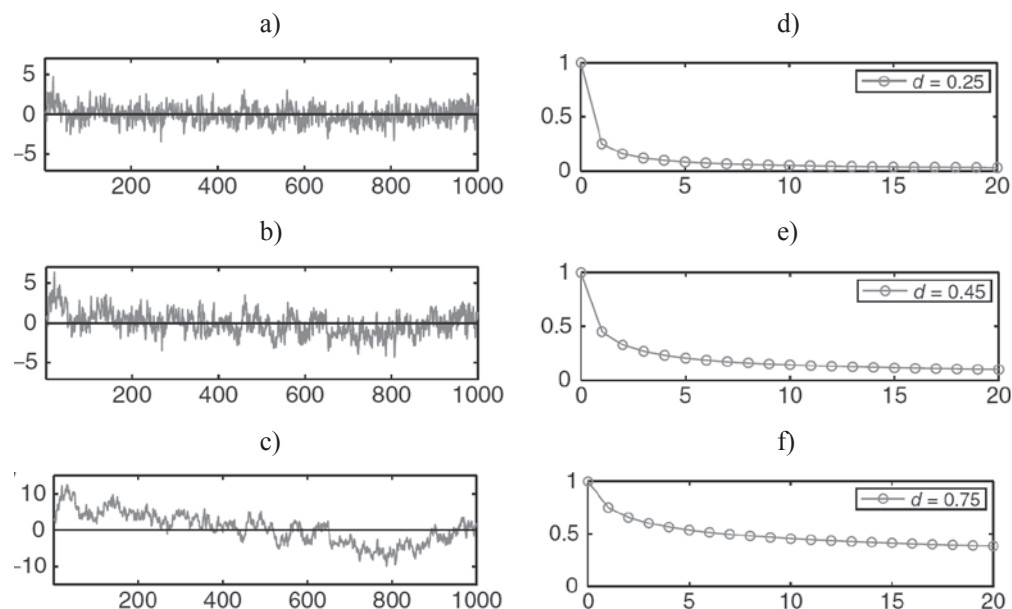
As the empirical results in time series analysis are often conditioned by the preferred methodological framework, the conventional route is to apply several methods to question the robustness of the obtained results. Following the same logic, this study applies all three mentioned FI tests, searching for an overall conclusion that goes beyond a single method case study.

In a nutshell, parameter d reveals the magnitude of persistence in the assessed time series. As Gadea and Mayoral (2006) neatly summarize, $d=0$ implies short mem-

ory. An integration order in the $\langle 0, 0.5 \rangle$ interval points to long memory with shocks decaying at a slower pace than with the $I(0)$ series. An integration order in the interval $[0.5, 1)$ can be interpreted as a sign of non-stationarity with transitory shocks. On the other hand, $d \geq 1$ implies shocks with a permanent effect.

Figure 2 helps illustrate the nature of several different fractionally integrated processes. As parameter d increases, the series resembles the true stationary process less and less and tends to look more like the random walk ($I(1)$) process with non-constant mean and variance (panels a-c). Moreover, parameter d also defines the impulse response functions, displaying how long the effects of a shock last. As d inflates, the effects of a shock fade away more slowly or, in other words, persist longer (panels d-f).

Figure 2
Simulated $I(d)$ series (a-c) and their impulse responses (d-f)



Source: Hassler, U. (2019). Time Series Analysis with Long Memory in View. Hoboken, NJ: Wiley

Data

Our empirical analysis is based on the CPDS dataset, compiled by Armingeon et al. (2022). CPDS primarily comprises political and institutional, but also socio-economic and demographic annual data for 36 OECD countries. Its scope covers, inter alia, detailed information on the type of government, its composition, duration, reasons for its termination, etc. It provides relatively long time series, for some countries starting from 1959. To be more specific, the data is gathered for the time period during which the assessed governments were officially democratic.²

There are several political CPDS variables crucial for our research. The variable *RIGHT* measures the right-wing government support as the parliamentary seat share of right-wing parties in government. Similarly, *LEFT* measures the support of left-wing parties as parliamentary seat share in government. These classifications and calculations were made on the basis of Schmidt (1996), where left parties are social democrats and parties to the left of them, while right parties are liberal and conservative parties. Lastly, the variable *GOV* quantifies the total government support and estimates the seat share of all parties in government. All three variables are weighted by the number of days in office in a given year (Armingeon et al., 2022).³

Our analysis is conducted for all EU member states except Spain (due to a limited number of observations), and the UK.

EMPIRICAL RESULTS

As the first step of our empirical strategy, we conducted the three most conven-

tional unit root tests on the government support time series for all EU member states. The results are presented in Table 1.

The results clearly show it is rather difficult to establish the true integration order since the three consulted tests mostly point to contradicting decisions. Following the rationale of Lebo et al. (2000) and DeBoef (2000), we interpret this as an argument in favour of FI estimation.

Summarized results of the three assessed FI tests (GPH, MOD, and ROB) are presented in Table 2. After estimating the integration order d , we follow a step-wise procedure. First, we test the null hypothesis that d is not significantly different from zero. If the null hypothesis cannot be rejected at conventional significance levels (at most 10%), we conclude that the time series of interest is stationary. Otherwise, we test the hypothesis $H_0 : d = 1$. If that hypothesis cannot be rejected, we treat the underlying series as nonstationary. However, if the null hypothesis is rejected, we postulate that the true order of (fractional) integration is somewhere between these two integers. If for a particular time series we cannot simultaneously reject the hypotheses $H_0 : d = 0.5$ and $H_0 : d = 1$, we conclude that the true integration order is between these two values, implying non-stationarity with transitory shocks. Analogously, if we simultaneously cannot reject $H_0 : d = 0$ and $H_0 : d = 0.5$, we postulate that the true integration order is between these two values, implying somewhat lower persistence. If the series at hand does not reject the null hypothesis for all three tests depicted in Table 2, and the 90% confidence interval comprises zero, we treat the variable at hand as stationary ($d = 0$).

² Aside from covering data at the national level for all EU member states, the database also includes the same information for other, mainly the most advanced world democracies (e.g. Australia, Canada, Japan, Switzerland, and the US). These countries are not assessed in this study.

³ The dataset also comprises a variable quantifying the support for government parties of the political centre, but that variable has not been empirically assessed due to an extremely large number of missing data and zero entries.

