

Online Appendix for Surrendering Influence: The Effects of Major Power Withdrawal

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1 Alternative *Influence* Measure: Threshold

In the manuscript, I conceptualize and measure major-power influence as a continuous variable. This choice follows from the theory: reductions in support should affect protégé behavior in proportion to the size and duration of the decline. However, it is possible that the effects of disengagement emerge only after support falls by a substantively meaningful amount. I therefore estimate an additional set of robustness checks that treat withdrawal as a threshold event rather than as a continuous change.

I replicate the main analyses from the paper: models 1 and 3 from Table 2 (democracy), models 2 and 4 from Table 3 (human rights and judicial independence), models 2 and 4 from Table 4 (trade openness and US trade share), and models 1 and 2 from Table 5 (US alignment based on alliances and UN voting). The goal is to assess whether the main results are driven by routine year-to-year variation in the latent influence score or whether they also appear when withdrawal is defined as a large decline in support. I therefore create a new measure, *Large US Decrease*, coded as 1 when the annual decrease in US support surpasses a substantively meaningful threshold. I also include an analogous *Large Russia Decrease* measure.

I set the threshold using McManus and Nieman (2019, Table 1), which reports the contribution of different support signals to the latent influence score for each major power. Specifically, I define a large US decrease as a downward shift of approximately .7 in the US influence score, roughly the size of terminating an alliance with the US. For Russia, the analogous threshold is approximately 1.5. A decline of this size in the latent influence score may reflect the termination of a single major signal of support, such as an alliance, or the cumulative effect of reductions across several dimensions, such as troop deployments, arms transfers, military exercises, visits, or public statements.

Table A.1 presents the threshold results for protégé domestic institutions, and Table A.2 presents the corresponding results for economic and foreign-policy outcomes. The results are consistent with the analogous continuous-treatment models in the manuscript. Large decreases in US influence produce effects in the expected direction, while the persistent component of influence and the error-correction parameter remain similar to those reported in the main analyses. Likewise, large decreases in Russia influence, as well as the persistent component, are similar to those in the main analysis. The long-run effects for each major power are also comparable in magnitude and significance to the manuscript results (recall the long-run effects here include only decreases in major power influence, whereas those in the main analysis are changes, i.e., positive or negative shifts). These findings suggest that the main conclusions are not driven solely by routine annual variation in the influence measure; they also hold when withdrawal is operationalized as a substantively large decline in support.

2 Causal Assumptions

Like other regression-based approaches that rely on selection-on-observables logic, a causal interpretation of the ECM estimates requires assumptions beyond the dynamic specification itself. This Appendix evaluates five assumptions discussed in the manuscript: sequential

Table A.1: Threshold Operationalization of Major Power Influence on Protégé Institutions.

DV:	Democracy (all regimes)	Democracy (mixed regimes)	Human Rights Protections	Judicial Independence
Large US Decrease	-.005** (.003)	-.003 (.004)	-.002 (.008)	-.002* (.001)
US Influence _{t-1}	.003** (.001)	.006** (.001)	.009** (.003)	.001** (.000)
Large Russia Decrease		-.015 (.005)	-.009 (.077)	.002 (.011)
Russia Influence _{t-1}		-.003** (.001)	.008** (.002)	.000 (.000)
Dependent Variable _{t-1}	-.016** (.002)	-.078** (.005)	-.020** (.002)	-.009** (.002)
Long-run Effect of a Large Major Power Drop				
US Influence	-.189**	-.079**	-.462**	-.132**
Russia Influence		.040**	-.407**	-.019
Controls	Y	Y	Y	Y
N	7945	4154	7738	7693

Table A.2: Threshold Operationalization of Major Power Influence on Protégé Foreign Policies.

