Weathering the Crisis:

Evidence of Diffuse Support for the EU from a Six-Wave Dutch Panel

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Abstract

The 2008 economic crisis and the Eurozone crisis gave rise to more voices challenging the European Union (EU), which in turn led to concerns about the resilience of the EU’s popular legitimacy. In times of crisis, democratic political regimes draw legitimacy from diffuse support from its citizens. Is there, however, diffuse support for the European Union? Although existing research suggests that there is, the evidence to date is thin, being based only on cross-sectional analysis. Diffuse support, however, is defined by its individual-level longitudinal characteristics. Due to the focus on cross-sectional data, the extant literature fails to demonstrate that support for the EU displays the key defining characteristic of diffuse support: individual-level stability over a time of crisis. I address this gap by using a six-wave panel dataset from the Netherlands to study over-time stability in support for the European Parliament during the 2008 economic crisis. I argue that public support for the European Parliament is highly diffuse. Using aggregate-data analysis, a longitudinal model that accounts for potential measurement error, and a dynamic panel data model, I find that although the economic crisis caused some variation in support for the European Parliament, over-time levels of support among individuals remained highly stable throughout the period of the study (2007-2012). These results suggest that in times of crisis the European Union can draw on mass public support as a source of resilience.

Keywords: political support, diffuse support, European Union, panel data analysis, economic crisis

Introduction

In 2008, the European Union (EU) entered a severe economic recession. A serious crisis in the Eurozone followed less than two years later. These events put the European Union under great pressure. They even threatened to break up one of the major achievements of European integration – the common European currency. As the economic and monetary crisis unfolded, more and more voices questioning membership in the EU emerged across Europe. These voices
were echoed by a growing popularity of Eurosceptic political parties (Usherwood et al., 2013; Duff, 2013). These developments have raised concerns about the resilience of the supranational political regime in Europe. Is the European Union resilient enough to weather a major economic crisis? Mass public political support is an important source of resilience for political regimes. One particular type of support – diffuse support – contributes to regime stability during difficult times such as economic crises (Easton, 1965). I therefore address the concerns about European Union’s resilience to crises by investigating the following question: How "diffuse" is support for the European Union?

The question about diffuse support for the European Union relates to a theoretical distinction between two types of political support: specific and diffuse. While specific support is a "running-tally" type of attitude that fluctuates according to the political regime's performance, diffuse support is an affective attitude. Diffuse support persists even in times when citizens become dissatisfied with the regime’s policies (Easton, 1965; Norris, 1999; Harteveld et al., 2013).

The theoretical distinction between specific and diffuse support is important in assessing the resilience of political regimes (Easton, 1965; Dalton, 2004; Norris, 2011). If political support for a regime is largely specific, then an event such as an economic crisis threatens the very survival of the regime. As the economic crisis brings hardships, citizens express negative evaluations of the regime’s performance and these, in turn, decrease political support. If, on the other hand, a regime enjoys diffuse support, it can use this stable reservoir of support to weather the crisis. A European Union that commands diffuse political support is therefore much more resilient to crises than a Union that depends on specific support.
Although the scholarly literature shows a growing consensus that support for the European Union has diffuse characteristics (Beaudonnet and Franklin, 2014; Serricchio et al., 2013; Torcal et al., 2012a; Hooghe and Marks, 2004), the empirical foundation for this consensus is rather limited. Virtually all evidence of diffuse support for the EU in the existing literature is based on cross-sectional comparative data. Diffuse support, however, is fundamentally a longitudinal phenomenon. It is defined as an individual’s attachment to a political regime that persists through a crisis. The longitudinal dimension is therefore crucial in the study of diffuse support.

Although the existing research devotes some attention to the longitudinal dimension of support, it does so only at the aggregate level of analysis (Serricchio et al., 2013; Beaudonnet and Franklin, 2014). Aggregate-level studies, however, do not necessarily demonstrate the presence of diffuse support. Over-time stability at the aggregate level may mask instability at the individual level. We therefore need to demonstrate stability at the individual level in order to provide evidence of diffuse support for the EU. Due the focus on cross-sectional data, however, the existing literature fails to provide such evidence. It is the goal of the present paper to fill this gap.

I use a six-wave panel survey from the Netherlands to study over-time stability of support for the EU during the 2008 economic crisis. I focus on political support for one of EU’s institutions – the European Parliament. I find that although the economic crisis caused some variability in public support for the EU, levels of support at the individual level displayed a high level of stability throughout the period of the economic crisis. This level of stability even approached the level of stability in support for democracy, which is regarded as one of the most diffuse dimensions of political support (Norris, 1999; Norris, 2011). Given that this high level of
stability was observed during a major economic crisis, I argue that public support for the EU is highly diffuse. The results from my analysis suggest that in times of crisis, the European Union can draw on mass public support as a source of resilience.

**Literature review, theory, and hypotheses**

Before proceeding with a review of the literature on political support for the European Union, it is important to explain what is meant by political support. Most broadly, political support (or mass public support) is defined as individuals’ favorable or unfavorable orientations towards an object that represents the political system. The objects of citizens’ support include the community of the political nation, the principles and institutions of the political regime, and the officeholders who represent these institutions (Easton, 1965; Norris, 1999). In this paper I focus on support for the political regime of the EU. I therefore define political support as support for EU institutions.