Table 1
Unit root test results

Variable	ADF p-value	KPSS test statistics	PP p-value	Variable	ADF p-value	KPSS test statistics	PP p-value
AT_GOV	0.0671	0.2244	0.0671	IT_GOV	0.0001	0.1009	0.0001
AT_LEFT	0.2411	0.4192	0.2411	IT_LEFT	0.8315	0.4879	0.0010
AT_RIGHT	0.0111	0.3076	0.0098	IT_RIGHT	0.0414	0.4973	0.0387
BE_GOV	0.0281	0.4520	0.3682	LT_GOV	0.1404	0.1333	0.1094
BE_LEFT	0.0004	0.1130	0.0173	LT_LEFT	0.2792	0.1177	0.2008
BE_RIGHT	0.3005	0.5422	0.2148	LT_RIGHT	0.2619	0.0791	0.2005
BG_GOV	0.0092	0.1278	0.1441	LU_GOV	0.1093	0.2023	0.1949
BG_LEFT	0.0005	0.3152	0.0253	LU_LEFT	0.2904	0.2590	0.0380
BG_RIGHT	0.0715	0.2233	0.0715	LU_RIGHT	0.0307	0.1523	0.1093
CY_GOV	0.1095	0.1137	0.1010	LV_GOV	0.0020	0.1845	0.0015
CY_LEFT	0.4433	0.2244	0.3758	LV_LEFT	0.0000	0.4940	0.0721
CY_RIGHT	0.0726	0.1310	0.0681	LV_RIGHT	0.0696	0.0982	0.0585
CZ_GOV	0.0011	0.3353	0.0016	MT_GOV	0.1504	0.2303	0.1072
CZ_LEFT	0.1915	0.1078	0.3021	MT_LEFT	0.4137	0.1356	0.4137
CZ_RIGHT	0.2847	0.1524	0.2188	MT_RIGHT	-	-	-
DE_GOV	0.0027	0.1596	0.0242	NL_GOV	0.0914	0.4381	0.1107
DE_LEFT	0.2465	0.0734	0.1490	NL_LEFT	0.0032	0.1959	0.0214
DE_RIGHT	0.0959	0.2637	0.0529	NL_RIGHT	0.0515	0.1661	0.0515
DK_GOV	0.0259	0.5165	0.0215	PL_GOV	0.0159	0.0844	0.0171
DK_LEFT	0.0509	0.3390	0.0336	PL_LEFT	0.8600	0.3816	0.2290
DK_RIGHT	0.0085	0.1353	0.0398	PL_RIGHT	0.5327	0.5079	0.2859
EE_GOV	0.0335	0.3921	0.0701	PT_GOV	0.0100	0.1318	0.0026
EE_LEFT	0.5557	0.2701	0.4085	PT_LEFT	0.0082	0.2339	0.0681
EE_RIGHT	0.1807	0.1748	0.1807	PT_RIGHT	0.0302	0.1890	0.0963
FI_GOV	0.0004	0.2738	0.0024	RO_GOV	0.0066	0.3702	0.0144
FI_LEFT	0.0024	0.1259	0.1109	RO_LEFT	0.0366	0.3176	0.0616
FI_RIGHT	0.0615	0.6957	0.0930	RO_RIGHT	0.1502	0.0952	0.1298
FR_GOV	0.0248	0.2106	0.0248	SE_GOV	0.0006	0.2515	0.0003
FR_LEFT	0.1663	0.2569	0.1224	SE_LEFT	0.0162	0.2970	0.0873
FR_RIGHT	0.2129	0.2576	0.0883	SE_RIGHT	0.0253	0.2384	0.1416
GR_GOV	0.0002	0.2290	0.0000	SI_GOV	0.0044	0.1495	0.0044
GR_LEFT	0.0085	0.1138	0.0790	SI_LEFT	0.0302	0.2007	0.0302
GR_RIGHT	0.0072	0.1364	0.0818	SI_RIGHT	0.0855	0.1164	0.0855
HR_GOV	0.2709	0.3444	0.2491	SK_GOV	0.0765	0.0720	0.0585
HR_LEFT	0.3283	0.1053	0.2905	SK_LEFT	0.0919	0.4463	0.2561
HR_RIGHT	0.1930	0.1379	0.1828	SK_RIGHT	0.4492	0.3192	0.4396
HU_GOV	0.1457	0.1500	0.5736	UK_GOV	0.0344	0.1109	0.0651
HU_LEFT	0.1116	0.2849	0.6269	UK_LEFT	0.0288	0.0801	0.1467
HU_RIGHT	0.2982	0.2994	0.7466	UK_RIGHT	0.0329	0.0760	0.1381
IE_GOV	0.0000	0.0501	0.0367				
IE_LEFT	0.0057	0.2152	0.0309				
IE_RIGHT	0.0225	0.2667	0.0025				

Note: All UR tests are specified for the model with a constant term. Critical value for the KPSS test at 5% significance is 0.463. Bold values imply nonstationarity at 5% significance level.

Country abbreviations are as follows: AT=Austria, BE=Belgium, BG=Bulgaria, CY=Cyprus, CZ=Czech Republic, DE=Germany, DK=Denmark, EE=Estonia, EL=Greece, FI=Finland, FR=France, HR=Croatia, HU=Hungary, IE=Ireland, IT=Italy, LT=Lithuania, LU=Luxembourg, LV=Latvia, MT=Malta, NL=Netherlands, PL=Poland, PT=Portugal, RO=Romania, SE=Sweden, SI=Slovenia, SK=Slovakia, UK=United Kingdom.

Source: authors' calculation.

Table 2 identifies the final outcome of our estimation strategy for each considered time series. As a rule of thumb, we treat variables with integration orders at or above 0.5 as highly persistent. Table 2 suggests that political support in almost all EU countries is mostly stationary within the GPH framework, with d taking values under 0.5. More specific, it means that political support in most cases in the EU is either:

- i) A true short-memory stationary process that reverts to the mean immediately, or
- ii) A weakly stationary process that exhibits the mean-reversion property, but has some (longer) memory.

Therefore, common shocks to political support such as economic crises, various public scandals, or party leadership changes only have temporary effects. The same

goes with positive shocks, for example successfully implementing reforms or welfare programs, or emerging charismatic incumbents, where the sudden popularity boost eventually fades away. More sooner than later, voters tend to “forget” so parties regain their usual (average) popularity measured in the number of parliamentary seats.

In contrast, there are only two countries that exhibit dominantly highly persistent political sentiment, Czechia and Hungary. Their integration order is at or above 0.5 level, meaning that some political shocks have had near-permanent and permanent repercussions on the political scene. This result came as no surprise, especially for Hungary, as Viktor Orban’s Fidesz party endures a pretty stable electoral support for a long time.

Table 2
Summary of FI test results

Method	GPH		MOD		ROB	
Variable	d	Conclusion	d	Conclusion	d	Conclusion
AT_LEFT	0.332	$0 \leq d < 0.5$	0.286	$d = 0$	1.052	$0.5 \leq d < 1$
AT_RIGHT	0.263	$d = 0$	0.183	$0 \leq d < 0.5$	0.579	$d = 0.5$
AT_GOV	-0.144	$0 \leq d < 0.5$	0.864	$d = 0$	0.726	$0.5 \leq d < 1$
BE_LEFT	0.001	$0 \leq d < 0.5$	0.218	$d = 0$	0.873	$0.5 \leq d < 1$
BE_RIGHT	0.701	$d = 0$	0.511	$d = 0$	0.900	$0.5 \leq d < 1$
BE_GOV	-0.335	$0 \leq d < 0.5$	0.557	$d = 0$	0.723	$d = 0.5$
BG_LEFT	-0.476	$0 \leq d < 0.5$	-0.305	$0 \leq d < 0.5$	0.652	$0.5 \leq d < 1$
BG_RIGHT	1.009	$d = 0$	0.556	$d = 0$	0.533	$d = 0.5$
BG_GOV	0.395	$0 \leq d < 0.5$	0.384	$0 \leq d < 0.5$	1.185	$0.5 \leq d < 1$
CY_LEFT	1.184	$d = 0$	1.069	$0.5 \leq d < 1$	0.782	$0.5 \leq d < 1$
CY_RIGHT	-0.301	$0 \leq d < 0.5$	-0.704	$0 \leq d < 0.5$	0.675	$d = 0.5$
CY_GOV	0.098	$0 \leq d < 0.5$	0.180	$0 \leq d < 0.5$	0.789	$0.5 \leq d < 1$
CZ_LEFT	1.133	$0.5 \leq d < 1$	1.215	$0.5 \leq d < 1$	0.870	$0.5 \leq d < 1$
CZ_RIGHT	1.972	$0.5 \leq d < 1$	1.824	$0.5 \leq d < 1$	1.187	$0.5 \leq d < 1$
CZ_GOV	0.410	$d = 0.5$	0.528	$d = 0.5$	0.612	$d = 0.5$
DE_LEFT	0.209	$d = 0$	0.267	$d = 0$	0.918	$0.5 \leq d < 1$
DE_RIGHT	0.267	$0 \leq d < 0.5$	0.210	$0 \leq d < 0.5$	0.820	$0.5 \leq d < 1$
DE_GOV	0.301	$d = 0$	0.371	$d = 0$	0.575	$d = 0.5$
DK_LEFT	0.563	$d = 0$	0.505	$d = 0$	0.737	$d = 0.5$
DK_RIGHT	0.143	$d = 0$	0.390	$d = 0$	0.728	$d = 0.5$
DK_GOV	-0.358	$d = 0$	0.068	$0 \leq d < 0.5$	0.490	$d = 0.5$
EE_LEFT	1.274	$0.5 \leq d < 1$	0.780	$d = 0$	0.792	$0.5 \leq d < 1$
EE_RIGHT	0.740	$d = 0$	0.629	$d = 0$	0.594	$d = 0.5$
EE_GOV	0.969	$d = 0$	0.354	$d = 0$	0.558	$d = 0.5$
EL_LEFT	0.300	$d = 0$	0.243	$d = 0$	0.865	$0.5 \leq d < 1$
EL_RIGHT	0.306	$d = 0$	0.232	$d = 0$	0.627	$d = 0.5$
EL_GOV	0.062	$0 \leq d < 0.5$	-0.138	$0 \leq d < 0.5$	0.081	$0 \leq d < 0.5$