DV:	Trade GDP	US Trade Total Trade	US Align. (Alliance)	US Align. (UN Votes)
Large US Decrease	-.008 (.010)	-.039** (.023)	-.001 (.002)	.001 (.005)
US Influence _{t-1}	-.004 (.003)	.012 (.008)	.001* (.001)	.001 (.002)
Large Russia Decrease	-.090 (.084)	-.147 (.215)	.002 (.018)	-.021 (.061)
Russia Influence _{t-1}	.002 (.004)	-.049** (.007)	-.000 (.001)	-.005** (.002)
Dependent Variable _{t-1}	-.038** (.004)	-.080** (.005)	-.008** (.002)	-.146** (.006)
Long-run Effect of a Large Major Power Drop				
US Influence	.101	-.150*	-.155*	-.006
Russia Influence	-.058	.616**	.010	.034**
Controls	Y	Y	Y	Y
N	6086	7383	7945	7224

exogeneity, no anticipation, correct dynamic specification, weak exogeneity of major-power influence, and no unmodeled interference across units. The tests reported below cannot prove causal identification, but they clarify where the evidence is strongest and where the interpretation should be more cautious.

2.1 Sequential Exogeneity

The first assumption, sequential exogeneity, requires conditional independence: after conditioning on the modeled history of the outcome and treatment, and on the included covariates, there should be no omitted factors that jointly determine both changes in major power influence and changes in the outcome variable. In the dynamic context, this is usually stated formally: conditional on prior outcomes, prior treatment, treatment changes, and controls, the current change in major-power influence must not be driven by unmodeled shocks to the contemporaneous outcome. The sequential exogeneity assumption is a weaker extension of conditional ignorability, as inclusion of the lag accounts for time-invariant omitted variables (Angrist and Pischke 2009, 243–244) and indirectly incorporates prior unobservable factors (Keele 2015, 322). If this assumption holds, then the treatment is as-if random with respect to the contemporaneous outcome.¹

The theoretical case for sequential exogeneity rests on the asymmetry of the major power–protégé relationship. Protégés are strategic actors, but they usually have stronger incentives to preserve support than to surrender it voluntarily. Once an initial bargain over the degree of major-power influence is reached, protégés benefit from keeping the relationship relatively stable: support provides security, resources, status, and external backing, while altering the terms of the relationship requires at least tacit agreement from the patron. Even when a protégé’s policy ideal point moves away from the major power’s—for example, following a change in the ruling societal coalition—the protégé is more likely to seek continued benefits for as long as possible than to terminate the relationship unilaterally. Protégés may hedge, signal loyalty, diversify ties, or make policy concessions, but they rarely have the leverage to compel a patron to maintain support once the patron’s domestic or geopolitical calculus changes.

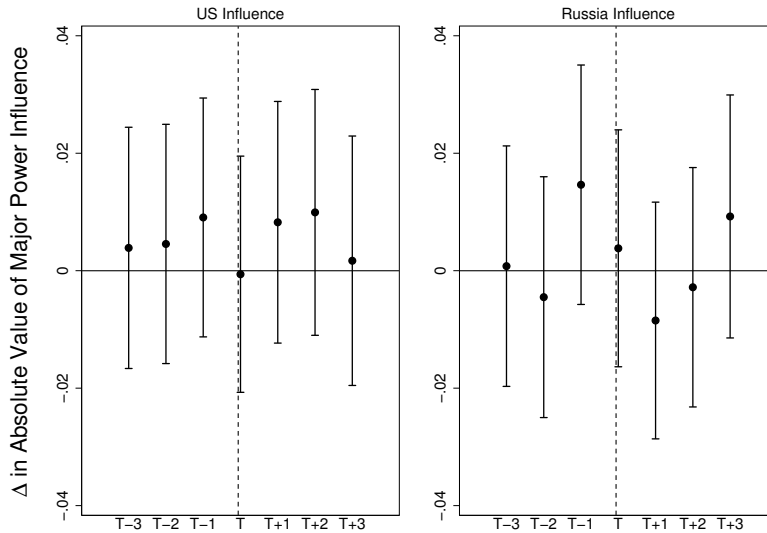
The major power, on the other hand, has several strategic reasons to withdraw support and influence. First, a major power that has experienced a leadership change that represents a change in the ruling societal coalition is likely to reorient its foreign policy or adjust the specific milieu goals that are emphasized (Mattes, Leeds and Carroll 2015; Nedal and Schramm 2025). Second, changes in geopolitical context, such as either material power changes or unexpected actions by a geopolitical rival (Bell and Johnson 2015; Nieman et al. 2021), or a major unexpected event, such as the September 11 terrorist attacks, can lead a major power to re-assess its foreign policy concerns and re-prioritize support for some protégés at the expense of others.²

