The Dynamics of Interstate War Finance

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How Do Governments Pay for Their Wars?

Shift Existing Distribution of Resources

▶ Cut social spending (Carter and Palmer Forthcoming).
▶ Cut infrastructure projects, bureaucrats' salaries, etc.

Increase Pool of Resources

▶ Increase taxes (Rasler and Thompson 1985).
▶ Borrowing money and deficit spending (Shea Forthcoming, Poast Forthcoming, DiGiuseppe 2012).
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Existing Scholarship Shares Two Characteristics

1) Assumes that interstate war finance is a discrete decision that funds a war effort throughout a war's duration.

2) Assumes that the use of a given finance strategy is independent of the use of other finance strategies.
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Two Types of War Finance Dynamics

1) Interstate war finance can exhibit temporal dynamics. The use of a given war finance strategy can vary over the course of a war.

2) Interstate war finance can exhibit strategic dynamics. The decision to use a given finance strategy can be conditional on the use of another finance strategy.
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General Assumptions

- Leaders are survival-motivated and rely on the support of a winning coalition to remain in power (BdM et al. 2003).
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▶ The use of a finance strategy is a function of its political and economic costs and the need for resources.
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▶ Poor economic performance increases the probability of leader removal (Chiozza and Goemans 2011).
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▶ The use of a finance strategy is a function of its political and economic costs and the need for resources.

▶ Poor economic performance increases the probability of leader removal (Chiozza and Goemans 2011).

▶ Reducing non-military spending, raising taxes, and inflationary monetary policy are generally less popular than borrowing money.
Temporal Dynamics

It becomes harder to finance an interstate war the longer a war endures.

▶ It will be harder to justify reduced non-military spending and higher taxes to war-weary publics.

▶ Cost of borrowing money should increase as a war endures.

▶ Inflationary monetary policy is an exception, but leaders will try to avoid this because it can threaten their job security.

The use of finance strategies should increase and then taper off as a war endures.
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Research Design

State-year data set of all countries from 1950 to 2007.

Dependent Variables

Explanatory Variables

Statistical Model
Research Design

State-year data set of all countries from 1950 to 2007.

Dependent Variables

- Non-Military Spending (Penn World Tables, COW).
- Tax Ratio (Kugler).
- Debt (Global Financial Statistics).
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- Cubic Polynomial of War Duration (MID).
- Regime Type (Polity IV), GDP per capita (PWT), CINC (COW), and RPC (Kugler and Domke).

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Statistical Model

▶ Linear Regression with Fixed Country Effects.
Non-Military Spending during an Interstate War
Taxes during an Interstate War

![Graph showing Tax Revenue as Percentage of GDP over Peace, War, Year Five, and Year Ten phases. The graph demonstrates a rise in tax revenue during the War phase, followed by a decline in later years.]
Debt during an Interstate War
Inflation during an Interstate War
We argue that finance strategies will become more complementary as the need for resources increases.

▶ If you don’t need many resources and/or resources are easy to come by, you can be relatively selective in your choice of finance strategies.

▶ If you need a lot of resources and/or resources are hard to come by, you will make use of whatever finance strategy you can.

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Strategic Dynamics: Substitutes and/or Complements?

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Modeling Strategic War Finance over Time

Dynamic Conditional Correlations (Lebo and Box-Steffensmeier 2008)
▶ Estimates individual series dynamics with ARIMA and GARCH models.
▶ Estimates correlations among series over time using MGARCH model.
   "Not advisable when the series are very short" (Lebo and Box-Steffensmeier 2008).

Moving Window or Rolling Correlations
▶ Calculates the average correlation between two series during a specified time period.
▶ Not as demanding of the data, but is less precise, has weighting issues, and does not do a good job modeling "abrupt changes" (Lebo and Box-Steffensmeier 2008).
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Debt and Taxes in the U.S.
Rolling Correlation of Debt and Taxes in the U.S.
Correlation of Debt and Taxes during an Interstate War.
Conclusions

Significant temporal dynamics exist in the degree to which governments reduce non-military spending, increase taxes, and borrow money during interstate wars.

No evidence of strategic dynamics in finance strategies over the course of interstate wars.

Possibly due to use of Rolling Correlations instead of Dynamic Conditional Correlations.
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What’s Next

▶ Analyze patterns of strategic war finance on sample of fewer countries over longer period of time.
▶ Analyze variation in war finance across regime type, economic development, and major power status.
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Questions?