In order to determine whether political support provides legitimacy to a regime challenged by a crisis, it is important distinguish between two kinds of support: *specific* support and *diffuse* support (Easton, 1965; Dalton, 2004). Specific support is a running-tally. Citizens adjust their level of specific support based on how satisfied they are with the current policy outputs of the political regime. Diffuse support, on the other hand, is independent of current regime performance. It is based on deeper, affective feelings. Diffuse support, therefore, does not fluctuate according to the current regime performance.

Given the different sources of specific and diffuse support, the two types of support differ in how stable they are over time, especially during times of crisis when citizens become dissatisfied with regime policies. While specific support changes over time as it is being updated
in line with evaluations of regime performance, diffuse support remains stable (Easton, 1965; Dalton, 2004; Norris, 2011; Norris, 1999). Although an extended period of low regime performance has the potential to affect diffuse support as well, over-time stability in the short-term through a time of crisis is the key defining characteristic of diffuse support (Easton, 1965). A regime that enjoys diffuse support can therefore use this stable reservoir of support to weather a crisis. Such a regime is thus much more resilient to crises than a regime that depends on specific support.

Empirical studies of attitudes towards the European Union show that support for the EU takes both specific and diffuse forms. Some studies suggest that support for the EU has a specific component. Macroeconomic indicators such as the level of inflation or GDP influence support for the EU (Eichenberg and Dalton, 2007). At the individual level, support for the EU correlates with citizens’ perception of personal benefits from EU integration (Gabel and Palmer, 1995; Mau, 2005; Torcal et al., 2012b) and with perceptions of the national economy (Hooghe and Marks, 2004; Klingeren et al., 2013). In addition, citizens whose occupations gain more from European integration express more support for the EU (Gabel, 1998; Hooghe and Marks, 2004).

Another branch of research suggests that support for the EU has a diffuse component as well. Multiple studies find that individuals’ feelings of European identity are a good predictor of support for the EU (Torcal et al., 2012a; Hooghe and Marks, 2004; Serricchio et al., 2013). Since identity is an affective feeling (Sanders et al., 2012), this evidence suggests that support for the EU is at least partly diffuse.

Although the literature provides some evidence suggesting that support for the European Union is diffuse (Serricchio et al., 2013; Torcal et al., 2012a; Hooghe and Marks, 2004), this evidence is rather limited. Heretofore, all research demonstrating diffuse support for the EU is
based on cross-sectional data. Diffuse support, however, is fundamentally a longitudinal phenomenon. It is defined as an individual’s attachment to a political regime that persists through a crisis. The longitudinal dimension is therefore crucial in the study of diffuse support.

Although the existing research devotes some attention to the longitudinal dimension of support, it does so only at the aggregate level of analysis (Serricchio et al., 2013; Beaudonnet and Franklin, 2014). Aggregate-level studies, however, do not necessarily demonstrate the presence of diffuse support. Over-time stability at the aggregate level may mask instability at the individual level. We therefore need to demonstrate stability at the individual level in order to provide evidence of diffuse support for the EU. Due to the focus on cross-sectional data, however, the existing literature fails to provide such evidence.

There are distinct theoretical expectations regarding the level of over-time stability in each of the two types of political support. Specific support is tied to evaluations of regime performance. During a major economic crisis, such as the 2008 recession, citizens are likely to become dissatisfied with the regime performance. Specific support changes over time, as citizens become less satisfied with the regime's policy outputs. Diffuse support, on the other hand, is the part of support that remains stable during a major crisis. Exploring stability in political support for the EU during the 2008 economic crisis therefore allows me to determine to what extent there is diffuse support for the EU. I expect support for the EU to be diffuse and therefore stable over the time of crisis.

*H1: Political support for the European Union is stable over time.*

Over-time stability in support is a relative term, however. Neither theoretical nor empirical works suggest that over-time stability in political support should be absolute (Alwin and Krosnick, 1991; Norris, 1999; Easton, 1965). Political support is a mix of diffuse and
specific components and the "diffusiveness" of political support for a particular object is thus a matter of degree (Norris, 2011). In order to make the findings about diffuse support for the EU more informative, I put these findings in context. I compare support for the EU to two dimensions of political support at the national level. Existing research on political support at the national level suggests that certain dimensions of support are more diffuse than others (Norris, 2011). Mass public support for democracy, for example, is among the most diffuse dimensions of political support (Norris, 2011). I therefore compare the level of over-time stability in support for the EU to over-time stability in support for democracy. In general, support for regime institutions is expected to be less diffuse than support for regime principles such as democracy (Norris, 2011). I therefore expect support for democracy to be more diffuse (and thus more stable over time) than support for the institutions of the European Union.

**H2: Support for the European Union is less stable than support for democracy.**

Existing research on political support at the national level also shows that certain institutions within the national political system have lower level of diffuse support. Citizens’ support for institutions is more vulnerable to performance evaluations when these institutions have closer connection to potentially controversial policies. The national government is an example of an institution that commands a lower level of diffuse support (Norris, 2011). Support for the national government is less diffuse because the government only includes parties that are part of the winning coalition; opposition parties are excluded. Citizens’ support for the government is therefore more volatile than support for institutions representing broader political views. Since the European Union represents a broader spectrum of political views than a national government, I expect support for the European Union to be more diffuse (and therefore more stable) than support for the national government.
H3: Support for the European Union is more stable than support for the national government.

