The Reciprocal Relationship Between Foreign Policy Preferences and Military Action

Introduction

Not knowing that it had already been proved by Reed et al in 2008, as a personal project I sought to use UN voting data to predict military behaviour such as interstate disputes.

In the UN General Assembly countries can either vote “yes”, “no” or “abstain” on resolutions. I initially used a measure of voting cohesion, IVC, as developed by Hurwitz (p. 228) to investigate this.

$$IVC = \frac{f+\frac{1}{2}g}{t} \times 100$$

where,

f is the number of times a pair of countries vote identically,
g is the number of times a country votes “abstain” while the other country votes “yes” or “no”, and
t is the total number of votes

It was found that IVC was significantly correlated with both military interstate disputes and the formation of military defense alliances, even when controlling for various other factors.

The findings of Reed et al were similar even though they used a slightly different formula that did not account for when one of the countries in a pair voted “abstain” and the other didn't.

There have been significant advancements in analysing UN voting data however since Reed et al’s investigation. Metrics such as IVC have been shown to not be rigorous. Consider if there are

three major issues that countries in the UN vote on (A, B, and C). Assume also that the USA and Russia only cares about issues A and B. If in a given period these countries only vote on resolutions that are related to issue C, there is a chance that they happen to vote in the same way, and thus metrics such as IVC will indicate high degree of alignment in voting preferences. If in the next period these countries only vote on resolutions relating to issues A and B (which they care about), there is a good chance that they vote antagonistically, and thus metrics such as IVC will show very low degrees of alignment. Therefore analyzing metrics such as IVC over time could indicate erroneous changes in voting preferences even if no change occurred besides what the countries were voting on.

To circumvent these issues, methods such as those developed by Bailey et al. represent state preferences as "ideal points" on a linear scale. Absolute differences in the ideal points between countries can be compared across time to accurately reflect changes in voting preferences over time.

Foreign Policy Preferences as an Indicator of Military Action

To build on my project I thus used absolute differences in ideal points instead of IVC, and found that the same significant relationships existed. Large differences in country voting preferences at the UN was an indicator of interstate disputes occurring, and small differences was an indicator of defense alliance formation. Notably the significant relationship holds true with lagged variables. That is, instead of just showing that differences in ideal points can indicate disputes occurring or alliances forming, I found that the average change in the difference between ideal points for a dyad over the past year, past 5 years, and past 10 years are significant. The results of these regressions are shown in tables 1 and 2.

Note that the ideal points data was obtained from Bailey et al, whereas the dispute and alliance datasets were obtained from the Correlates of War project (versions 4.0 and 4.1 respectively). The data was also supplemented by the National Material Capabilities offered by the Correlates of War project (version 6.0) to provide information about military capabilities (cinc ratio)

Table 1: Regression Results Predicting the Formation of Military Defense Alliances in the Next Year (Binomial Model)

Variable	**Estimate**	**Pr (> |t|)**
intercept ***	38.67	1.54e-07
difference in ideal points (current year) ***	-1.153	< 2e-16
change in difference in ideal points (past year) *	0.404	0.041
mean change in difference in ideal points (past 5 years)	1.229	0.069
mean change in difference in ideal points (past 10 years) ***	-3.594	2.48e-04
countries share an alliance **	0.602	0.001
countries already previously allied *	0.416	0.038
current year ***	-0.023	6.06e-10
cinc ratio ***	1.158	3.51e-12
cinc mean	4.216	0.266

The occurrence of military interstate disputes and the formation of defence alliances can be seen as manifestations of the types of relationships between countries at a point in time. I suggest that disputes are indicative of a pair of countries being more antagonistic, whereas alliances are indicative of a pair of countries being more friendly. If this is the case, then we would expect differences in voting preferences to be positively correlated with one event and negatively correlated with another. This finding is reflected in the results.

For example, difference in ideal points (foreign policy positions for a pair of countries) for the current year, is positively correlated with the occurrence of a dispute in the next year, but negatively correlated with the formation of an alliance in the next year. Countries are more likely to align with those that have similar foreign policy beliefs, and to have disputes with those that differ.

When we consider how those differences in ideal points change on average over time, a more interesting relationship emerges. The mean change in difference in ideal points over the past year is positively correlated with the formation of a defense alliance in the next year, whereas the mean change over the past ten years is negatively correlated with the formation of a defense alliance. Recall that when these variables are positive they indicate countries becoming more different in foreign policy preferences over time, whereas when they are negative, countries are becoming more similar in foreign policy preferences over time. This suggests that alliances do not just occur when countries become more aligned over time, but occur at decisive moments when pairs of countries which were becoming more aligned over time, begin to diverge. This supports Schroeder's work as referenced by Piccoli (p. 19) that alliances may be used as a tool for management. As suggested by Morrow (p. 906) when discussing the USA and Israel, some countries have no need to sign a military defense alliance because there is no doubt that they would aid each other in a crisis. This data provides evidence for that claim, suggesting that when there is doubt, when countries that were previously becoming increasingly aligned show signs that they may begin to differ, alliances are formed to remove any doubt.

