# Predictably Unpredictable: The Effects of Conflict Involvement on the Error Variance of Vote Models

# **Online Appendix**

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## Overview

This document provides analyses briefly discussed—but not presented—in "Predictably Unpredictable: The Effects of Conflict Involvement on the Error Variance of Vote Models".

## Sample and Summary Statistics

We present the sample countries and summary statistics in Tables S.1 and S.2.

[Tables S.1-S.2 about here]

As it stands, the only democratic elections that are excluded are due to missing economic data (especially prior to 1970), or non-partisan governments (e.g., Greece). We are therefore confident that we have included all government parties for all available elections in the 24 advanced democracies for our sample time period.

#### **Full Results**

Due to space constraints, we omitted the country-specific fixed effects coefficients in the manuscript. Table S.3 presents the full set of results.

#### [Table S.3 about here]

#### **Robustness Checks**

We conducted a series of robustness checks. In the manuscript we present the results counting the number of hostile MIDs in the entire election cycle in the manuscript and then refer to the other time domains (24-, 12-, and 6-months prior to the election) in Table S.4.

#### [Table S.4 about here]

As expected, the coefficient for *hostile MIDs* in the variance equation is statistically significant at conventional levels and positive in each model. Moreover, as one gets closer to the election, the hostile disputes increase the error variance of vote share.

As a second set of robustness checks, we estimate the *hostile MIDs* as a continuous weight by proximity to the election. We create eight different variables in total, split into four time domains (36-months prior to the election, 24-months, 12-months, and 6-months), based on two types of decay functions (exponential and linear decay). These variables represent an interesting robustness check, since they provide greater weight to disputes that occur closer to the election (as shown in Figure S.1).

### [Figures S.1-S.2 about here]

In Figure S.2 we present the coefficients for the dispute variable with decay function for the variance part of the equation. Our initial results are robust to this modification of model specification, as the value of the coefficient is positive in all eight models, as well as statistically significant at the 95% confidence level. This would suggest that involvement in hostile disputes increases the error variance of voting models, even once we take into account the proximity of the dispute to the election.

# **Tables and Figures**

Table S.1: Distribution of Disputes within Sample Countries

| Country       | No. of Elections | <b>Elections with</b> | Obs | Elections              |  |  |  |  |
|---------------|------------------|-----------------------|-----|------------------------|--|--|--|--|
| a Hostile MID |                  |                       |     |                        |  |  |  |  |
| Australia     | 14               | 3                     | 22  | 1966-1998              |  |  |  |  |
| Austria       | 10               | 0                     | 16  | 1966-1999              |  |  |  |  |
| Belgium       | 11               | 2                     | 37  | 1968-1999              |  |  |  |  |
| Canada        | 10               | 4                     | 10  | 1965-1997              |  |  |  |  |
| Denmark       | 14               | 0                     | 32  | 1966-1998              |  |  |  |  |
| Finland       | 10               | 0                     | 40  | 1966-1999              |  |  |  |  |
| France        | 8                | 6                     | 9   | 1967-1997              |  |  |  |  |
| Germany       | 2                | 2                     | 4   | 1994-1998              |  |  |  |  |
| Great Britain | 9                | 7                     | 9   | 1966-1997              |  |  |  |  |
| Greece        | 5                | 3                     | 6   | $1981-2000^{\dagger}$  |  |  |  |  |
| Iceland       | 3                | 0                     | 6   | 1991-1999              |  |  |  |  |
| Ireland       | 9                | 1                     | 13  | 1969-1997              |  |  |  |  |
| Israel        | 5                | 5                     | 6   | 1981-1999 <sup>†</sup> |  |  |  |  |
| Italy         | 8                | 2                     | 20  | 1968-1994              |  |  |  |  |
| Japan         | 11               | 0                     | 12  | 1967-1996              |  |  |  |  |
| Luxembourg    | 4                | 0                     | 8   | 1984-1999              |  |  |  |  |
| Netherlands   | 10               | 2                     | 24  | 1967-1998              |  |  |  |  |
| New Zealand   | 11               | 3                     | 12  | 1966-1996              |  |  |  |  |
| Norway        | 8                | 3                     | 15  | 1969-1997              |  |  |  |  |
| Portugal      | 4                | 0                     | 6   | 1980-1995              |  |  |  |  |
| Spain         | 6                | 2                     | 6   | 1979-1996              |  |  |  |  |
| Sweden        | 10               | 4                     | 14  | 1968-1994              |  |  |  |  |
| Switzerland   | 8                | 0                     | 35  | 1967-1995              |  |  |  |  |
| USA           | 8                | 8                     | 8   | 1968-1996              |  |  |  |  |
| Total         | 198              | 59                    | 370 |                        |  |  |  |  |

*Note:* Beginning dates are determined by the availability of economic and CMP data; end dates are determined by availability of MID data.