Method	GPH		MOD		ROB	
Variable	<i>d</i>	Conclusion	<i>d</i>	Conclusion	<i>d</i>	Conclusion
FI_LEFT	0.491	$d = 0$	0.778	$d = 0$	0.779	$0.5 \leq d < 1$
FI_RIGHT	0.516	$d = 0$	0.597	$d = 0$	0.819	$0.5 \leq d < 1$
FI_GOV	0.442	$d = 0$	0.334	$d = 0$	0.511	$d = 0.5$
FR_LEFT	0.224	$0 \leq d < 0.5$	0.304	$0 \leq d < 0.5$	1.120	$0.5 \leq d < 1$
FR_RIGHT	0.598	$d = 0$	0.609	$d = 0$	1.091	$0.5 \leq d < 1$
FR_GOV	-0.397	$0 \leq d < 0.5$	-0.388	$0 \leq d < 0.5$	0.757	$d = 0.5$
HR_LEFT	0.170	$d = 0$	0.686	$d = 0$	0.682	$0.5 \leq d < 1$
HR_RIGHT	0.488	$d = 0$	1.006	$0.5 \leq d < 1$	0.739	$0.5 \leq d < 1$
HR_GOV	-0.487	$d = 0$	1.482	$d = 0$	0.317	$0 \leq d < 0.5$
HU_LEFT	0.757	$0.5 \leq d < 1$	0.379	$d = 0$	1.270	$0.5 \leq d < 1$
HU_RIGHT	1.535	$d = 0$	0.826	$0.5 \leq d < 1$	1.162	$0.5 \leq d < 1$
HU_GOV	1.099	$0.5 \leq d < 1$	1.423	$0.5 \leq d < 1$	1.161	$0.5 \leq d < 1$
IE_LEFT	-0.274	$0 \leq d < 0.5$	-0.527	$d = 0.5$	0.787	$d = 0.5$
IE_RIGHT	-0.599	$0 \leq d < 0.5$	0.107	$0 \leq d < 0.5$	0.695	$0.5 \leq d < 1$
IE_GOV	-0.483	$d = 0.5$	0.135	$0 \leq d < 0.5$	0.824	$0.5 \leq d < 1$
IT_LEFT	-0.143	$0 \leq d < 0.5$	-0.621	$0 \leq d < 0.5$	0.884	$0.5 \leq d < 1$
IT_RIGHT	0.764	$0.5 \leq d < 1$	0.645	$d = 0$	0.742	$0.5 \leq d < 1$
IT_GOV	0.173	$d = 0$	0.102	$d = 0$	0.199	$0 \leq d < 0.5$
LT_LEFT	0.637	$d = 0$	0.514	$d = 0$	0.819	$0.5 \leq d < 1$
LT_RIGHT	0.153	$d = 0$	0.111	$0 \leq d < 0.5$	0.688	$0.5 \leq d < 1$
LT_GOV	-0.014	$0 \leq d < 0.5$	-0.399	$0 \leq d < 0.5$	0.537	$d = 0.5$
LU_LEFT	-0.240	$0 \leq d < 0.5$	-0.133	$0 \leq d < 0.5$	0.772	$d = 0.5$
LU_RIGHT	0.526	$d = 0$	0.530	$d = 0$	1.074	$0.5 \leq d < 1$
LU_GOV	0.833	$d = 0$	0.650	$0.5 \leq d < 1$	0.759	$d = 0.5$
LV_LEFT	1.238	$0.5 \leq d < 1$	0.458	$0 \leq d < 0.5$	0.429	$0 \leq d < 0.5$
LV_RIGHT	-0.300	$0 \leq d < 0.5$	0.247	$0 \leq d < 0.5$	0.331	$d = 0.5$
LV_GOV	-0.094	$d = 0$	0.569	$d = 0$	0.001	$0 \leq d < 0.5$
MT_LEFT	0.973	$0.5 \leq d < 1$	1.082	$0.5 \leq d < 1$	0.877	$0.5 \leq d < 1$
MT_RIGHT	-	-	-	-	-	-
MT_GOV	0.432	$d = 0$	0.313	$d = 0$	0.859	$0.5 \leq d < 1$
NL_LEFT	0.110	$0 \leq d < 0.5$	0.158	$0 \leq d < 0.5$	0.767	$d = 0.5$
NL_RIGHT	0.176	$0 \leq d < 0.5$	0.161	$0 \leq d < 0.5$	0.781	$0.5 \leq d < 1$
NL_GOV	0.608	$0.5 \leq d < 1$	0.421	$0 \leq d < 0.5$	0.741	$d = 0.5$
PL_LEFT	0.199	$d = 0$	-0.898	$d = 0$	0.850	$0.5 \leq d < 1$
PL_RIGHT	0.431	$d = 0$	-0.908	$0 \leq d < 0.5$	0.837	$0.5 \leq d < 1$
PL_GOV	-0.179	$0 \leq d < 0.5$	-0.819	$d = 0.5$	0.692	$d = 0.5$
PT_LEFT	0.171	$d = 0$	-0.530	$0 \leq d < 0.5$	0.665	$0.5 \leq d < 1$
PT_RIGHT	0.340	$d = 0$	-0.380	$0 \leq d < 0.5$	0.734	$d = 0.5$
PT_GOV	0.203	$0 \leq d < 0.5$	0.155	$0 \leq d < 0.5$	0.352	$d = 0.5$
RO_LEFT	1.194	$d = 0$	1.140	$0.5 \leq d < 1$	0.298	$0 \leq d < 0.5$
RO_RIGHT	0.238	$0 \leq d < 0.5$	0.267	$0 \leq d < 0.5$	0.705	$0.5 \leq d < 1$
RO_GOV	-0.274	$0 \leq d < 0.5$	0.207	$0 \leq d < 0.5$	0.282	$0 \leq d < 0.5$
SE_LEFT	0.407	$d = 0$	0.100	$d = 0$	0.887	$d = 0$
SE_RIGHT	0.553	$d = 0$	0.477	$d = 0$	0.789	$d = 0.5$
SE_GOV	-0.010	$0 \leq d < 0.5$	0.558	$d = 0$	0.211	$d = 0.5$
SI_LEFT	0.391	$d = 0$	0.415	$d = 0$	0.258	$0 \leq d < 0.5$
SI_RIGHT	0.216	$d = 0$	0.554	$d = 0$	0.404	$d = 0.5$
SI_GOV	-0.703	$d = 0.5$	-0.336	$0 \leq d < 0.5$	0.293	$0 \leq d < 0.5$
SK_LEFT	0.445	$d = 0$	0.370	$d = 0$	0.814	$0.5 \leq d < 1$
SK_RIGHT	1.414	$0.5 \leq d < 1$	1.020	$0.5 \leq d < 1$	0.604	$d = 0.5$
SK_GOV	-0.362	$0 \leq d < 0.5$	0.217	$d = 0$	0.447	$d = 0.5$
UK_LEFT	0.313	$d = 0$	0.479	$d = 0$	0.984	$0.5 \leq d < 1$
UK_RIGHT	0.194	$d = 0$	0.420	$d = 0$	0.786	$0.5 \leq d < 1$
UK_GOV	0.406	$0 \leq d < 0.5$	0.372	$d = 0$	0.784	$d = 0.5$

Source: authors' calculation.

Regarding the MOD approach, the obtained inferences seem almost intact. Again, a vast majority of the assessed variables are mean-reverting and political shocks in EU countries seem rather short-lived. Again, the only two exceptions to this rule are Hungary and Czechia. When it comes to the ROB method, although the results are quantitatively different, the prevailing conclusions remain the same. Two of the three examined methods suggest that political sentiment is largely a short-memory process.

The complete set of results for all three methods is provided in Appendices 1-3.

Table 2 and Appendices 1-3 show no particular differences in the persistence level of LEFT and RIGHT, but we utilize the nonparametric Mann-Whitney test for independent samples to formally corroborate this finding. A positive entry in the second column of Table 3 implies that the median d for the method at hand is higher for RIGHT than for LEFT.

Table 3
Mann-Whitney test results

Method		Difference in median d (RIGHT vs. LEFT)	p-value
GPH		0.062	0.406
MOD		0.071	0.782
ROB		-0.095	0.165
Method		Difference in median d (new vs. old members)	p-value
GPH	LEFT	0.447	0.006
	RIGHT	0.156	0.695
	GOV	-0.198	0.449
MOD	LEFT	0.215	0.054
	RIGHT	0.111	0.695
	GOV	-0.040	1.000
ROB	LEFT	-0.016	0.863
	RIGHT	-0.102	0.116
	GOV	-0.188	0.343

Source: authors' calculation.

As the results in Table 3 suggest, there are no significant differences in the median integration orders of right-wing and left-wing government support.