As the discussion above shows, existing literature suggests that political support for the EU is specific to some degree (Klinger en et al., 2013; Torcal et al., 2012b; Hooghe and Marks, 2004; Gabel, 1998). There may therefore be some change in support over time. To what extent do changes in economic performance explain changes in support for the EU? Building upon research that connects political support to evaluations of economic performance (Hooghe and Marks, 2004; Klinger en et al., 2013; Gabel and Whitten, 1997), I expect that there will be a positive relationship between evaluations of economic performance and support for the EU.

H4: There is a positive relationship between changes in evaluations of economic performance and changes in support for the EU.

This approach to the study of the relationship between performance evaluations and political support, however, differs from the approaches found in the existing literature. While existing literature examines the relationship from a static point of view, I take a dynamic approach to this relationship.

In the following sections, I examine these four hypotheses. The next section introduces data and variables. Then, I explore over-time stability in political support using the following three analytical tools: an aggregate-level analysis, a "Wiley and Wiley" model (Wiley and Wiley, 1970), and a dynamic panel data model. While the aggregate-level analysis provides a basic assessment of over-time stability, the "Wiley and Wiley" model evaluates continuity in individual-level attitudes over time while controlling for possible unreliability in measurement. The dynamic panel data model then complements the analysis by exploring whether individuals have a long-term level of support that they return to, after reporting an unusually high or low
level of support. In addition, the dynamic panel data model examines how changes in evaluations of economic performance affect changes in political support.

In order to examine hypotheses 2 and 3, all three empirical sections (the aggregate-level analysis, the "Wiley and Wiley" model, and the dynamic panel data model) also explore over-time stability in two national-level attitudes: support for the national government and support for democracy. Each of the three empirical sections then compares the stability in these two national-level attitudes to stability in support for the European Union.

**Data and variables**

I use data from the Longitudinal Internet Studies for the Social Sciences (LISS) Panel. The LISS Panel is a representative sample of Dutch individuals who participate in regular internet surveys. The panel is based on a true probability sample of Dutch households (Scherpenzeel and Das, 2010). Every year between 2007 and 2012, the LISS Panel collected data on political attitudes, including attitudes towards the EU. Around 6,000 individuals were interviewed in each wave of the panel. 2,657 individuals completed all six panel waves (approximately 39 percent of the original sample).

The LISS Panel is a suitable source of data for this study. It is one of the rare resources that provide multi-wave, nationally representative panel data on attitudes towards the European Union. In addition, as the panel spans from 2007 to 2012, it allows researchers to study stability of attitudes throughout the Great Recession.

In this study, mass public political support for the European Union is the main concept of interest. I focus on one dimension of political support – support for regime institutions. Support for EU institutions is defined as citizens’ confidence in the European Parliament. Confidence
in regime institutions is a well-established measure of support for a political regime (Torcal et al., 2012b; Norris, 1999; Easton, 1965). Variable *confidence in the European Parliament* ranges from 0 to 100, with higher values indicating greater support.

In order to put the level of diffuse support for the EU into perspective, this attitude is compared to two other dimensions of political support: support for the national government and support for democracy (hypotheses 2 and 3). Support for the national government is defined as *confidence in the Dutch government*. Similarly, citizens’ support for democracy is defined as *confidence in democracy*. Both these confidence variables range from 0 to 100, with higher values indicating greater support.

In order to examine the extent to which the economic crisis explains over-time variation in political support (hypothesis 4), I define a variable measuring how satisfied respondents are with the Dutch economy (variable called *economic evaluations*). Existing research shows that evaluations of national economic performance are related to support for the European Union (Hooghe and Marks, 2004; Klinger et al., 2013; Gabel and Whitten, 1997). In line with the existing research, I expect that there will be a positive relationship between evaluations and support for the EU.

**Aggregate political support**

This section provides an aggregate-level analysis of stability in political support. First, I examine the trend in the mean of support for the European Parliament (Figure 1). Support for the European Parliament appears fairly stable throughout the period of the LISS Panel. Even when the economic crisis arrived in 2008, support did not experience any major drop. As Figure 1 shows, the mean ranges between 40 and 50. There is a slight downward trend after 2010 but
the decrease in support is not very large. Figure 1 further shows that the mean values for respondents who completed all six waves of the panel do not significantly differ from the mean values of respondents who participated only in some of the panel waves. This suggests that respondents who regularly participated in the panel do not differ from those respondents who only participated in some of the waves.

Compared to aggregate stability in confidence in the Dutch government and confidence in democracy, support for the European parliament displays slightly more over-time variation than support for democracy and somewhat less over-time variation than support for the Dutch government. Overall, the aggregate-level stability in support for the European Parliament through the economic crisis suggests that support for the European Union is more diffuse than specific.

There may be a concern, however, that the Dutch case significantly differs from the EU as a whole and that conclusions drawn from this analysis have only a limited application to the entire European Union. To address this concern, I use data from the Eurobarometer surveys to compare support for the European Parliament in the Netherlands and support for the European Parliament in the EU as a whole (see Figure A in the appendix). There is slightly higher support for the European Parliament in the Netherlands than in the EU as a whole. The over-time trend in support for the European Parliament in the Netherlands, however, is parallel to the trend in the European Union as a whole. This comparison therefore suggests that the over-time dynamics in
support for the European Parliament in the Netherlands are not radically different from dynamics of support in the European Union as a whole.