<sup>&</sup>lt;sup>†</sup> A number of elections are excluded due to missing data.

Table S.2: Summary Statistics

| Table 5.2: Summary Statistics   |        |        |       |           |      |
|---------------------------------|--------|--------|-------|-----------|------|
|                                 | Min.   | Max.   | Mean  | Std. Dev. | Mode |
|                                 |        |        |       |           |      |
| Dependent Variable              |        |        |       |           |      |
| Vote Share $(V_t)$              | .50    | 51.03  | 23.60 | 14.56     |      |
|                                 |        |        |       |           |      |
| Explanatory Variables           |        |        |       |           |      |
| Previous Vote Share $(V_{t-1})$ | 1.37   | 57.71  | 25.54 | 15.06     |      |
| Majority                        | 0      | 1      | .82   | .39       | 1    |
| Coalition                       | 0      | 1      | .29   | .45       | 0    |
| Executive                       | 0      | 1      | .52   | .50       | 1    |
| Time Left in CIEP (%)           | 0      | 88.33  | 17.92 | 22.33     |      |
| Executive×CIEP                  | 0      | 88.33  | 9.69  | 18.53     |      |
| Real GDP Per Capita Growth      | -7.28  | 14.92  | 3.03  | 3.32      |      |
| Unemployment                    | 0      | 22.7   | 5.97  | 4.28      |      |
| Differenced Inflation           | -14.22 | 228.18 | 1.11  | 16.97     |      |
|                                 |        |        |       |           |      |
| Disputes                        |        |        |       |           |      |
| Hostile MIDs                    | 0      | 9      | 0.5   | 1.27      | 0    |

Figure S.1: Values of the *Hostile MIDs* Variable across the Election Cycle for Different Continuous Proximity Weights

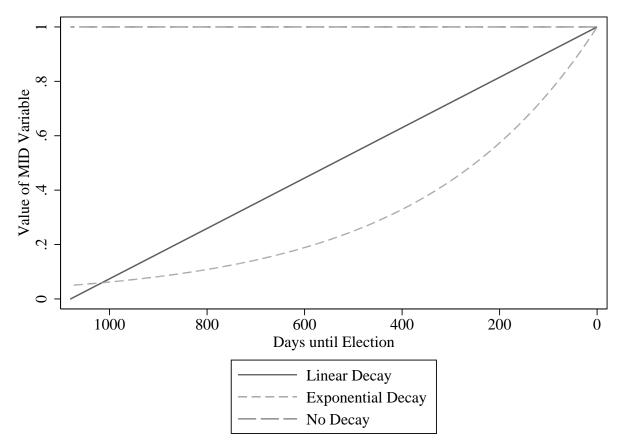


Table S.3: Heteroskedastic Regression Results for the Effects of Involvement in Hostile Disputes in the Election Cycle on Government Parties' Vote Shares  $(V_t)$ 