The size of the coefficients reinforces this idea as the estimate for the mean change in the difference in ideal points over the past year is +0.404, whereas over the past 10 years it is -3.629. One interpretation of this is that the change in policy preferences over the past year has a much smaller effect on alliance formation than over the past ten years. In line with this, the results suggest that a small constant increase in alignment in foreign policy preferences over the past 10 years is just as likely to indicate alliance formation in the next year as a large divergence in foreign policy preferences within the current year. Combining these interpretations of the data, I suggest that military defense alliances are even more likely when two states become more similar over time and then suddenly shift. Drawing on Morrow's posit (p. 906), I suggest that under these conditions pairs of countries sign these alliances to reaffirm to each other that shifts in policy preferences do not indicate that they are becoming enemies.

Table 2: Regression Results Predicting the Occurrence of Military Interstate Disputes in the Next Year (Binomial Model)

Variable	**Estimate**	**Pr (> |t|)**
intercept **	11.74	0.002
difference in ideal points (current year) ***	0.340	< 2e-16
change in difference in ideal points (past year) *	-0.202	0.031
mean change in difference in ideal points (past 5 years)	0.573	0.079
mean change in difference in ideal points (past 10 years)	0.448	0.388
countries share an alliance **	-0.316	0.009
countries already previously allied ***	1.618	< 2e-16
current year ***	-0.010	5.41e-07
cinc ratio ***	1.697	< 2e-16
cinc mean ***	27.41	< 2e-16

An interpretation of these findings is more difficult for the case of disputes. Firstly, changes in the difference between ideal points is only significant over the past year (it is not significant over the past 5 years or 10 years). Secondly, it is negatively correlated with disputes in the next year. This would suggest that holding everything else constant, when countries become more aligned within a year, they are more likely to experience disputes. This seems to go against theory that suggests disputes occur when countries aren't in agreement on the status quo. Given this theory, we should see that states are less likely to engage in disputes when they begin to align more over time. Furthermore, differences in ideal points for the current year was found to be positively correlated with the disputes occurring. This finding supports common theories of war, as countries that differ more in their view on the status quo, are more likely to experience conflict. Thus I conclude that the negative relationship associated with the trend over the past year needs a lot more investigation before conclusions can be drawn from it.

The Reciprocal Relationship between Military Action and Foreign Policy Preferences

If past voting preferences are indicators of disputes and alliance formation, could these disputes and alliances in turn indicate future voting preferences. In 1991 Morrow developed his idea of asymmetric alliances which suggests that when major powers align with weaker countries what they exchange is security and autonomy. If this holds true then we should expect that after countries form military alliances, they should become more closely aligned with each other over time. I thus regressed whether an alliance formed against the mean change in the difference in UN preferences for the next year, next 5 years, and next 10 years. The findings are shown in tables 3, 4, and 5.

Table 3: Regression Results Predicting Change in The Difference in Ideal Points over the Next Year (Linear Model Adjusted R-squared: 0.08836)

Variable	**Estimate**	**Pr (> |t|)**
intercept	1.176e-01	0.163
new defensive alliance **	-4.430e-02	0.003
new military interstate dispute ***	3.994e-02	4.27e-05
difference in ideal points (current year) ***	-5.306e-02	< 2e-16
change in difference in ideal points (past year) ***	-1.520e-01	< 2e-16
mean change in difference in ideal points (past 5 years) ***	-1.573e-01	< 2e-16
mean change in difference in ideal points (past 10 years) ***	-2.910e-01	< 2e-16
countries share an alliance ***	3.080e-02	< 2e-16
countries already previously allied ***	-4.045e-02	< 2e-16
current year	-4.039e-05	0.340
cinc ratio **	-6.025e-03	0.001
cinc mean ***	6.194e-01	< 2e-16

Table 4: Regression Results Predicting Average Change in The Difference in Ideal Points over the Next Five Years (Linear Model Adjusted R-squared: 0.1578)

Variable	**Estimate**	**Pr (> |t|)**
intercept *	6.173e-02	0.019
new defensive alliance **	-1.391e-02	0.002
new military interstate dispute **	9.036e-03	0.003
difference in ideal points (current year) ***	-3.152e-02	< 2e-16
change in difference in ideal points (past year) ***	-3.547e-02	< 2e-16
mean change in difference in ideal points (past 5 years) ***	-7.136e-02	< 2e-16
mean change in difference in ideal points (past 10 years) ***	-1.376e-01	< 2e-16
countries share an alliance ***	1.854e-02	< 2e-16
countries already previously allied ***	-2.522e-02	< 2e-16
current year	-1.912e-05	0.147
cinc ratio ***	-4.564e-03	9.26e-15
cinc mean ***	3.807e-01	< 2e-16

An alliance forming in the current year was significantly negatively correlated with changes in UN ideal points over the next year, 5 years, and 10 years, even when accounting for past changes in the difference in UN ideal points. Similarly, a military dispute in the current year was a significant indicator, though positively correlated. This suggests that independent of how foreign policy alignment varied in the past, a military defense alliance leads to more alignment, and a military dispute leads to less alignment in foreign policy over time. Additionally, the estimates for the impact of disputes was consistently bigger than that of defense alliances regardless of which time period being considered, indicating that disputes have bigger effects on foreign policy preferences than alliances.