We also test whether there are significant differences in the integration orders of new vs. old EU member states. The latter group comprises Austria, Belgium, Germany, Denmark, Finland, France, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Sweden, and the United Kingdom, while all remaining countries are treated as new EU member states. This empirical exercise is motivated by the conventional wisdom that electoral volatility is usually highly sensitive to macroeconomic outcomes across the EU (Dassonneville and Hooghe, 2017). The literature also suggests that the persistence of political sentiment might be considerably different for two-party and multiparty systems (Ohmura, 2021). A similar link is also noticed between the number of parties in the government and the stability of government policies: multiparty coalitions tend to produce more stable policy frameworks (Colomer, 2012). To empirically evaluate the potential link between the type of political system and the persistence of political sentiment, we divide our dataset into two-party and multiparty subsamples. The former consists of the UK and Malta, while all remaining countries have multiparty political systems. However, we found no significant difference in the persistence of political support between two-party and multiparty systems. For brevity, we do not report these results here. Moreover, electoral stability is found to be in direct relationship with the age of democracy (Mainwaring and Zoco, 2007; Lupu and Riedl, 2012). Finally, the concept of economic voting seems to be particularly important after the global financial crisis (Lobo and Pannico, 2020), which was long-lasting and had great repercussions for the new

EU members. With that in mind, we formally test whether the persistence of political sentiment was significantly stronger in new in comparison to the old member states. As the bottom half of Table 4 reveals, the median integration order of left-wing parties is considerably higher in new members than in the EU core. This finding holds for two out of three examined estimation techniques. Our findings can easily be linked to the proliferation of left-wing parties across the new EU member states as a response to rising inequality after 2008 (March, 2012; Nikolakakis, 2017).

Finally, to wrap up the whole story, we believe it would be meaningful to comment on the possible consequences of this result. Namely, the ingrained reduced political sentiment persistence might manifest in the higher volatility of the EU political systems and therefore even lower predictability of election results. We could expect less and less identification of party affiliation with personal or social identity and, accordingly, the further emergence of the diverse political parties whose popularity may grow rapidly, but fall just as fast, which indicates certain instability in the European political arena.

In this regard, the implication for the European political systems is straightforward. Although regularly established as multi-party systems, they have usually performed as *de facto* two-party environments. However, there are reasons to believe that European countries are on their way to a genuine multi-party climate with a third option that has never had such favourable conditions to rise rapidly in the political arena. A particularly important role in that process will surely be assigned to protest voters, whose significance across the EU is rapidly growing (Hernández, 2018; Birch and Dennison, 2019).

CONCLUSION

This paper seeks to augment the existing literature on the statistical properties of voting sentiment, while also trying to adequately explain its implications. Earlier research on this subject has been fairly uniform, both in research settings and in the obtained results. Specifically, the majority conducted a single-country analysis in a two-party framework, investigating the persistence of political support measured by opinion poll data. As scholars have usually focused on the US or the UK, no wonder the results mostly match, repeatedly indicating that government support is a highly persistent process. On the contrary, this research conducts a multi-country analysis searching for political sentiment features in a pan-European context.

Using the CPDS database, we estimate the fractional integration order of government support across the entire EU and find that the support of left- and right-wing parties in national governments exhibits its limited memory and low persistence. With hardly any exceptions, our findings are supported by two out of three FI estimators and are robust across the EU countries. Moreover, this holds for old as well as new member states. Apart from different initial settings, our results deviate from the ones in the existing literature as we measure government support by the number of seats in the parliament. We believe this ex-post method is more convenient as it is based on the actual election results rather than forecasts and potentially unacted beliefs comprised in opinion polls.

The short memory of government support in the majority of the analysed countries implies that an average EU voter is somewhat short-sighted and forgets about the disturbances in the political systems. In other words, public scandals and other negative shocks to political sentiment

for both left- and right-wing parties tend to be bumps in the road rather than perpetual downhill. Similarly, positive shocks to political support, such as implementing a widely accepted reform or successfully unifying the nation in hard times, will also eventually fade away. The observed short memory of political sentiment indicates overall lesser stability and predictability of the national political systems, and could therefore serve to enlighten the recent voting history in Europe.

Overall, this research is intended as an extensive, multi-layered empirical exercise with a specific purpose – to investigate the statistical properties of political support employing a rigid framework in order to better explain the dynamics of political processes in the EU. We see it as bridging the gap between theoretical models and the unpredictable and uncertain reality of EU politics. Hopefully, political scientists and experts would be better informed using this piece of the puzzle when inspecting the sources and determinants of the short memory of the EU political sentiment. Moreover, as it is expected that public reactions stabilize over time, EU policymakers might as well ingrain this information in their decision-making process.

To further examine the robustness of the results obtained here, future research endeavours should entail measuring the persistence of the EU political support on more frequent data. Such a framework would ensure much larger datasets and would open the door to incorporating structural break analysis into FI testing.

REFERENCES

Akarca, A.T., & Başlevent, C. (2011). Persistence in regional voting patterns in Turkey during a period of major political realignment. *European Urban and Regional Studies*, 18(2), 184-202. <https://doi.org/10.1177/0969776411399342>

Ansolabehere, S., & Gerber, A. (1997). Incumbency Advantage and the Persistence of Legislative

Majorities. *Legislative Studies Quarterly*, 22(2), 161-178. <https://doi.org/10.2307/440380>

Armington, K., Engler, S., & Leemann, L. (2022). *Comparative Political Data Set 1960-2020*. Department of Political Science, University of Zurich.

Barkoulas, J. T., & Baum, C. F. (1997). Long Memory and Forecasting in Euroyen Deposit Rates. *Asia-Pacific Financial Markets*, 4(3), 189-201. <https://doi.org/10.1023/A:1009630017314>

Baum, C.F., & Wiggins, V.L. (2000). sts16: Tests for long memory in a time series. *Stata Technical Bulletin*, 57, 39-44.

Birch, S., & Dennison, J. (2019) How protest voters choose. *Party Politics*, 25(2), 110-125. <https://doi.org/10.1177/1354068817698857>

Box-Steffensmeier, J., Dillard, M., Kimball, D., & Massengill, W. (2015). The long and short of it: the unpredictability of late deciding voters. *Electoral Studies*, 39, 181-194. <https://doi.org/10.1016/j.electstud.2015.03.013>

Box-Steffensmeier, J.M., Knight, K., & Sigelman, L. (1998). The Interplay of Macropartisanship and Macroideology: A Time Series Analysis. *The Journal of Politics*, 60(4), 1031-1049. <https://doi.org/10.2307/2647729>

Box-Steffensmeier, J.M., & Smith, R.M. (1996). The Dynamics of Aggregate Partisanship. *American Political Science Review*, 90(3), 567-580. <https://doi.org/10.2307/2082609>

Box-Steffensmeier, J.M., & Smith, R.M. (1998). Investigating Political Dynamics Using Fractional Integration Methods. *American Journal of Political Science*, 42(2), 661-689. <https://doi.org/10.2307/2991774>

Box-Steffensmeier, J.M., & Tomlinson, A.R. (2000). Fractional integration methods in political science. *Electoral Studies*, 19(1), 63-76. [https://doi.org/10.1016/S0261-3794\(99\)00036-0](https://doi.org/10.1016/S0261-3794(99)00036-0)

Byers, D., Davidson, J., & Peel, D. (1997). Modelling Political Popularity: An Analysis of Long-range Dependence in Opinion Poll Series. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 160(3), 471-490. <https://doi.org/10.1111/j.1467-985X.1997.00075.x>

Byers, D., Davidson, J., & Peel, D. (2000). The dynamics of aggregate political popularity: Evidence from eight countries. *Electoral Studies*, 19(1), 49-62. [https://doi.org/10.1016/S0261-3794\(99\)00035-9](https://doi.org/10.1016/S0261-3794(99)00035-9)

Clarke, H. D., Norpoth, H., & Whiteley, P. F. (1998). It's about time: Modelling political and social dynamics. U E. Scarborough and E. Tanenbaum