|  | Tues voi | e oriar ( |  |  |  |  |
|--|----------|-----------|--|--|--|--|
|  | β        | S.E.      |  |  |  |  |
| Vote Share $(V_{t-1})$                       | 0.91***  | (0.02)    |  |  |  |  |
| Real GDP Per Capita Growth                   | 0.07**   | (0.04)    |  |  |  |  |
| Unemployment                                 | -0.05**  | (0.03)    |  |  |  |  |
| First-Differenced Inflation                  | -0.02*** | (.01)     |  |  |  |  |
| Majority Government                          | -1.41*** | (0.48)    |  |  |  |  |
| Coalition Government                         | 0.06     | (0.37)    |  |  |  |  |
| Executive Party                              | 0.34     | (0.81)    |  |  |  |  |
| Time Left in CIEP (%)                        | 0.01     | (0.01)    |  |  |  |  |
| Executive×CIEP                               | 0.02     | (0.02)    |  |  |  |  |
| Hostile MIDs                                 | -0.04    | (0.06)    |  |  |  |  |
| Constant                                     | 1.54***  | (0.57)    |  |  |  |  |
| Heteroskedasticity Terms                     |          |           |  |  |  |  |
| Hostile MIDs                                 | 0.28***  | (0.10)    |  |  |  |  |
| USA  | -5.70*** | (1.60)    |  |  |  |  |
| Canada                                       | -0.63    | (1.46)    |  |  |  |  |
| Great Britain                                | -2.32*   | (1.47)    |  |  |  |  |
| Ireland                                      | -2.02    | (1.44)    |  |  |  |  |
| Netherlands                                  | -1.79    | (1.45)    |  |  |  |  |
| Belgium                                      | -3.44**  | (1.44)    |  |  |  |  |
| Luxembourg                                   | -3.26**  | (1.44)    |  |  |  |  |
| France                                       | -0.89    | (1.45)    |  |  |  |  |
| Switzerland                                  | -1.08    | (1.44)    |  |  |  |  |
| Spain  | 0.11     | (1.44)    |  |  |  |  |
| Portugal                                     | 0.82     | (1.44)    |  |  |  |  |
| Germany                                      | -3.46**  | (1.46)    |  |  |  |  |
| Austria                                      | -1.07    | (1.44)    |  |  |  |  |
| Italy  | -1.71    | (1.45)    |  |  |  |  |
| Greece                                       | -2.69*   | (1.49)    |  |  |  |  |
| Finland                                      | -3.36**  | (1.44)    |  |  |  |  |
| Sweden                                       | -2.54*   | (1.45)    |  |  |  |  |
| Norway                                       | -1.94    | (1.44)    |  |  |  |  |
| Denmark                                      | -1.92    | (1.44)    |  |  |  |  |
| Iceland                                      | -2.36*   | (1.44)    |  |  |  |  |
| Israel                                       | -1.75    | (1.42)    |  |  |  |  |
| Japan  | -2.23*   | (1.44)    |  |  |  |  |
| Australia                                    | -2.38*   | (1.45)    |  |  |  |  |
| $\sigma^2$                                   | 4.56***  | (1.02)    |  |  |  |  |
| N  |          | 370       |  |  |  |  |
| Adjusted $R^2$ 0.97                          |          |           |  |  |  |  |
| Note: Robust standard arrors in parentheses: |          |           |  |  |  |  |

Note: Robust standard errors in parentheses; \*\*=p < .05, \*=p < .1 (two-tailed). New Zealand is the example fixed effect.

Table S.4: Heteroskedastic Regression Results for the Effects of Involvement in Hostile Disputes across Different Time Domains on Government Parties' Vote Shares  $(V_t)$ 

|                             | 24 Months | 12 Months | 6 Months |
|-----------------------------|-----------|-----------|----------|
|                             | Prior     | Prior     | Prior    |
| Vote Share $(V_{t-1})$      | 0.91***   | 0.91***   | 0.92***  |
|                             | (0.02)    | (0.02)    | (0.02)   |
| Real GDP Per Capita Growth  | 0.07**    | 0.06*     | 0.05     |
| _                           | (0.04)    | (0.04)    | (0.04)   |
| Unemployment                | -0.05**   | -0.05*    | -0.04    |
|                             | (0.03)    | (0.03)    | (0.03)   |
| First-Differenced Inflation | -0.02***  | -0.02**   | -0.02*** |
|                             | (.01)     | (0.01)    | (0.01)   |
| Majority Government         | -1.48***  | -1.41***  | -1.38*** |
|                             | (0.48)    | (0.50)    | (0.44)   |
| Coalition Government        | 0.16      | 0.28      | 0.30     |
|                             | (0.35)    | (0.40)    | (0.38)   |
| Executive Party             | 0.38      | 0.36      | 0.33     |
| •                           | (0.82)    | (0.82)    | (0.81)   |
| Time Left in CIEP (%)       | 0.01      | 0.01      | 0.01     |
|                             | (0.01)    | (0.01)    | (0.01)   |
| Executive×CIEP              | 0.02      | 0.02      | 0.02     |
|                             | (0.02)    | (0.02)    | (0.02)   |
| Hostile MIDs                | -0.13     | -0.35**   | -0.67*** |
|                             | (0.10)    | (0.16)    | (0.21)   |
| Constant                    | 1.54***   | 1.44***   | 1.36***  |
|                             | (0.58)    | (0.57)    | (0.52)   |
| Heteroskedasticity Terms    |           |           |          |
| Hostile MIDs                | 0.37**    | 0.41*     | 0.67***  |
|                             | (0.15)    | (0.27)    | (0.32)   |
| $\sigma^2$                  | 4.58***   | 4.61***   | 4.62***  |
|                             | (1.02)    | (1.02)    | (1.02)   |
| N                           | 370       | 370       | 370      |
| Adjusted $R^2$              | 0.97      | 0.96      | 0.96     |

*Note:* Robust standard errors in parentheses; \*\* = p < .05, \* = p < .1 (two-tailed). Country-specific fixed effects coefficients in the variance equation have been omitted for presentation purposes.

Figure S.2: Gamma Coefficients (and 95% Confidence Intervals) for the Effects of Hostile MIDs on Error Variance: Exponential and Linear Continuous Decays