To summarize, even after changes in the societal coalition ruling the state (e.g., a change from a Conservative government to a Liberal one in Colombia), protégés have little incentive to defect from the existing equilibrium where they receive benefits from the major power. Instead, it is major powers that are likely to decrease influence in response to changes in

¹This assumption addresses reverse causation—the possibility that changes in a protégés’ domestic institutions or foreign-policy behavior lead major powers to withdraw support, rather than the reverse.

²Either of these processes can lead to a change in major power support that is exogenous from the perspective of the impacted protégé state. Moreover, after a major power has withdrawn support from a protégé, the behavioral outcomes of the protégé decline in relevance for the major power relative to other factors. If the major power completely withdraws support, for example, then it has decided that its own strategic interests do not include the (now former) protégé and thus it need not consider the implications for the protégé.

Figure A.1: Effect of a Change in a Protégés Ruling Societal Coalition on Major Power Influence.



their own domestic ruling coalition and the geopolitical context with other major powers and events. From the perspective of the protégé, these actions are as-if random as they apply to the outcome variables under study in the manuscript.

The key theoretical pathways underlying the causal process can be empirically validated. First, since protégé states prefer to receive benefits to losing them, there should be no immediate difference in the measure of major power influence following key events that alter their ideal point, such as changes in the societal coalition on which a protégé's government is based. That is, if protégés cannot unilaterally impact major power influence, there should be no change in this variable in the years before or after a change in the protégé's ruling societal coalition. Conversely, if major powers can unilaterally impact influence, there should be an effect following changes in a major power's domestic coalition. Lastly, changes in major power influence should also be impacted by the actions of rival major powers.

To test whether changes in the ruling domestic societal coalition impact major power influence, I estimate an OLS where the absolute value of a change in major power influence for a particular protégé is a function of the treatment of a change in the protégé's ruling societal coalition, using data from Mattes, Leeds and Matsemura (2016), while controlling for the level of major power influence in the previous period. I use the absolute value of the change in major power support as a change in the protégé's ruling societal coalition could bring to power a government more aligned with the major power or one less aligned with it. In either case, any change in influence—positive or negative—after the treatment would run counter to the theoretical pathway posited in the manuscript. I repeat this estimation for the three years prior to treatment through three years afterward. This specification is a simple difference-in-difference design, as the treatment group contains states that experience a change in the ruling societal coalition and the control group includes those that do not experience such a change.

The results for both US and Russian major power influence are presented in Figure A.1.

The results show no treatment effect—the difference-in-difference coefficient is not statistically significant in any time period for either major power. Instead, the average major power influence within three years before and after the intervention is nearly identical. In sum, these tests provide no evidence that the main results are driven by reverse causation from domestic changes in protégé states.

Next, I test whether major power influence for a particular protégé is responsive to the major power’s own domestic changes of ruling societal coalitions as well as to the changing level of influence by a rival major power for the same protégé. To do so, I estimate two ECMs, one for US influence and one for Russia influence, treating the two major powers as geopolitical rivals. Though my focus here is primarily on instantaneous effects—to support my claim withdrawal is driven by the major power—an ECM is appropriate because it allows for unbiased estimates of the short-term effect with integrated outcome variables, as well as when both the outcome and some explanatory variables are integrated.³