Table 5: Regression Results Predicting Average Change in The Difference in Ideal Points over the Next Ten Years

(Linear Model Adjusted R-squared: 0.2043)

Variable	**Estimate**	**Pr (> |t|)**
intercept ***	1.256e-01	3.29e-16
new defensive alliance ***	-1.531e-02	1.03e-08
new military interstate dispute ***	1.055e-02	3.01e-09
difference in ideal points (current year) ***	-2.354e-02	< 2e-16
change in difference in ideal points (past year) ***	-1.310e-02	< 2e-16
mean change in difference in ideal points (past 5 years) ***	-5.320e-02	< 2e-16
mean change in difference in ideal points (past 10 years) ***	-9.295e-02	< 2e-16
countries share an alliance ***	1.580e-02	< 2e-16
countries already previously allied ***	-1.998e-02	< 2e-16
current year ***	-5.375e-05	3.29e-12
cinc ratio ***	-3.627e-03	< 2e-16
cinc mean	2.521e-01	< 2e-16

Differences in Foreign Policy Preferences Oscillate

To investigate further, we observe that throughout all time periods, the estimate of the intercepts is consistently positive and large relative to all other variables. This would suggest that holding everything else constant, countries tend to diverge on foreign policy preferences. The estimate of the "current year" variable however is negative. Accounting for this, we see that at its largest (year 2014), the current year variable reduces the intercept but it still remains positive. This is accounted for by the following formula:

$$Adjusted\ Intercept\ =\ (Original\ Intercept\ Estimate)\ +\ (Current\ Year\ Estimate)\ \times\ 2014$$

As shown in table 6, the adjusted intercept is consistently positive, this means that holding everything else constant, for the next year, 5 years, and 10 years, on average a pair of countries is expected to diverge in foreign policy preferences. Notably however, we see that there appears to be a decreasing trend in the adjusted intercepts as we predict foreign policy changes further into the future. Because these intercepts get smaller as we predict changes over larger periods in time, we expect that foreign policy preferences are expected to diverge over time on average, but that this divergence slows down over time. Notably, however, the model estimates for the intercept and year variables are only both significant in the model that is predicting changes over the next ten years. Therefore this hypothesis requires a more rigorous analysis.

Table 6: Intercepts of the Linear Regressions Predicting Changes in Foreign Policy, Adjusted for the Year 2014

Model	**Original Intercept**	**Adjusted Intercept for 2014**
Change in the next year	1.176e-01	0.036
Change in the next 5 years	6.173e-02	0.023
Change in the next 10 years	1.256e-01	0.017

This hypothesis can be better explained by the estimates for differences in ideal points. Differences in ideal points in the current year is negatively correlated with changes in those differences in following years. Recall that the adjusted intercept is positive. Thus for countries that are different in foreign policy preferences, in the future that difference becomes less likely to change or possibly even more likely to decrease, as compared to countries which have similar foreign policy preferences. Differences in foreign policy preferences appear to oscillate like a pendulum. Foreign policy differences swing to a max, slowing down as they get closer to that maximum difference, and then begin to converge once again.

This is supported by the impact of the average change in difference in ideal points over the past year, five years, and ten years. All of these variables are significant and negatively correlated with changes in the future, regardless of how far in the future we are analysing (1 year, 5 years, or 10 years). This suggests that countries diverging on foreign policy preferences in the past indicates that that divergence will slow down in the future, and that they may even begin to

converge. This is further supported by the fact that for each time period in the future being considered, the estimate for a change over the past 10 years is larger than the estimate for a change over the past 5 years, which is larger than the estimate for a change over the past year. The longer that countries have been diverging in foreign policy preferences, the more likely that divergence will stop in the future, and possibly revert. In the same way that we have interpreted these estimates, we can see that for a pair of counties, their foreign policy preferences are not expected to converge completely. As their preferences get closer together we expect that their preferences diverge as well. Though many countries are similar they are each unique and can be expected to want different things over time.

Conclusion

This paper makes three significant contributions. First, by showing that differences in ideal points are positively correlated with disputes, it shows that though Reed et al used a less appropriate metric, their findings are not discredited. Differences in foreign policy preferences contribute to interstate disputes, and as I show alliance formation.

Secondly, this paper provides evidence for the management theory of alliances that is more rigorous than presented by Morrow. It is not only security that is traded as a result of alliance formation, but autonomy. I demonstrate this by showing that un voting preferences begin to converge after a military alliance, or at least diverge less.

Lastly this paper demonstrates that differences in foreign policy preferences oscillate. As countries become more different in their foreign policy preferences that rate of change slows to a maximum then they begin to converge again. As those preferences converge, the rate of change of convergence slows and then they begin to diverge once again.

Citations

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