# Erratum: Coding Correction & Updated Analysis *Duration Models for Repeated Events*, Box-Steffensmeier and Zorn (2002)

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Michael Tiernay* raises an issue with the repeated events paper that deals with the manner in which the event count variable – `sumdisp` – is coded. The variable, as coded in the existing data, takes a value of 0 until a dyad experiences its first event, at which point it takes a value of 1 until it experiences a second event and so on. The issue that Tiernay raises is at what point the value of this variable should change. In the current coding scheme, the variable takes on a new value in the *same* time period that a failure occurs. Alternatively, Tiernay suggests that the value of the variable should change in the period following an event, since it is only after experiencing an event that a dyad is at risk of experiencing a second event. Table 1 shows the basic data structure as well as the two alternate coding schemes, that used in the paper and the alternate supplied in the code Tiernay sent. We consulted Box-Steffensmeier and Jones (2004, 161), as well as Therneau and Grambsch (2000), and it seems like the alternate coding scheme suggested by Tiernay makes sense. Tiernay's suggested coding matches the appendix as well.

A replication of column 5 of Table 2, PWP method with interevent time, using the different coding schemes, is presented in Table 2. This reveals that many of the results are consistent – growth, allies, contiguity and trade all retain the same sign, significance level, and similar coefficient magnitudes.[1] There are two noticeable changes between the two models. With the original coding scheme, democracy is not significant, whereas with the new coding scheme, the effect of joint-democracy is negative and highly significant, indicating that dyadic democracy does reduce the likelihood of MID onset. The ratio of capabilities between states was positive and significant in the original model, but with the recoded event counter, the sign flips, such that larger ratios seem to serve as a deterrent to dispute onset.

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[1]The allies variable becomes statistically significant at the .01 level rather than .05 with the recoded event counter.

Table 1: Example of Coding Change, Rows 20 to 29 of Data

| Dyad | Start | Dispute | Old Sum Dispute | Recoded Sum Dispute |
|---|---|---|---|---|
| 2020 | 20 | 0 | 0 | 0 |
| 2020 | 21 | 0 | 0 | 0 |
| 2020 | 22 | 0 | 0 | 0 |
| 2020 | 23 | 1 | *1* | *0* |
| 2020 | 0 | 0 | 1 | 1 |
| 2020 | 1 | 0 | 1 | 1 |
| 2020 | 2 | 0 | 1 | 1 |
| 2020 | 3 | 1 | *2* | *1* |
| 2020 | 0 | 0 | 2 | 2 |

Table 2: Cox Estimates with Changed Coding of Sum Disputes

| | (1) Original Coding | (2) New Coding |
|---|---|---|
| democ | 0.099 | -0.284** |
| | (0.075) | (0.102) |
| growth | -3.422** | -3.459** |
| | (1.242) | (1.211) |
| allies | -0.202* | -0.329** |
| | (0.094) | (0.123) |
| contig | 0.618*** | 0.885*** |
| | (0.104) | (0.129) |
| capratio | 0.056* | -0.171** |
| | (0.025) | (0.064) |
| trade | 0.812 | -4.287 |
| | (9.604) | (10.466) |
| *N* | 20448 | 20448 |

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

# References

Box-Steffensmeier, Janet M. and Bradford S. Jones. 2004. *Event History Modeling: A Guide for Social Scientists*. New York: Cambridge University Press.

Box-Steffensmeier, Janet M. and Christopher Zorn. 2002. "Duration Models for Repeated Events." *The Journal of Politics* 64(4):1069–1094.

Therneau, Terry M. and Patricia M. Grambsch. 2000. *Modeling Survival Data: Extending the Cox Model*. New York: Springer.