I measure a change in the major power’s ruling societal coalition using data from Mattes, Leeds and Matsemura (2016). As previous research of major power competition has found that contemporaneous outcomes are related to simultaneous actions of a rival (McGinnis and Williams 1989; Kadera 2001; Nieman et al. 2021), I include a measure of the contemporaneous change in support by a rival major power and a lag of prior rival support measured in level-terms. Finally, I include a lag of the major power’s own support. Lastly, as the outcome variables— $\Delta US Influence$ and $\Delta Russia Influence$ —are also predictors in the complementary equation, I also report results where the ECMs are estimated by three-stage least squares.⁴

The results are presented in Table A.3. Changes in the domestic societal ruling coalition are a significant factor for each major power, with each experiencing a temporary decrease in influence. As protégé states have no direct impact on the domestic politics of a major power, this result offers initial support that major powers make foreign policy decisions in response to changes in their own interests.

Changes in the rival’s influence are also associated with a major power’s own influence with a protégé. In the two single-equation models, the impact is positive and statistically significant, suggesting that both major powers increase their own efforts when a rival takes steps to recruit a protégé. However, the coefficients in the simultaneously estimated model are positive for the US and negative for Russia. This indicates that, once the contemporaneous change in a rival’s influence is instrumented, then the effect for Russia is reversed. The magnitude of the coefficients also increases. These larger effects are short-lived, though, as the persistent component—represented as the coefficient associated with the lag of rival’s influence—is much smaller: it failed to reach significance in both US models, while it is orders smaller in magnitude than the contemporaneous effect in the Russia equations. Notably,

³An alternative estimator would be a differenced model. Despite both using a differenced Y as the outcome, an ECM is not the same as a differenced model. Though both include differenced values of X and difference out time-invariant unit-level fixed effects, the ECM differs from a differenced model in two important ways: first, an ECM assumes the error is from period t whereas a differenced model assumes it is the difference from two periods, and second the ECM includes a lagged value of the right-hand side variables in level terms, which allows for calculation of their total effect. The differenced estimator estimates instantaneous effects of the independent variables only. In terms of causal inference, the differenced model gives the upper bound of the instantaneous effect of X , whereas a lagged model, such as an ECM, gives a more conservative lower bound estimate (Angrist and Pischke 2009, 245–247).

⁴Each equation is identified by its own version of the domestic change in ruling societal coalition variable.

Table A.3: Major Power Domestic Geopolitical Drivers of Influence for Individual Protégés.

	Single-Equation		Three-stage	
	US	Russia	US	Russia
Major Power:				
Δ Domestic Ruling Societal Coalition	-.023** (.011)	-.233** (.022)	-.032** (.013)	-.367** (.109)
Δ Rival's Influence	.074** (.013)	.044** (.008)	.231* (.123)	-2.624* (1.513)
Rival's Influence $_{t-1}$	-.009 (.006)	-.007* (.004)	.005 (.012)	-.247* (.137)
Major Power's Influence $_{t-1}$	-.089** (.004)	-.086** (.004)	.088** (.005)	-.125** (.027)
Constant	.006 (.004)	.008** (.003)	.006 (.004)	.019 (.012)
Observations	9067	9067	9067	

the results indicate that major powers' own decisions to change support are responsive to geopolitical developments.⁵ Overall, this set of results indicates that major power influence is indeed driven by the domestic and external interests of the major power.

Taken together, the results from Figure A.1 and Table A.3 are consistent with the theoretical claim that changes in major-power support are driven primarily by major-power domestic and geopolitical factors rather than by prior protégé outcomes.

2.2 Anticipation

A second assumption is that protégés do not systematically anticipate future changes in major power influence and adjust their behavior before the change occurs. This no anticipation assumption matters because anticipatory adjustment would make it difficult to distinguish the effect of withdrawal from behavior that occurred in expectation of withdrawal.

I evaluate this by re-estimating the baseline ECM augmented with one- and two-year leads of the change in major-power influence. If protégés systematically changed their behavior before disengagement, the leads should predict current outcomes. If the lead terms are not distinguishable from zero, this provides evidence against anticipatory adjustment.