- (Ur.), Research strategies in the social sciences (str. 127-155). Oxford University Press.
- Clarke, H. D., & Lebo, M. (2003). Fractional (Co)Integration and Governing Party Support in Britain. *British Journal of Political Science*, 33(2), 283–301. <https://doi.org/10.1017/S0007123403000127>
- Colomer, J.M. (2012). The more parties, the greater policy stability. *European Political Science*, 11, 229-243. <https://doi.org/10.1057/eps.2011.34>
- Dassonneville, R., & Hooghe, M. (2017). Economic indicators and electoral volatility: economic effects on electoral volatility in Western Europe, 1950-2013. *Comparative European Politics*, 15, 919-943. <https://doi.org/10.1057/cep.2015.3>
- Davidson, J. (2005). Testing for Fractional Cointegration: The Relationship between Government Popularity and Economic Performance in the UK. U C. Diebolt and C. Kyrtou (Ur.), New Trends in Macroeconomics (str. 147–171). Springer-Verlag. https://doi.org/10.1007/3-540-28556-3_8
- DeBoef, S. (2000). Persistence and aggregations of survey data over time: From microfoundations to macropersistence. *Electoral Studies*, 19, 9-29. [https://doi.org/10.1016/s0261-3794\(99\)00033-5](https://doi.org/10.1016/s0261-3794(99)00033-5)
- DeBoef, S., & Granato, J. (1997). Near-Integrated Data and the Analysis of Political Relationships. *American Journal of Political Science*, 41(2), 619-640. <https://doi.org/10.2307/2111780>
- Elinas, A.A. (2015). Neo-Nazism in an established democracy: The persistence of Golden Dawn in Greece. *South European Society and Politics*, 20(1), 1-20. <https://doi.org/10.1080/13608746.2014.981379>
- Fiorina, M.P. (1992). An Era of Divided Government. *Political Science Quarterly*, 107(3), 387-410. <https://doi.org/10.2307/2152437>
- Gadea, M.D., & Mayoral, L. (2006). The persistence of inflation in OECD countries. A fractionally integrated approach. *International Journal of Central Banking*, 2(1), 51-104. <https://doi.org/10.2139/ssrn.1002300>
- Geweke, J., & Porter-Hudak, S. (1983). The estimation and application of long memory time series models. *Journal of Time Series Analysis*, 4(4), 221-238. <https://doi.org/10.1111/j.1467-9892.1983.tb00371.x>
- Gil-Alana, L.A. (2008). Long-Term Statistical Relationships in Political Science: An Analysis Based on Fractional Integration and Cointegration. *The Open Political Science Journal*, 1, 5-16. <https://doi.org/10.2174/1874949600801010005>
- Granger, C.W.J. (1980). Long memory relationships and the aggregation of dynamic models. *Journal of Econometrics*, 14(2), 227–238. [https://doi.org/10.1016/0304-4076\(80\)90092-5](https://doi.org/10.1016/0304-4076(80)90092-5)
- Granger, C.W.J., & Ding, Z. (1996). Varieties of long memory models. *Journal of Econometrics*, 73(1), 61–77. [https://doi.org/10.1016/0304-4076\(95\)01733-X](https://doi.org/10.1016/0304-4076(95)01733-X)
- Granger, C.W.J., & Joyeux, R. (1980). An Introduction to Long-Memory Time Series Models and Fractional Differencing. *Journal of Time Series Analysis*, 1(1), 15–29. <https://doi.org/10.1111/j.1467-9892.1980.tb00297.x>
- Hassler, U. (2019). Time Series Analysis with Long Memory in View. Wiley.
- Hellwig, T. (2007). Economic openness, policy uncertainty, and the dynamics of government support. *Electoral Studies*, 26(4), 772–786. <https://doi.org/10.1016/j.electstud.2007.06.005>
- Hernández, E. (2018). Democratic discontent and support for mainstream and challenger parties: Democratic protest voting. *European Union Politics*, 19(3), 458-480. <https://doi.org/10.1177/1465116518770812>
- Ignazi, P. (2003). Extreme right parties in Western Europe. Oxford University Press.
- Keil, A., Bernat, E.M., Cohen, M. X., Ding, M., Fabiani, M., Gratton, G., Kappenman, E.S., Maris, E., Mathewson, K.E., Ward, R.T., & Weisz, N. (2022). Recommendations and publication guidelines for studies using frequency domain and time-frequency domain analyses of neural time series. *Psychophysiology*, 59(5), 14052. <https://doi.org/10.1111/psyp.14052>
- Kitschelt, H. (2007) Growth and persistence of the radical right in postindustrial democracies: Advances and Challenges in Comparative Research. *West European Politics*, 30(5), 1176-1206. <https://doi.org/10.1080/01402380701617563>
- Lanier, D.N., Lebo, M.J., & Walker, R.W. (1998). The Long Memory of the Supreme Court. Presented at the annual meeting of the Southern Political Science Association, Atlanta.
- Lebo, M. J., Walker, R. W., & D. Clarke, H. (2000). You must remember this: Dealing with long memory in political analyses. *Electoral Studies*, 19(1), 31–48. [https://doi.org/10.1016/S0261-3794\(99\)00034-7](https://doi.org/10.1016/S0261-3794(99)00034-7)
- Lobo, M.C., & Pannico, R. (2020). Increased economic salience or blurring of responsibility? Economic voting during the Great Recession. *Electoral Studies*, 65, 102-141. <https://doi.org/10.1016/j.electstud.2020.102141>
- Lubbers, M., Gijsberts, M. and Scheepers, P. (2002). Extreme right-wing voting in Western Europe.

- European Journal of Political Research*, 41(3), 345-378. <https://doi.org/10.1111/1475-6765.00015>
- Lupu, N., & Riedl, R. B. (2013). Political Parties and Uncertainty in Developing Democracies. *Comparative Political Studies*, 46(11), 1339-1365. <https://doi.org/10.1177/0010414012453445>
- Mainardi, S. (2001) Fractional integration: an overview and results on mining sector time series. *Politická ekonomie*, 49(3). <https://doi.org/10.18267/j.polek.317>.
- Mainwaring, S., & Zoco, E. (2007). Political sequences and the stabilization of interparty competition: Electoral volatility in old and new democracies. *Party Politics*, 13(2), 155-178. <https://doi.org/10.1177/1354068807073852>
- March, L. (2012). Problems and perspectives of contemporary European radical left parties: Chasing a lost world or still a world to win? *International Critical Thought*, 2(3), 314-339. <https://doi.org/10.1080/21598282.2012.706777>
- Nelson, C., & Plosser, C. (1982). Trends and random walks in macroeconomic time series: Some evidence and implications. *Journal of Monetary Economics*, 10(2), 139-162. [https://doi.org/10.1016/0304-3932\(82\)90012-5](https://doi.org/10.1016/0304-3932(82)90012-5)
- Nikolakakis, N. (2017). Syriza's stance vis-à-vis the European Union following the financial crisis: the persistence of left Europeanism and the role of the European Left party. *European Politics and Society*, 18(2), 128-147. <https://doi.org/10.1080/23745118.2016.1196918>
- Ohmura, H. (2021). Macropartisanship in Multiparty Systems: A Comparative Study of Five Democracies. *Political Behavior*. <https://doi.org/10.1007/s11109-021-09699-6>
- Phillips, P.C.B. (1999). Discrete Fourier Transforms of Fractional Processes. Working paper No. 1243, Cowles Foundation for Research in Economics, Yale University. Dostupno na: <http://cowles.econ.yale.edu/P/cd/d12a/d1243.pdf>
- Phillips, P.C.B. (2007). Unit Root Log Periodogram Regression. *Journal of Econometrics*, 138(1), 104-124. <https://doi.org/10.1016/j.jeconom.2006.05.017>
- Raunio, T. (2007). Softening but persistent: Euroscepticism in the Nordic countries. *Acta Politica*, 42, 191-210. <https://doi.org/10.1057/palgrave.ap.5500183>
- Robinson, P. M. (1995). Log-Periodogram Regression of Time Series with Long Range Dependence. *Annals of Statistics*, 23(3), 1048-1072. <https://doi.org/10.2307/2242436>
- Saarts, T. (2015). Persistence and decline of political parties: the case of Estonia. *East European Politics*, 31(2), 208-228. <https://doi.org/10.1080/21599165.2015.1036035>
- Schmidt, M. G. (1996). When Parties Matter: A Review of the Possibilities and Limits of Partisan Influence on Public Policy. *European Journal of Political Research*, 30, 155-183. <https://doi.org/10.1111/j.1475-6765.1996.tb00673.x>
- Snowdon, B., & Vane, H. R. (2005). Modern macroeconomics. Edward Elgar.
- Steehouwer, H. (2010). *A frequency domain methodology for time series modelling*. U Berkeley, A.B., Coche, J., Nyholm, K. (Ur), Interest rate models, asset allocation and quantitative techniques for central banks and sovereign wealth funds. Palgrave Macmillan. https://doi.org/10.1057/9780230251298_15
- Usherwood, S., & Startin, N. (2013). Euroscepticism as a persistent phenomenon. *Journal of Common Market Studies*, 51(1), 1-16. <https://doi.org/10.1111/j.1468-5965.2012.02297.x>
- Van Elsas, E.J. (2017). Appealing to the 'losers'? The electorates of left-wing and right-wing Eurosceptic parties compared, 1989-2014. *Electoral Studies*, 50, 68-79. <https://doi.org/10.1016/j.electstud.2017.09.013>
- Zulianello, M., & Larsen, E.G. (2021). Populist parties in European Parliament elections: A new dataset on left, right and valence populism from 1979 to 2019. *Electoral Studies*, 71, 102-312. <https://doi.org/10.1016/j.electstud.2021.102312>