Looking at the over-time stability in mean values is not the only way to gauge stability at the macro level. An analysis of the percentage of respondents who in later waves of the panel report the same level of support as they did in the first wave provides another option (Prior, 2010). According to this measure, political support for the EU does not seem very stable (see Figure 2). Only around 27% of respondents keep the same level of support throughout the six years of the panel study. Analyzing how many respondents give the exact same answer may, however, be an overly strict measure of stability. This measure may be biased downward due to measurement error. In order to explore this possibility, I analyze the percentage of respondents who since the first wave of the panel change their answer by 20 points or less (Figure 3). When this measure is used, support appears significantly more stable. Between 80 and 90 percent of respondents keep their level of support within 20 points of their response in the first wave.

Figures 2 and 3 further show that the levels of over-time stability are comparable for respondents who participated in at least two waves of the panel and for respondents who participated in all six waves. The fact these two groups of respondents display comparable levels of stability suggests that panel effects should not be a problem for the present analysis.

[Figure 2 about here]

[Figure 3 about here]

In sum, the theory of political support expects diffuse support to remain stable even in times such as an economic crisis. The aggregate-level analysis provides some evidence of diffuse
support for the European Union. Despite the arrival of the financial crisis in fall 2008, the mean of political support remained relatively stable between 2007 and 2012. The low percentage of respondents who kept the exact same level of support throughout the six years of the panel study, however, does not provide very persuasive evidence of diffuse support. Nevertheless, the fact that an overwhelming majority of respondents kept their level of support within 20 points from their original level of support suggests that small amounts of measurement error may cause the attitudes appear less stable than they really are. The next section addresses this problem and takes a look at over-time stability of political support while controlling for measurement error.

**Individual-level analysis: Wiley and Wiley model**

The Wiley and Wiley model is a type of structural equation model that allows us to study over-time stability in attitudes and control for measurement error (Wiley and Wiley, 1970). In a Wiley and Wiley model, political support is viewed as a latent concept. A latent concept cannot be measured directly and it is therefore measured by observable indicators. In the present case, in each wave of the panel study the latent variable confidence in the European Parliament is measured by an observed indicator of confidence in the European Parliament. The Wiley and Wiley model then estimates how much error there is in the measurement of the latent concept as well as how stable the latent concept is over time.

The Wiley and Wiley model defines the observed variable $x$ at time $t$ as a function of the latent variable $\xi_t$ and measurement error $\epsilon_t$:

$$x_t = \lambda_t \xi_t + \epsilon_t \quad \text{ (where } t = 1,2,3,\ldots, T)$$

$\lambda_t$ is a parameter that represents the loadings of the latent variable on the observed indicator.
Figure 4 illustrates the logic of the Wiley and Wiley model. The circles represent the latent variable $\xi_t$ and the boxes represent the observed indicators $x_t$. Parameter $\lambda_t$ is fixed to 1 because there is only one observed indicator for each latent variable. Except for the latent variable in the first panel wave ($\xi_1$), all latent variables are a function of the preceding latent variable ($\xi_{t-1}$) and the random shock $\theta_t$. Coefficients $\beta_2$ through $\beta_6$ show the strength of the relationship between the latent variables. If the coefficient $\beta_{t,t-1}$ is close to 1, respondents’ relative position in the distribution vis-à-vis other respondents is stable from one year to the next. In other words, if $\beta_{t,t-1}$ is close to 1, individual respondents maintain their relative position to the year-specific mean. The year-specific mean, however, can change. Stability of political support at the individual level is therefore present only if both over-time stability in the distribution and over-time stability in the mean are present. As Figure 1 shows, the mean level of confidence in the European Parliament is relatively stable over time. Therefore, if my analysis shows estimates of $\beta_{t,t-1}$ close to 1, it will indicate stability of political support at the individual level. Furthermore, since diffuse support is characterized by over-time stability during a major crisis, evidence of over-time stability during the 2008 economic crisis would indicate that political support for the EU is diffuse.

By contrast, if $\beta_{t,t-1}$ is close to 0, it will suggest that from one year to the next individual respondents do not keep their relative position within the distribution of attitudes. In other words, $\beta_{t,t-1}$ close to 0 means that respondents do not maintain a stable relative position vis-à-vis the year-specific mean. In the case of support for the European Parliament, such a result would
imply that the stability observed at the aggregate level is not mirrored at the individual level. Since diffuse support is defined by over-time stability during crises, $\beta_{t,t-1}$ close to 0 would indicate a great deal of volatility in support, so much so that we would not be able to label such support as "diffuse."

Although in the study of attitude stability $\beta_{t,t-1}$ is most likely to fall into the 0 - 1 range, $\beta_{t,t-1}$ can potentially take on a full range of values. Values greater than 1 indicate that the distribution of attitudes is becoming more polarized (as a coefficient greater than one increases individuals’ relative distance from the mean). Values close to negative 1 indicate that there is a high stability in the shape of the distribution but that individuals "switch sides" within the distribution (individuals keep the relative distance from the mean but they move to the opposite side of the mean). Therefore, out the full range of values that $\beta_{t,t-1}$ can have, only a value close to 1 indicates individual-level stability in attitudes.