The results for these tests are presented in Tables A.4 and A.5. For the outcomes focusing on protégé institutions (democracy, human rights, and rule of law), the lead terms are not statistically or substantively meaningful for the institutional outcomes: none of the leads are statistically significant and the main estimates of interest—change in major power influence and lagged major power influence—have the same magnitude and significance as in the manuscript.

⁵The lagged level of a major power's own influence is far from -1 and near 0, indicating a strong error correction process and high autocorrelation. Though not the focus of this part of the analysis, the high degree of autocorrelation suggests that the persistent component of a change in a rival's influence may generate a sizable long-run effect.

Table A.4: Lead Tests for Major-Power Influence on Protégé Institutions

DV:	Democracy (all regimes)	Democracy (mixed regimes)	Human Rights Protections	Judicial Independence
Δ US Influence $_{t+2}$	0.002 (0.002)	0.003 (0.002)	0.000 (0.005)	0.000 (0.001)
Δ US Influence $_{t+1}$	0.002 (0.002)	0.003 (0.003)	0.002 (0.005)	0.001 (0.001)
Δ US Influence	0.005** (0.002)	0.009** (0.003)	0.002 (0.005)	0.001 (0.001)
US Influence $_{t-1}$	0.004** (0.001)	0.008** (0.001)	0.008** (0.003)	0.001** (0.000)
DV $_{t-1}$	-0.016** (0.002)	-0.076** (0.005)	-0.019** (0.002)	-0.009** (0.002)
Controls	Y	Y	Y	Y
N	7936	4149	7733	7690

Table A.5: Lead Tests for Major-Power Influence on Protégé Foreign Policies

DV:	$\frac{\text{Trade}}{\text{GDP}}$	$\frac{\text{US Trade}}{\text{Total Trade}}$	US Align. (Alliance)	US Align. (UN Votes)
Δ US Influence $_{t+2}$	0.020** (0.005)	0.020 (0.013)	0.001 (0.001)	-0.004 (0.003)
Δ US Influence $_{t+1}$	0.013** (0.006)	0.036** (0.015)	0.002* (0.001)	0.003 (0.003)
Δ US Influence	0.010* (0.006)	0.061** (0.014)	0.002** (0.001)	0.013** (0.003)
US Influence $_{t-1}$	-0.002 (0.003)	0.032** (0.008)	0.002** (0.001)	0.003* (0.002)
DV $_{t-1}$	-0.038** (0.004)	-0.073** (0.004)	-0.008** (0.002)	-0.148** (0.006)
Controls	Y	Y	Y	Y
N	6086	7379	7936	7221

For the economic and foreign-policy outcomes, the main estimates remain stable after including lead terms, although some leads are statistically significant. This pattern suggests timing ambiguity: trade and foreign-policy behavior may begin adjusting before disengagement is fully measured, or annual data may imperfectly capture the timing of changing support. I therefore interpret these estimates as qualified causal evidence. They are consistent with the proposed mechanism, but the timing of adjustment is less clean than for the institutional outcomes.

Table A.6: Unit Root Tests

Variable	γ	SE_γ	t-statistic
US Influence	-.089	(.004)	-20.20
Russia Influence	-.086	(.004)	-19.64
Democracy	.004	(.001)	3.92
Human Rights Protections	.007	(.001)	6.84
Judicial Independence	.003	(.000)	8.30
Trade Openness, $\frac{\text{Trade}}{\text{GDP}}$	.002	(.001)	3.62
US Trade Proportion, $\frac{\text{US Trade}}{\text{Total Trade}}$	-.014	(.001)	-8.56
US Align. (Alliance)	-.002	(.001)	-1.97
US Align (UN Votes)	-.054	(.003)	-18.49

2.3 Dynamic Specification

A third assumption concerns dynamic specification. A time series model must include enough of the relevant history of the outcome and explanatory variable to capture the dynamic process.