Appendix 1

FI test results: GPH method (complete results)

Variable	d	Std. error	p(H ₀ :d=0)	p(H ₀ :d=0.5)	p(H ₀ :d=1)	Conclusion
AT_LEFT	0.332	0.287	0.299	0.708	0.067	$0 \leq d < 0.5$
AT_RIGHT	0.263	0.391	0.531	0.715	0.118	$d = 0$
AT_GOV	-0.144	0.561	0.807	0.849	0.097	$0 \leq d < 0.5$
BE_LEFT	0.001	0.339	0.997	0.899	0.032	$0 \leq d < 0.5$
BE_RIGHT	0.701	0.402	0.141	0.681	0.490	$d = 0$
BE_GOV	-0.335	0.227	0.200	0.993	0.002	$0 \leq d < 0.5$
BG_LEFT	-0.476	0.307	0.182	0.988	0.005	$0 \leq d < 0.5$
BG_RIGHT	1.009	1.285	0.468	0.646	0.994	$d = 0$
BG_GOV	0.395	0.246	0.169	0.657	0.057	$0 \leq d < 0.5$
CY_LEFT	1.184	0.618	0.114	0.841	0.778	$d = 0$
CY_RIGHT	-0.301	0.359	0.439	0.962	0.015	$0 \leq d < 0.5$
CY_GOV	0.098	0.199	0.644	0.950	0.006	$0 \leq d < 0.5$
CZ_LEFT	1.133	0.456	0.056	0.888	0.782	$0.5 \leq d < 1$
CZ_RIGHT	1.972	0.823	0.062	0.933	0.291	$0.5 \leq d < 1$
CZ_GOV	0.410	0.089	0.006	0.819	0.001	$d = 0.5$
DE_LEFT	0.209	0.469	0.674	0.719	0.153	$d = 0$
DE_RIGHT	0.267	0.281	0.384	0.778	0.048	$0 \leq d < 0.5$
DE_GOV	0.301	0.444	0.528	0.664	0.176	$d = 0$
DK_LEFT	0.563	0.386	0.204	0.562	0.309	$d = 0$
DK_RIGHT	0.143	0.397	0.734	0.796	0.083	$d = 0$
DK_GOV	-0.358	0.291	0.274	0.984	0.006	$d = 0$
EE_LEFT	1.274	0.558	0.071	0.888	0.645	$0.5 \leq d < 1$
EE_RIGHT	0.740	0.508	0.205	0.672	0.631	$d = 0$
EE_GOV	0.969	0.921	0.341	0.684	0.974	$d = 0$
EL_LEFT	0.300	0.634	0.656	0.617	0.320	$d = 0$
EL_RIGHT	0.306	0.479	0.551	0.649	0.207	$d = 0$
EL_GOV	0.062	0.272	0.829	0.916	0.018	$0 \leq d < 0.5$
FI_LEFT	0.491	0.655	0.487	0.505	0.472	$d = 0$
FI_RIGHT	0.516	0.287	0.132	0.521	0.152	$d = 0$
FI_GOV	0.442	0.417	0.338	0.553	0.238	$d = 0$
FR_LEFT	0.224	0.360	0.560	0.761	0.084	$0 \leq d < 0.5$
FR_RIGHT	0.598	0.401	0.197	0.591	0.362	$d = 0$
FR_GOV	-0.397	0.248	0.170	0.992	0.002	$0 \leq d < 0.5$
HR_LEFT	0.170	0.703	0.818	0.671	0.291	$d = 0$
HR_RIGHT	0.488	0.504	0.377	0.509	0.356	$d = 0$
HR_GOV	-0.487	1.135	0.686	0.788	0.247	$d = 0$
HU_LEFT	0.757	0.334	0.073	0.762	0.499	$0.5 \leq d < 1$
HU_RIGHT	1.535	1.122	0.229	0.801	0.653	$d = 0$
HU_GOV	1.099	0.455	0.061	0.877	0.836	$0.5 \leq d < 1$
IE_LEFT	-0.274	0.215	0.259	0.992	0.002	$0 \leq d < 0.5$
IE_RIGHT	-0.599	0.386	0.182	0.982	0.009	$0 \leq d < 0.5$

Variable	d	Std. error	p(H ₀ :d=0)	p(H ₀ :d=0.5)	p(H ₀ :d=1)	Conclusion
IE_GOV	-0.483	0.153	0.025	0.999	0.000	d = 0.5
IT_LEFT	-0.143	0.214	0.534	0.985	0.003	0 ≤ d < 0.5
IT_RIGHT	0.764	0.318	0.061	0.778	0.490	0.5 ≤ d < 1
IT_GOV	0.173	0.834	0.844	0.645	0.367	d = 0
LT_LEFT	0.637	0.399	0.171	0.627	0.405	d = 0
LT_RIGHT	0.153	0.475	0.761	0.751	0.135	d = 0
LT_GOV	-0.014	0.354	0.969	0.897	0.035	0 ≤ d < 0.5
LU_LEFT	-0.240	0.416	0.589	0.932	0.031	0 ≤ d < 0.5
LU_RIGHT	0.526	0.343	0.185	0.529	0.226	d = 0
LU_GOV	0.833	0.575	0.207	0.706	0.783	d = 0
LV_LEFT	1.238	0.229	0.003	0.988	0.346	0.5 ≤ d < 1
LV_RIGHT	-0.300	0.410	0.497	0.946	0.025	0 ≤ d < 0.5
LV_GOV	-0.094	1.008	0.929	0.709	0.327	d = 0
MT_LEFT	0.973	0.408	0.063	0.850	0.949	0.5 ≤ d < 1
MT_RIGHT	-	-	-	-	-	-
MT_GOV	0.432	0.312	0.224	0.582	0.128	d = 0
NL_LEFT	0.110	0.271	0.701	0.895	0.022	0 ≤ d < 0.5
NL_RIGHT	0.176	0.323	0.609	0.820	0.051	0 ≤ d < 0.5
NL_GOV	0.608	0.220	0.040	0.678	0.135	0.5 ≤ d < 1
PL_LEFT	0.199	0.486	0.699	0.719	0.160	d = 0
PL_RIGHT	0.431	0.307	0.220	0.585	0.123	d = 0
PL_GOV	-0.179	0.317	0.598	0.957	0.014	0 ≤ d < 0.5
PT_LEFT	0.171	1.021	0.873	0.620	0.454	d = 0
PT_RIGHT	0.340	0.531	0.551	0.612	0.269	d = 0
PT_GOV	0.203	0.266	0.480	0.843	0.030	0 ≤ d < 0.5
RO_LEFT	1.194	0.891	0.238	0.765	0.836	d = 0
RO_RIGHT	0.238	0.309	0.475	0.783	0.057	0 ≤ d < 0.5
RO_GOV	-0.274	0.275	0.365	0.981	0.006	0 ≤ d < 0.5
SE_LEFT	0.407	0.388	0.342	0.590	0.188	d = 0
SE_RIGHT	0.553	0.449	0.273	0.545	0.365	d = 0
SE_GOV	-0.010	0.350	0.978	0.898	0.034	0 ≤ d < 0.5
SI_LEFT	0.391	0.766	0.632	0.554	0.462	d = 0
SI_RIGHT	0.216	0.384	0.598	0.754	0.096	d = 0
SI_GOV	-0.703	0.258	0.042	0.997	0.001	d = 0.5
SK_LEFT	0.445	0.419	0.337	0.549	0.243	d = 0
SK_RIGHT	1.414	0.625	0.073	0.898	0.537	0.5 ≤ d < 1
SK_GOV	-0.362	0.347	0.345	0.972	0.011	0 ≤ d < 0.5
UK_LEFT	0.313	0.589	0.617	0.618	0.296	d = 0
UK_RIGHT	0.194	0.764	0.810	0.647	0.339	d = 0
UK_GOV	0.406	0.260	0.180	0.633	0.071	0 ≤ d < 0.5

Note: Country abbreviations are as **previously defined**. Source: Authors' calculation.