The results of the Wiley and Wiley model of confidence in the European Parliament are reported in the first column of Table 1. All $\beta_{t,t-1}$ coefficients for confidence in the European Parliament are very close to 1. In almost all cases, the confidence interval includes 1, suggesting a very high level of stability of the attitude distribution. The only instance when the distribution was less stable was between 2007 and 2008 (the estimated $\beta$ equals .91). The financial crisis began between the 2007 and the 2008 wave of the panel survey and may therefore explain this lower level of stability. Although the stability in attitudes between 2007 and 2008 is slightly lower than in the later waves of the panel, it is still fairly high. The Wiley and Wiley model therefore demonstrates that between 2007 and 2012 the distribution of attitudes towards the European Parliament was stable around the year-specific means. Together with the over-time
stability in mean values, these results suggest that support for the European Parliament is largely diffuse.

[Table 1 about here]

How diffuse is the support for the European Parliament in comparison to the two dimensions of political support at the national level? The results reported in columns 2 and 3 in Table 1 allow us to compare support for the European Parliament to support for the Dutch government (column 2) and to support for democracy (column 3). The results in column 2 of Table 1 show that during the 2008 economic crisis, support for the European Parliament was more stable than support for the Dutch government. The distribution of confidence in the Dutch government experienced greater variability, especially from 2009 to 2010 and from 2011 to 2012. In addition, confidence in the Dutch government has more over time variation in its mean (as demonstrated in Figure 1). Confidence in the Dutch government, therefore, has less over-time stability at the individual level than confidence in the European Parliament. In contrast, public support for democracy is highly stable over time (column 3 in Table 1). In comparison to support for the European Parliament, however, support for democracy is only slightly more stable.

Overall, the Wiley and Wiley model shows that individuals have a stable level of support for the European Parliament. This result is consistent with hypothesis 1. Indeed, the level of stability approaches the level of stability in one of the most diffuse dimensions of support - support for democracy. The Wiley and Wiley model results are also consistent with hypotheses 2 and 3: Support for the European Parliament is more diffuse than support for the Dutch government and somewhat less diffuse than support for democracy.
Although the Wiley and Wiley model provides useful insights into over-time stability, it only gives a specific view of stability: the stability of distribution in the short-run, from one year of the panel to the next. Another way to look at stability is to examine stability from a long-term point of view. Do individuals have a long-term level of political support? When individuals deviate from their long-term level of support, do they quickly return to this long-term level? The following section uses a dynamic panel data model to answer these questions about long-term stability of political support.

**Individual-level analysis: Dynamics of political support**

Dynamic panel data models are useful estimation tools for data with a large number of observations and a small number of time periods. These models focus on individual-level over-time changes. In particular, they model how rapidly momentary variations in an underlying disposition fade over time.

Dynamic panel data models are part of the family of lagged dependent variable models (Cameron and Triverdi, 2010). The basic set up for a lagged dependent variable model is

\[ y_{it} = \gamma y_{i,t-1} + x_{it}^\prime \beta + \alpha_i + \epsilon_{it}, \quad t = 2, 3, 4 \ldots, T \]  

(2)

where \( y_{it} \) is the dependent variable, \( y_{i,t-1} \) is the lagged dependent variable, \( x_{it} \) are the other regressors, \( \alpha_i \) is a fixed effect, and \( \epsilon_{it} \) is the disturbance term. \( \gamma \) and \( \beta \) are regression coefficients.

The lagged dependent variable model is designed to address the problem of autocorrelation in the model's errors – a problem that often appears in analysis of panel data. The problem of autocorrelation in errors arises as observations are clustered within individuals (as we repeatedly measure each individual’s attitudes over time). Since most conventional statistical
models assume no autocorrelation in the error term, the presence of this autocorrelation threatens
the consistency of the model's estimates (Roodman, 2009).

Although the simple lagged dependent variable regression described in equation (2) is
often useful in panel data analysis, it is not appropriate for the type of panel data examined in
this study - data with a large number of cases and low number of time periods. The simple
lagged dependent variable model gives inconsistent estimates for this type of data because there
is still correlation between the lagged dependent variable and the disturbance term (Cameron and
Triverdi, 2010). A step towards getting around this problem is to estimate the model using first
differences:

\[ \Delta y_{it} = \gamma \Delta y_{i,t-1} + \Delta x'_{it} \beta + \Delta \varepsilon_{it}, \quad t = 2, 3, 4 \ldots, T \quad (3) \]

Taking first differences, however, does not eliminate the unwanted correlation between
lagged dependent variable \( y_{i,t-1} \) and the error term \( \varepsilon_{it} \) completely. The consistency of the model
is further improved by using the second lag of the dependent variable \( (y_{i,t-2}) \) as an instrument
for \( y_{i,t-1} \) (Anderson and Hsiao, 1981). This improved model then gives consistent estimates
provided that the second lag of the dependent variable \( (y_{i,t-2}) \) is uncorrelated with the
disturbance term (Roodman, 2009). In order to further improve the precision of the estimates,
Arellano and Bond (1991) suggest using not just \( y_{i,t-2} \) as an instrument for \( y_{i,t-1} \) but all further
lags as well \( (y_{i,t-3}, y_{i,t-4}, \ldots, y_{i,t-T}) \). This estimator is called the Arellano-Bond estimator and it
is commonly used in panel data models (Prior, 2010; Wawro, 2002; Roodman, 2009). I use the
Arellano-Bond estimator for my dynamic panel data analysis. \(^{11}\)

When using the Arellano-Bond estimator to assess over-time stability of attitudes, the
coefficient for the lagged dependent variable (\( \gamma \)) is the coefficient of interest. The \( \gamma \) coefficient
indicates to what extent changes in the past level of political support affect the current level of
political support. $\gamma$ close to zero means that past changes in the level of support do not persist into the current time period. In other words, it means that if individuals report an unusually high or unusually low level of political support in one year, they quickly return to their long-term level in the subsequent year (Prior, 2010). Since diffuse support is defined as support that persists during a time of crisis, a stable long-term level of political support during a financial crisis indicates that citizens have diffuse support for the EU.