I first test whether the outcome variables and major power influence contain unit roots. This matters because the ECM must be specified in stationary terms. A unit root implies that, for a given variable y , that $\alpha'_1 = 1$ in the model $y_t = \alpha'_1 y_{t-1} + \epsilon_t$ (Enders 2010, 206). To evaluate this, I perform the Dickey-Fuller test for each variable:

$$\Delta y_t = \gamma y_{t-1} + \epsilon_t \quad (1)$$

where $\gamma = \alpha'_1 - 1$. The null hypothesis is that $\gamma = 0$; if γ is negative and statistically significant, we can reject the null hypothesis of a unit root.

The results of this test are presented in Table A.6. The tests indicate that the major-power influence variables are stationary, while several outcomes are highly persistent and cannot be distinguished from unit-root processes: *democracy*, *human rights protections*, *judicial independence*, and *trade as a percent GDP*.

For each outcome/explanatory variable combination, an ECM is appropriate. As the dependent variable enters the ECM in first differences, the estimated equation is specified in stationary terms even for the integrated outcomes (De Boef and Keele 2008; Keele, Linn and Webb 2016). Moreover, using a single estimation strategy allows for a consistent presentation and interpretation of the relationship between major power influence and the various outcomes.

Next, I test the lag structure by adding one additional lag to each of the main independent variables (both differenced and lagged) and one additional lag to the dependent variable. The additional lags on the independent variables yield insignificant results, where the sum of the additional lags on the dependent variable is roughly the same as the coefficient in the original analysis (thus producing the same long-run multiplier).⁶ These results, presented in

⁶The sum of the lags are within the 95% credible interval of the analogous model from the manuscript in 5 of the 8 cases and all cases are within the 90% credible interval. The reported standard error of the coefficient of sum of the lags is the square root of the variance of the sum of two coefficients, or $Var(X) +$

Table A.7: Additional Lags in ECM for Major Power Influence on Protégé Institutions.

DV:	Democracy (all regimes)	Democracy (mixed regimes)	Human Rights Protections	Judicial Independence
Δ US Influence	.005** (.002)	.008** (.003)	.003 (.004)	-.000 (.000)
US Influence _{t-1}	.005** (.002)	.010** (.003)	.009** (.005)	-.000 (.000)
Δ US Influence _{t-1} (additional lag)	.003 (.002)	.004 (.003)	-.006 (.004)	-.000 (.000)
US Influence _{t-2} (additional lag)	-.001 (.002)	-.002 (.003)	-.004 (.005)	.001 (.000)
$\sum_{\ell=1}^2 DV_{t-\ell}$	-.021** (.002)	-.083** (.005)	-.023** (.002)	-.007** (.001)
Controls	Y	Y	Y	Y
N	7602	3928	7504	7465

Table A.8: Additional Lags in ECM for Major Power Influence on Protégé Foreign Policies.

DV:	$\frac{\text{Trade}}{\text{GDP}}$	$\frac{\text{US Trade}}{\text{Total Trade}}$	US Align. (Alliance)	US Align. (UN Votes)
Δ US Influence	.005 (.006)	.040** (.013)	.001 (.001)	.010** (.003)
US Influence _{t-1}	-.004 (.006)	.033** (.014)	.003** (.001)	.002 (.003)
Δ US Influence _{t-1} (additional lag)	.001 (.006)	.017 (.013)	.000 (.001)	.002 (.003)
US Influence _{t-2} (additional lag)	.002 (.006)	-.021 (.015)	-.002* (.001)	-.002 (.003)
$\sum_{\ell=1}^2 DV_{t-\ell}$	-.032** (.004)	-.050** (.004)	-.004** (.001)	-.104** (.006)
Controls	Y	Y	Y	Y
N	5853	7088	7605	6805

Tables A.7 and A.8, offer support of the specification in the main analysis.

2.4 Weak Exogeneity

The fourth assumption concerns weak exogeneity of major-power influence for the single-equation ECM. Substantively, the concern is feedback, or that major-power influence may adjust in response to prior protégé outcomes, in which case the treatment process would be jointly determined with the outcome process rather than plausibly modeled as conditionally

$Var(Y) + 2Cov(X, Y)$. Recall also that in the ECM, $\alpha_1 = \alpha'_1 - 1$, so for model 1 of Table A.7, the associated t-statistic for the coefficient on $\sum_{\ell=1}^2 DV_{t-\ell}$ is .97878/.00217=451.