Appendix 2

FI test results: MOD method (complete results)

Variable	d	Std. error	p(H ₀ :d=0)	p(H ₀ :d=0.5)	p(H ₀ :d=1)	Conclusion
AT_LEFT	0.286	0.207	0.227	0.826	0.018	d = 0
AT_RIGHT	0.183	0.374	0.645	0.782	0.081	0 ≤ d < 0.5
AT_GOV	0.864	0.611	0.217	0.711	0.832	d = 0
BE_LEFT	0.218	0.479	0.667	0.709	0.163	d = 0
BE_RIGHT	0.511	0.517	0.369	0.508	0.387	d = 0
BE_GOV	0.557	0.643	0.426	0.534	0.522	d = 0
BG_LEFT	-0.305	0.239	0.257	0.990	0.003	0 ≤ d < 0.5
BG_RIGHT	0.556	0.694	0.459	0.531	0.551	d = 0
BG_GOV	0.384	0.235	0.163	0.679	0.047	0 ≤ d < 0.5
CY_LEFT	1.069	0.418	0.051	0.884	0.876	0.5 ≤ d < 1
CY_RIGHT	-0.704	0.449	0.178	0.978	0.013	0 ≤ d < 0.5
CY_GOV	0.180	0.209	0.428	0.907	0.011	0 ≤ d < 0.5
CZ_LEFT	1.215	0.527	0.069	0.884	0.700	0.5 ≤ d < 1
CZ_RIGHT	1.824	0.724	0.053	0.936	0.307	0.5 ≤ d < 1
CZ_GOV	0.528	0.115	0.006	0.591	0.009	d = 0.5
DE_LEFT	0.267	0.448	0.577	0.687	0.163	d = 0
DE_RIGHT	0.210	0.218	0.380	0.880	0.015	0 ≤ d < 0.5
DE_GOV	0.371	0.434	0.431	0.611	0.207	d = 0
DK_LEFT	0.505	0.446	0.309	0.504	0.317	d = 0
DK_RIGHT	0.390	0.330	0.291	0.624	0.124	d = 0
DK_GOV	0.068	0.249	0.795	0.928	0.013	0 ≤ d < 0.5
EE_LEFT	0.780	0.561	0.223	0.681	0.711	d = 0
EE_RIGHT	0.629	0.439	0.212	0.610	0.437	d = 0
EE_GOV	0.354	0.519	0.525	0.605	0.268	d = 0
EL_LEFT	0.243	0.488	0.639	0.689	0.181	d = 0
EL_RIGHT	0.232	0.383	0.572	0.742	0.101	d = 0
EL_GOV	-0.138	0.268	0.630	0.968	0.008	0 ≤ d < 0.5
FI_LEFT	0.778	0.934	0.443	0.611	0.821	d = 0
FI_RIGHT	0.597	0.332	0.132	0.609	0.279	d = 0
FI_GOV	0.334	0.353	0.388	0.671	0.118	d = 0
FR_LEFT	0.304	0.301	0.359	0.729	0.068	0 ≤ d < 0.5
FR_RIGHT	0.609	0.338	0.132	0.620	0.300	d = 0
FR_GOV	-0.388	0.255	0.189	0.991	0.003	0 ≤ d < 0.5
HR_LEFT	0.686	0.418	0.162	0.663	0.487	d = 0
HR_RIGHT	1.006	0.464	0.082	0.837	0.989	0.5 ≤ d < 1
HR_GOV	1.482	1.161	0.258	0.782	0.695	d = 0
HU_LEFT	0.379	0.346	0.323	0.630	0.132	d = 0
HU_RIGHT	0.826	0.348	0.064	0.804	0.638	0.5 ≤ d < 1
HU_GOV	1.423	0.626	0.072	0.900	0.530	0.5 ≤ d < 1
IE_LEFT	-0.527	0.216	0.059	0.997	0.001	d = 0.5
IE_RIGHT	0.107	0.154	0.520	0.974	0.002	0 ≤ d < 0.5

Variable	d	Std. error	p(H ₀ :d=0)	p(H ₀ :d=0.5)	p(H ₀ :d=1)	Conclusion
IE_GOV	0.135	0.177	0.480	0.953	0.005	0 ≤ d < 0.5
IT_LEFT	-0.621	0.269	0.069	0.996	0.002	0 ≤ d < 0.5
IT_RIGHT	0.645	0.332	0.110	0.660	0.334	d = 0
IT_GOV	0.102	0.751	0.897	0.690	0.285	d = 0
LT_LEFT	0.514	0.390	0.245	0.514	0.268	d = 0
LT_RIGHT	0.111	0.425	0.804	0.799	0.091	0 ≤ d < 0.5
LT_GOV	-0.399	0.427	0.392	0.956	0.022	0 ≤ d < 0.5
LU_LEFT	-0.133	0.287	0.663	0.961	0.011	0 ≤ d < 0.5
LU_RIGHT	0.530	0.313	0.151	0.537	0.194	d = 0
LU_GOV	0.650	0.274	0.064	0.697	0.258	0.5 ≤ d < 1
LV_LEFT	0.458	0.242	0.118	0.566	0.076	0 ≤ d < 0.5
LV_RIGHT	0.247	0.216	0.304	0.853	0.017	0 ≤ d < 0.5
LV_GOV	0.569	0.581	0.372	0.545	0.492	d = 0
MT_LEFT	1.082	0.383	0.037	0.906	0.838	0.5 ≤ d < 1
MT_RIGHT	-	-	-	-	-	-
MT_GOV	0.313	0.416	0.485	0.664	0.160	d = 0
NL_LEFT	0.158	0.384	0.698	0.793	0.080	0 ≤ d < 0.5
NL_RIGHT	0.161	0.320	0.636	0.831	0.047	0 ≤ d < 0.5
NL_GOV	0.421	0.227	0.123	0.629	0.051	0 ≤ d < 0.5
PL_LEFT	-0.898	1.335	0.531	0.829	0.214	d = 0
PL_RIGHT	-0.908	0.493	0.125	0.982	0.012	0 ≤ d < 0.5
PL_GOV	-0.819	0.297	0.040	0.997	0.002	d = 0.5
PT_LEFT	-0.530	0.503	0.340	0.952	0.029	0 ≤ d < 0.5
PT_RIGHT	-0.380	0.491	0.473	0.934	0.037	0 ≤ d < 0.5
PT_GOV	0.155	0.269	0.589	0.872	0.026	0 ≤ d < 0.5
RO_LEFT	1.140	0.373	0.028	0.926	0.723	0.5 ≤ d < 1
RO_RIGHT	0.267	0.297	0.409	0.766	0.057	0 ≤ d < 0.5
RO_GOV	0.207	0.260	0.462	0.845	0.028	0 ≤ d < 0.5
SE_LEFT	0.100	0.502	0.850	0.769	0.133	d = 0
SE_RIGHT	0.477	0.423	0.311	0.521	0.272	d = 0
SE_GOV	0.558	0.361	0.183	0.561	0.276	d = 0
SI_LEFT	0.415	1.234	0.750	0.526	0.656	d = 0
SI_RIGHT	0.554	0.634	0.422	0.533	0.514	d = 0
SI_GOV	-0.336	0.286	0.293	0.984	0.005	0 ≤ d < 0.5
SK_LEFT	0.370	0.698	0.619	0.570	0.408	d = 0
SK_RIGHT	1.020	0.302	0.020	0.927	0.949	0.5 ≤ d < 1
SK_GOV	0.217	0.410	0.619	0.739	0.115	d = 0
UK_LEFT	0.479	0.423	0.308	0.519	0.273	d = 0
UK_RIGHT	0.420	0.578	0.500	0.552	0.362	d = 0
UK_GOV	0.372	0.253	0.202	0.682	0.056	d = 0

Note: Country abbreviations are as **previously defined**. Source: Authors' calculation.