The dynamic panel data model indicates a lack of stability in attitudes if $\gamma$ (the coefficient for the lagged dependent variable) is close to 1. $\gamma$ coefficient close to 1 indicates that deviations from the individual's long-term mean persist into the subsequent years and that individuals do not return to any stable level of political support. $\gamma$ coefficient close to 1 will therefore suggest that individuals do not have a stable long-term level of political support and that support for the EU is rather specific than diffuse.

I assess the over-time stability of political support for the EU by estimating a simple Arellano-Bond model. Only the lagged dependent variable and a set of dummy variables for the years of the panel survey are included as predictors (Roodman, 2009; Prior, 2010). The results of this estimation are reported in the first column of Table 2. The coefficient for the lagged dependent variable is very close to zero (0.035). This indicates that when individuals deviate from their own long-term level of political support, this deviation does not persist and individuals quickly return to their long-term level of support. In other words, this result indicates that individuals have a long-term level of political support for the EU. Given that this stable long-term level of political support was observed during a major economic crisis, we can characterize support for the EU as diffuse.
How does the long-term stability in political support for the EU compare to stability in the two dimensions of political support at the national level? The second and third columns in Table 2 report dynamic panel data models of support for the Dutch government and support for democracy. Confidence in the national government has a lower level of stability. Its coefficient for the lagged dependent variable is further from zero than it was in the case of support for the European Parliament. Support for democracy, on the other hand, appears highly stable. Its estimate of the coefficient for the lagged dependent variable is indistinguishable from zero. Overall, the conclusions for this comparison are similar to the conclusions drawn from the Wiley and Wiley model: Political support for the European Parliament shows more over-time stability than support for the national government and slightly less stability than support for democracy.

Although the level of stability in support for the European Parliament is high, there is some over-time variation. To what extent does the economic crisis explain this variation? I use the dynamic panel data model to explore to what extent changes in citizens’ evaluations of the economy explain changes in support for the EU. The fourth column of Table 2 reports this model. According to the estimates, a 1-point increase in evaluations of the economy leads to about 0.3 increase in confidence for the European Parliament. Changes in the citizens’ evaluations of the economy therefore explain a substantial part of changes in support for the European Union.

The findings about the strong influence of economic evaluations on support for the European Parliament may appear to contradict the findings about high over-time stability in support. In order to understand why these two results are compatible, it is important to keep the
dynamic nature of the model in mind. In a dynamic panel data model, citizens’ economic evaluations only explain the portion of the dependent variable that changes over time. The results of the model indicate that political support for the EU is largely stable and that the little variation that exists is fairly well explained by citizens’ evaluations of economic performance.

In sum, the dynamic panel data model demonstrates that individuals have a stable long-term level of support for the European Parliament. If individuals deviate from this long-term value, they quickly return back to it. The long-term stability in support for the EU is slightly lower than stability in support for democracy and significantly higher than stability in support for the Dutch national government. These conclusions are consistent with the conclusions derived from the aggregate-level analysis and from the Wiley and Wiley models. Overall, my analysis shows that throughout the period of the Great Recession individuals maintained a substantial level of stability in their support for the EU. I therefore argue that support for the European Parliament among Dutch citizens is highly diffuse.

Concluding remarks

Diffuse political support gives political regimes legitimacy during times of crisis. This paper explored whether mass public support for the European Union is a diffuse type of support. Although the existing literature provides some evidence suggesting that support for the European Union is diffuse (Beaudonnet and Franklin, 2014; Serricchio et al., 2013; Torcal et al., 2012a; Hooghe and Marks, 2004), this evidence is limited. All existing research demonstrating diffuse support for the EU is based on cross-sectional data. Diffuse support, however, is an attitude defined by its longitudinal characteristics at the individual level of measurement. The existing literature therefore fails to demonstrate that citizens’ support for the EU displays the defining
characteristic of diffuse support: individual-level stability during a time of crisis. In this paper I addressed this gap by focusing on over-time stability in political support for the European Parliament during the 2008 economic crisis.

This study showed that public support for the EU maintained a high level of stability throughout the economic crisis. Although the crisis was responsible for some over-time variation in support for the EU, overall, individuals' support for the EU was highly stable. The over-time stability in support for the EU even approached the level of stability in one of the most diffuse dimensions of political support – support for democracy. Based on this evidence, I argue that public support for the European Union is largely diffuse.

The high stability of support for the EU throughout the 2008 recession implies that in times of crisis, the European Union can draw on mass public support as a source of resilience. The results in this study also suggest that mobilization appeals challenging the supranational political regime in Europe may be limited in its ability to gain traction within the wider audience in the EU.