Table A.9: Test for Feedback with US Influence

Variable	π_2	SE $_{\pi_2}$	t-statistic
Democracy	-.002	(.083)	-.03
Democracy (mixed regimes)	.030	(.110)	.27
Human Rights Protections	-.011	(.029)	-.40
Judicial Independence	.113	(.202)	.56
Trade Openness, $\frac{\text{Trade}}{\text{GDP}}$	.025	(.031)	.82
US Trade Proportion, $\frac{\text{US Trade}}{\text{Total Trade}}$	.012	(.010)	1.11
US Align. (Alliance)	.159	(.119)	1.34
US Align (UN Votes)	.018	(.044)	.41

independent.⁷ This assumption is key for estimating valid long-run effects. I assess this concern by estimating marginal models of changes in major-power influence and testing whether lagged outcome terms predict subsequent changes in influence (Enders 2010: 371; Linn, Lebo, and Webb 2026: 113–117). The test therefore asks whether the treatment process responds systematically to earlier protégé behavior once prior influence and the relevant controls are taken into account.

I check this using a Granger causality test on the marginal model:

$$\Delta x_t = \pi_0 + \pi_1 \Delta x_{t-1} + \pi_2 \Delta y_{t-1} + \Delta \text{Controls}_{t-1} + \epsilon_t \quad (2)$$

where x is US influence, y is the outcome variable, and the controls are the model specific control for each outcome listed in the manuscript. I then test whether the lagged outcome terms predict subsequent changes in major power influence. Failure to reject this restriction provides evidence against feedback from the protégé outcome to the treatment process; rejection would indicate major-power influence adjusts in response to prior protégé behavior.

Table A.9 presents the results for the relevant lagged outcome variable. None of the outcome variables reach statistical significance, offering no evidence of feedback for any outcome variable on US influence. This lack of feedback implies that the influence measures do not depend on the outcome variables. Thus, the evidence supports the assumption that major power influence is weakly exogenous.

2.5 Spatial Interdependence

Finally, the fifth assumption is that the treatment of one unit does not affect the outcomes of other units in unmodeled ways. Because major powers may withdraw from several protégés at once, cross-sectional dependence is a potential threat to valid causal inference.

I test this using a temporal spatial autoregressive model (Franzese and Hays 2007, 2008; Cook, Hays and Franzese 2023). I first construct a connectivity matrix among observations, $\mathbf{W}$. The connectivity matrix relates to similarity in major power influence, such

⁷More technically, a variable is weakly exogenous if: (1) the parameters of interest in a conditional model do not depend on the parameter values from the marginal model, and (2) the parameters are unrestricted across the models (Engle, Hendry and Richard 1983; Linn, Lebo and Webb 2026, 114–115).

Table A.10: Spatial Autoregression for Major Power Influence on Protégé Institutions.

DV:	Democracy (all regimes)	Democracy (mixed regimes)	Human Rights Protections	Judicial Independence
Δ US Influence	.004** (.001)	.007** (.002)	.001 (.004)	.000 (.001)
US Influence _{t-1}	.003** (.001)	.007** (.001)	.008** (.003)	.001** (.000)
Δ Russia Influence		-.004 (.003)	-.000 (.006)	-.002** (.001)
Russia Influence _{t-1}		-.003** (.001)	.008** (.003)	-.000 (.000)
DV _{t-1}	-.016** (.002)	-.077** (.005)	-.020** (.002)	-.011** (.001)
Spatial Interdependence – US Network				
ρ	.338** (.050)	.208** (.055)	.300** (.050)	.500** (.036)
Long-run Effect on US Influence:				
Median $\mathbf{W}$	.028	.060	.067	.006
Change Influence from:				
75 percentile $\rightarrow$ Median	-.018	-.025	-.043	-.004
Mean $\rightarrow$ unaligned	-.198	-.052	-.377	-.089
Controls	Y	Y	Y	Y
Number of Observations	7945	4154	7738	7693