Appendix 3

FI test results: ROB method (complete results)

Variable	d	Std. error	p(H0:d=0)	p(H ₀ :d=0.5)	p(H ₀ :d=1)	Conclusion
AT_LEFT	1.052	0.173	0.002	0.988	0.775	$0.5 \leq d < 1$
AT_RIGHT	0.579	0.129	0.007	0.716	0.023	$d = 0.5$
AT_GOV	0.726	0.136	0.003	0.921	0.101	$0.5 \leq d < 1$
BE_LEFT	0.873	0.095	0.000	0.994	0.239	$0.5 \leq d < 1$
BE_RIGHT	0.900	0.075	0.000	0.998	0.241	$0.5 \leq d < 1$
BE_GOV	0.723	0.114	0.001	0.947	0.059	$d = 0.5$
BG_LEFT	0.652	0.270	0.061	0.701	0.255	$0.5 \leq d < 1$
BG_RIGHT	0.533	0.227	0.066	0.555	0.095	$d = 0.5$
BG_GOV	1.185	0.189	0.002	0.992	0.371	$0.5 \leq d < 1$
CY_LEFT	0.782	0.141	0.003	0.949	0.183	$0.5 \leq d < 1$
CY_RIGHT	0.675	0.143	0.005	0.862	0.072	$d = 0.5$
CY_GOV	0.789	0.135	0.002	0.958	0.179	$0.5 \leq d < 1$
CZ_LEFT	0.870	0.232	0.013	0.914	0.600	$0.5 \leq d < 1$
CZ_RIGHT	1.187	0.233	0.004	0.984	0.458	$0.5 \leq d < 1$
CZ_GOV	0.612	0.089	0.001	0.869	0.007	$d = 0.5$
DE_LEFT	0.918	0.141	0.001	0.984	0.585	$0.5 \leq d < 1$
DE_RIGHT	0.820	0.146	0.002	0.960	0.274	$0.5 \leq d < 1$
DE_GOV	0.575	0.098	0.002	0.759	0.007	$d = 0.5$
DK_LEFT	0.737	0.103	0.001	0.965	0.051	$d = 0.5$
DK_RIGHT	0.728	0.128	0.002	0.932	0.087	$d = 0.5$
DK_GOV	0.490	0.109	0.006	0.534	0.005	$d = 0.5$
EE_LEFT	0.792	0.188	0.008	0.909	0.318	$0.5 \leq d < 1$
EE_RIGHT	0.594	0.160	0.014	0.709	0.052	$d = 0.5$
EE_GOV	0.558	0.191	0.033	0.613	0.068	$d = 0.5$
EL_LEFT	0.865	0.155	0.003	0.968	0.421	$0.5 \leq d < 1$
EL_RIGHT	0.627	0.117	0.003	0.836	0.024	$d = 0.5$
EL_GOV	0.081	0.055	0.204	1.000	0.000	$0 \leq d < 0.5$
FI_LEFT	0.779	0.139	0.003	0.949	0.172	$0.5 \leq d < 1$
FI_RIGHT	0.819	0.115	0.001	0.980	0.177	$0.5 \leq d < 1$
FI_GOV	0.511	0.100	0.004	0.541	0.005	$d = 0.5$
FR_LEFT	1.120	0.145	0.001	0.996	0.446	$0.5 \leq d < 1$
FR_RIGHT	1.091	0.114	0.000	0.998	0.462	$0.5 \leq d < 1$
FR_GOV	0.757	0.118	0.001	0.959	0.095	$d = 0.5$
HR_LEFT	0.682	0.288	0.064	0.722	0.320	$0.5 \leq d < 1$
HR_RIGHT	0.739	0.172	0.008	0.889	0.188	$0.5 \leq d < 1$
HR_GOV	0.317	0.182	0.141	0.820	0.013	$0 \leq d < 0.5$
HU_LEFT	1.270	0.218	0.002	0.992	0.270	$0.5 \leq d < 1$
HU_RIGHT	1.162	0.252	0.006	0.977	0.547	$0.5 \leq d < 1$
HU_GOV	1.161	0.164	0.001	0.995	0.371	$0.5 \leq d < 1$
IE_LEFT	0.787	0.099	0.001	0.983	0.085	$d = 0.5$
IE_RIGHT	0.695	0.156	0.007	0.867	0.108	$0.5 \leq d < 1$

IE_GOV	0.824	0.109	0.001	0.985	0.165	$0.5 \leq d < 1$
IT_LEFT	0.884	0.131	0.001	0.984	0.416	$0.5 \leq d < 1$
IT_RIGHT	0.742	0.146	0.004	0.921	0.137	$0.5 \leq d < 1$
IT_GOV	0.199	0.136	0.203	0.961	0.002	$0 \leq d < 0.5$
LT_LEFT	0.819	0.268	0.028	0.857	0.529	$0.5 \leq d < 1$
LT_RIGHT	0.688	0.210	0.022	0.795	0.197	$0.5 \leq d < 1$
LT_GOV	0.537	0.219	0.058	0.564	0.089	$d = 0.5$
LU_LEFT	0.772	0.113	0.001	0.970	0.099	$d = 0.5$
LU_RIGHT	1.074	0.136	0.001	0.996	0.608	$0.5 \leq d < 1$
LU_GOV	0.759	0.119	0.001	0.959	0.099	$d = 0.5$
LV_LEFT	0.429	0.247	0.142	0.607	0.069	$0 \leq d < 0.5$
LV_RIGHT	0.331	0.135	0.058	0.866	0.004	$d = 0.5$
LV_GOV	0.001	0.221	0.998	0.963	0.006	$0 \leq d < 0.5$
MT_LEFT	0.877	0.096	0.000	0.995	0.254	$0.5 \leq d < 1$
MT_RIGHT	-	-	-	-	-	
MT_GOV	0.859	0.149	0.002	0.970	0.387	$0.5 \leq d < 1$
NL_LEFT	0.767	0.106	0.001	0.973	0.079	$d = 0.5$
NL_RIGHT	0.781	0.129	0.002	0.959	0.151	$0.5 \leq d < 1$
NL_GOV	0.741	0.099	0.001	0.970	0.048	$d = 0.5$
PL_LEFT	0.850	0.260	0.022	0.882	0.590	$0.5 \leq d < 1$
PL_RIGHT	0.837	0.185	0.006	0.936	0.418	$0.5 \leq d < 1$
PL_GOV	0.692	0.147	0.005	0.876	0.090	$d = 0.5$
PT_LEFT	0.665	0.182	0.015	0.796	0.125	$0.5 \leq d < 1$
PT_RIGHT	0.734	0.106	0.001	0.961	0.054	$d = 0.5$
PT_GOV	0.352	0.102	0.018	0.896	0.001	$d = 0.5$
RO_LEFT	0.298	0.187	0.172	0.836	0.013	$0 \leq d < 0.5$
RO_RIGHT	0.705	0.220	0.024	0.803	0.236	$0.5 \leq d < 1$
RO_GOV	0.282	0.157	0.133	0.888	0.006	$0 \leq d < 0.5$
SE_LEFT	0.887	0.922	0.380	0.654	0.908	$d = 0$
SE_RIGHT	0.789	0.081	0.000	0.992	0.048	$d = 0.5$
SE_GOV	0.211	0.080	0.046	0.992	0.000	$d = 0.5$
SI_LEFT	0.258	0.153	0.152	0.913	0.005	$0 \leq d < 0.5$
SI_RIGHT	0.404	0.147	0.041	0.729	0.010	$d = 0.5$
SI_GOV	0.293	0.192	0.188	0.834	0.014	$0 \leq d < 0.5$
SK_LEFT	0.814	0.172	0.005	0.936	0.329	$0.5 \leq d < 1$
SK_RIGHT	0.604	0.171	0.017	0.716	0.068	$d = 0.5$
SK_GOV	0.447	0.143	0.026	0.637	0.012	$d = 0.5$
UK_LEFT	0.984	0.144	0.001	0.990	0.916	$0.5 \leq d < 1$
UK_RIGHT	0.786	0.137	0.002	0.955	0.178	$0.5 \leq d < 1$
UK_GOV	0.784	0.104	0.001	0.979	0.093	$d = 0.5$

Note: Country abbreviations are as **previously defined**. Source: Authors' calculation.

Sažetak

PERZISTENTNOST PODRŠKE VLADI U ZEMLJAMA EU

Petar Sorić

Marina Matošec

*Ekonomski fakultet, Sveučilište u Zagrebu,
Zagreb, Hrvatska*

U radu se doprinosi postojećoj literaturi kroz opsežnu analizu perzistentnosti podrške građana vladi u međunarodnom kontekstu. Konkretno, ovaj rad je inicijalni pokušaj procjene reda frakcionarne integracije potpore vladi u zemljama EU, koje su dosad bile izvan fokusa sličnih studija. Iskorištavajući bogatstvo podataka iz baze Comparative Political Data Set (CPDS), autori otkrivaju da je podrška i lijevim i desnim opcijama u nacionalnih parlamentima uglavnom proces ograničene memorije i relativno niske perzistentnosti. Navedeni nalazi su pouzdani u zemljama EU-a (uz vrlo mali broj iznimaka) te ih podržavaju dva od tri procjenitelja frakcionarne integracije. Ovi bi rezultati mogli informirati znanstvenike, političare i kreatore politike EU-a da izvanredni događaji (povezani s podrškom vladi) relativno brzo nestaju iz sjećanja tipičnog europskog glasača.

Ključne riječi: potpora vladi, politički sentiment, perzistentnost, frakcionarna integracija.