The conclusions from this study warrant a few caveats though. My analysis is based on data from only one EU member country – the Netherlands. The generalizability of my results to the entire European Union may therefore be limited, as there are studies suggesting that there are important cross-country differences in citizens’ attitudes towards the EU (Díez Medrano, 2003; Duchesne et al., 2013). Nevertheless, the aggregate-data analysis demonstrated that the over-time trend in support for the European Parliament in the Netherlands is parallel to the trend in the European Union as a whole. This comparison suggests that the over-time dynamics in support for the European Parliament in the Netherlands are not radically different from dynamics of political support in the European Union as a whole.
This study provides the first step in our understanding of individual-level dynamics of support for the European Union. Future research can build up on this study by exploring the dynamics of other dimensions of support for the EU, such as support for other EU institutions or support for the political community of the EU. Further longitudinal analysis of attitudes towards the EU has the potential to enrich our understanding of public opinion in the EU in other areas as well. Panel data analysis can provide new insights into determinants of attitudes towards the EU as well as into relationships between attitudes and political behavior. Such data provide a greater leverage in the study of causal relationships than observational studies do. Existing panel survey datasets as well as possible new longitudinal data collection efforts are a promising opportunity to gain new insights into the sources and consequences of political attitudes in the European Union.

Acknowledgements

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Notes

1 The economic crisis began in fall 2008. Throughout the paper I refer to this economic crisis as “the 2008 economic crisis,” or “the Great Recession.”

2 The LISS Panel is administered by administered by CentERdata (Tilburg University, The Netherlands). More about the survey methodology can be found at www.lissdata.nl and in Scherpenzeel and Das (2010).

3 The LISS Panel measures citizens’ confidence in the European Parliament via the following question: “Can you indicate, on a scale from 0 to 10, how much confidence you personally have in each of the following institutions? European Parliament” The variable is measured on a scale from 0 to 10. For the purposes of this analysis, the variable was rescaled to a scale from 0 to 100 (with low values indicating low confidence and high values indicating high confidence).

4 Confidence in the Dutch government as well as confidence in democracy are measured by the same survey item as confidence in the European Parliament. Similarly, the original 0-10 score was rescaled to a 0-100 score, with low values indicating low confidence and high values indicating high confidence.

5 I use all available Eurobarometer surveys between October 2007 and October 2012. I used the following Eurobarometer survey question: “And, for each of them, please tell me if you tend to trust it or tend not to trust it? The European Parliament”. I compared percentages of respondents who indicated that they tend to trust the European Parliament.

6 The threshold of 20 points of less is based on standards used in other studies focusing on over-time stability of attitudes (Prior, 2010).

7 Since there is only one indicator for each latent variable, the model requires a set of assumptions in order to become identified. These assumptions include: 1) The measurement error $\varepsilon_t$ is uncorrelated with the latent variables $\xi_t$; 2) the measurement errors $\varepsilon_t$ are serially uncorrelated; 3) the random shocks $\theta_t$ are serially uncorrelated; 4) the system is lag-1, meaning that the latent variable at time $t-2$ ($\xi_{t-2}$) exerts no direct influence on latent variable at time $t$ ($\xi_t$); 5) the measurement error variance is assumed to be constant over time $[V(\varepsilon_1) = V(\varepsilon_2) = V(\varepsilon_3) = \ldots V(\varepsilon_T) = V(\varepsilon)]$.

8 I estimate this model in Stata 12 using the variance-covariance matrix. Maximum likelihood was the method of estimation. Having more than three waves of panel data allows me to evaluate the fit of the model. The model performs well: RMSEA of 0.029 and CFI of .998 indicate a good fit (Acock, 2013). Although $\chi^2$ is statistically significant (suggesting less than perfect fit), it is not a major problem because $\chi^2$ can be a misleading measure of fit where sample size is large (such as in the present case where $N = 2,147$).

The Wiley and Wiley model also reports estimates of reliability of the measurement scale. The reliabilities for the confidence in the European Parliament scale range between .73 and .78.

9 The data are collected each year in December. The financial crisis began in Fall 2008.

10 All equations in this section are adapted from Cameron and Trivedi (2010).

11 I use one-step Arellano-Bond estimator. All available lags are used as instruments for $y_{it-1}$. This means that all cases in the dataset that display at least three consecutive waves of data are included in the analysis.

12 Due to the estimation procedure (first differencing and then using the second lag of the dependent variable as an instrument), only dummy variables for waves 3, 4, 5, and 6 of the panel are included in the model.

13 The Arellano-Bond estimator assumes that there is no serial correlation in errors. A violation of this assumption would be indicated by a significant test statistic in the second-order autocorrelation test (this test statistic is reported at the bottom of Table 2). In both models of support for the European Parliament as well as in the model of support for democracy, the test statistic is sufficiently small (and therefore not statistically significant). The models of confidence in the European Parliament therefore satisfy this assumption. The test statistic for the model of support for the Dutch government is statistically significant, indicating violation of this assumption. However, the test statistic depends on sample size and it easily becomes statistically significant when the sample size is large (as in the present case).

14 There may be a concern that the relationship between evaluations of the economy and support for the European Union is affected by endogeneity. It is possible that there is a third variable that affects both evaluations of the economy and support for the EU. In order to alleviate this concern, I estimate an Arellano-Bond model in which the variable economic evaluations is viewed as an endogenous variable. Instead of using the current level of satisfaction with the economy as a predictor, the model uses the first lag of satisfaction with the economy as a predictor. Table A in the appendix reports this estimation. The interpretation of the results does not change. Possible endogeneity therefore does not affect the results of this estimation.
References

Acock AC. (2013) Discovering Structural Equation Modeling Using Stata, College Station: Stata Press.