Note: Control variables are the same as in the main analyses reported in Tables 2–5 of the manuscript. Long-run effects are constructed from the ratio of parameters for the change and lag of major power over the temporal and spatially lagged dependent variable (long-run multiplier: $-\frac{\beta_1}{\alpha_1 + \rho \mathbf{W}}$).

that each cell within the connectivity matrix represents the similarity of a pair of states in terms of their position within the major power’s network. This connectivity matrix captures dependencies that protégés may have due to a similar position within the major power’s hierarchical political order. Owing to asymmetries in support—e.g., state-pairs with close alignment to a major power are more likely to act similarly than pairs of non-aligned states—network position similarity is measured as the product of their major power influence scores, $US\ Influence_i \times US\ Influence_j$. Prior to calculating the connectivity scores, influence measures were transformed to avoid negative values. Consistent with common practice, the diagonal of the connectivity matrix is zeroed out, and the matrix is row-standardized.

Results for the spatial autoregressive models are presented in Tables A.10 and A.11. The main results show that the signs and significance of the main variables are robust to this specification. I also calculate the long-run effect while accounting for both spatial and temporal processes, each of which has its own feedback effect (Cook, Hays and Franzese 2023, 68–69). The construction of the connectivity matrix implies that the spatial effect varies depending on a protégé’s specific value of major power influence. As such, I report three long-run effects for a protégé: one where it has the median value of $\mathbf{W}$, one for a change from a relatively high degree of major power influence to the median level of influence (from approximately the 75th percentile to the 50 percentile), and one for a change from the mean level of influence to being non-aligned (i.e. influence is zero). For states with greater major

Table A.11: Spatial Autoregression for Major Power Influence on Protégé Foreign Policies.

DV:	Trade GDP	US Trade Total Trade	US Align. (Alliance)	US Align. (UN Votes)
Δ US Influence	.005 (.005)	.037** (.013)	.001 (.001)	.006** (.002)
US Influence $_{t-1}$	-.002 (.003)	.017** (.008)	.001* (.001)	.002 (.002)
Δ Russia Influence	-.003 (.006)	-.029* (.016)	-.004** (.001)	-.010** (.003)
Russia Influence $_{t-1}$	.002 (.004)	-.051** (.008)	-.001 (.001)	-.004** (.001)
DV $_{t-1}$	-.036** (.004)	-.081** (.004)	-.008** (.001)	-.101** (.006)
Spatial Interdependence – US Network				
ρ	.640** (.029)	.241** (.055)	.460** (.041)	.797** (.012)
Long-run Effect on US Influence:				
Median W	.009	.097	.008	.004
Change Influence from:				
75 percentile $\rightarrow$ Median	.006	-.050	-.005	-.003
Mean $\rightarrow$ unaligned	.064	-.148	-.152	-.014
Controls	Y	Y	Y	Y
Number of Observations	6086	7383	7945	7224

Note: Control variables are the same as in the main analyses reported in Tables 2–5 of the manuscript. Long-run effects are constructed from the ratio of parameters for the change and lag of major power over the temporal and spatially lagged dependent variable (long-run multiplier: $-\frac{\beta_1}{\alpha_1 + \rho \mathbf{W}}$).

power influence, the effect of major-power withdrawal is somewhat offset by the spatial interdependencies based on its position within the major power’s network.

The lower a protégé’s position after withdrawal, however, the less the impact of the spatial parameter. As unaligned states are outside of the US network, they are unaffected by its connectivity—i.e. the values within their W matrix will effectively be zero. Therefore, for minor powers with initial major power influence scores at around the mean (roughly the 55 percentile) who shift to an unaligned status, the long-run effects are similar to those reported in the main tables, as the spatial impact is approximately zero. Substantively, this means, unless a state has a very high initial position in a major power network, the long-run impact of major-power withdrawal is the same as that reported in the main analysis.

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