Figure 1. Mean values of political support over time.
Figure 2. Confidence in the European Parliament:
Percentage of respondents who give the same answer as in the first wave of the panel

- Respondents who participated in at least two waves
- Respondents who participated in all six waves
Figure 3. Confidence in the European Parliament: Percentage changing by 20 points or less compared to the first wave of the panel.
Figure 4. Measurement Model.
Table 1. Wiley and Wiley model.
Dependent variable: Political support.

<table>
<thead>
<tr>
<th></th>
<th>European Parliament</th>
<th>Dutch Parliament</th>
<th>Democracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\beta_{2007,2008}$</td>
<td>0.912 (0.024)**</td>
<td>0.972 (0.033)**</td>
<td>0.951 (0.029)**</td>
</tr>
<tr>
<td>$\beta_{2008,2009}$</td>
<td>0.979 (0.022)**</td>
<td>1.036 (0.027)**</td>
<td>1.036 (0.027)**</td>
</tr>
<tr>
<td>$\beta_{2009,2010}$</td>
<td>0.974 (0.021)**</td>
<td>0.787 (0.025)**</td>
<td>0.950 (0.023)**</td>
</tr>
<tr>
<td>$\beta_{2010,2011}$</td>
<td>0.964 (0.020)**</td>
<td>1.015 (0.029)**</td>
<td>1.013 (0.024)**</td>
</tr>
<tr>
<td>$\beta_{2011,2012}$</td>
<td>1.078 (0.022)**</td>
<td>0.782 (0.027)**</td>
<td>1.046 (0.025)**</td>
</tr>
<tr>
<td>$\epsilon_{1-6}$</td>
<td>112.229 (2.584)**</td>
<td>121.330 (4.013)**</td>
<td>106.959 (2.258)**</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>25.25</td>
<td>549.38</td>
<td>21.44</td>
</tr>
<tr>
<td>df</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>p-value</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
</tr>
<tr>
<td>N</td>
<td>2,147</td>
<td>2,438</td>
<td>2,327</td>
</tr>
<tr>
<td>CFI</td>
<td>0.998</td>
<td>0.919</td>
<td>0.998</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.029</td>
<td>0.157</td>
<td>0.024</td>
</tr>
</tbody>
</table>

Standard errors in parentheses. * p<0.05; ** p<0.01
<table>
<thead>
<tr>
<th>Year</th>
<th>European Parliament</th>
<th>Dutch Government</th>
<th>Democracy</th>
<th>European Parliament</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>-0.529 (0.274)**</td>
<td>-4.198 (0.315)**</td>
<td>-1.139 (0.253)**</td>
<td>-1.107 (0.270)**</td>
</tr>
<tr>
<td>2010</td>
<td>-0.657 (0.299)*</td>
<td>-1.160 (0.333)**</td>
<td>0.300 (0.275)</td>
<td>-1.618 (0.298)**</td>
</tr>
<tr>
<td>2011</td>
<td>-3.287 (0.317)**</td>
<td>-6.776 (0.357)**</td>
<td>-3.899 (0.290)**</td>
<td>-1.791 (0.318)**</td>
</tr>
<tr>
<td>2012</td>
<td>-5.756 (0.330)**</td>
<td>-9.344 (0.368)**</td>
<td>-2.706 (0.311)**</td>
<td>-4.167 (0.333)**</td>
</tr>
</tbody>
</table>

Economic evaluations

<table>
<thead>
<tr>
<th>Economic evaluations</th>
<th>European Parliament</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autocorrelation test: 1st-Order</td>
<td>-31.37 (0.010)**</td>
</tr>
<tr>
<td>Autocorrelation test: 2nd-Order</td>
<td>1.13 (-8.72)**</td>
</tr>
</tbody>
</table>

| N | 13,953 | 15,180 | 14,767 | 13,354 |

Coefficients from a one-step Arellano-Bond (1991) model (estimated using Stata 12 xtabond command). Standard errors in parentheses. Statistical significance levels: * p<0.05; ** p<0.01. The values for autocorrelation test represent the autocorrelation test statistic.
Appendix

Figure A. Percentage of respondents who tend to trust the European Parliament.

Table A. Dynamic panel data model. Dependent variable: Political support. Economic evaluations defined as an endogenous predictor.

<table>
<thead>
<tr>
<th></th>
<th>European Parliament</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political support (lagged)</td>
<td>0.053 (0.016)**</td>
</tr>
<tr>
<td>Economic evaluations (endogenous)</td>
<td>0.268 (0.123)*</td>
</tr>
<tr>
<td>2009</td>
<td>-1.042 (0.362)**</td>
</tr>
<tr>
<td>2010</td>
<td>-1.482 (0.534)**</td>
</tr>
<tr>
<td>2011</td>
<td>-1.902 (0.665)**</td>
</tr>
<tr>
<td>2012</td>
<td>-4.288 (0.714)**</td>
</tr>
<tr>
<td>Autocorrelation test: 1st-Order</td>
<td>-31.19</td>
</tr>
<tr>
<td>Autocorrelation test: 2nd-Order</td>
<td>1.59</td>
</tr>
<tr>
<td>N</td>
<td>13,354</td>
</tr>
</tbody>
</table>

Coefficients from a one-step Arrellano-Bond (1991) model (estimated using Stata 12 xtabond command). Standard errors in parentheses. Statistical significance levels: * p<0.05; ** p<0.01. Values for autocorrelation test represent the autocorrelation test statistic.