KNOWING UNKNOWNS: THE EFFECT OF UNCERTAINTY IN INTERSTATE CONFLICT

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UNCERTAINTY AND CONFLICT

Current approaches (briefly)

New measures of uncertainty

Preliminary tests

Objections

THEORY

- Bargaining models of conflict
  - Private information and disincentive to share
  - “Known unknowns” versus “unknown unknowns”

EMPIRICAL APPROACHES

Ignore the problem

Narrow the strategic context

Incorporate into statistical models

Spin off other implications

MEASURING UNCERTAINTY

Exploit the structure of publicly available data, from multiple sources

Three types of measures

- Coder-assessed uncertainty
- Retrospective uncertainty
- Inter-source uncertainty

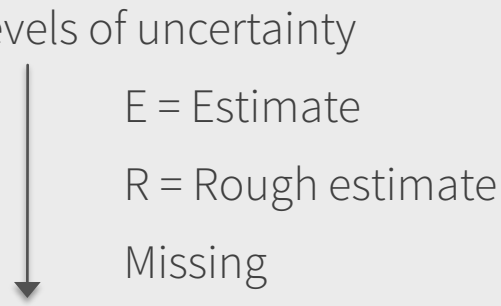
CODER-ASSESSED UNCERTAINTY

```
Pakistan  1973  $669
          ...
          1977  $840
          1978  $989
          1979  $1066
          ...
          1983  $1984   E
```

Military expenditures data in millions of 1983 dollars, from World Military Expenditures and Arms Trade dataset.

CODER-ASSESSED UNCERTAINTY

```
Pakistan  1973  $669
          ...
          1977  $840
          1978  $989
          1979  $1066
          ...
          1983  $1984   E
```



Military expenditures data in millions of 1983 dollars, from World Military Expenditures and Arms Trade dataset.

RETROSPECTIVE UNCERTAINTY

1983 EDITION

Pakistan	1973	$669
	...	
	1977	$840
	1978	$989
	1979	$1066
	...	
	1983	$1984

Military expenditures data in millions of 1983 dollars, from World Military Expenditures and Arms Trade dataset.

RETROSPECTIVE UNCERTAINTY

1973 EDITION

1963	$270
...	
1973	$448

1983 EDITION

Pakistan	1973	$669
	...	
	1977	$840
	1978	$989
	1979	$1066
	...	
	1983	$1984

Military expenditures data in millions of 1983 dollars, from World Military Expenditures and Arms Trade dataset.

RETROSPECTIVE UNCERTAINTY

1973 EDITION

	1983 EDITION		1973 EDITION	
			1963	$270
			. . .	
Pakistan	1973	$669	1973	$448
	. . .			
	1977	$840		
	1978	$989		
	1979	$1066		
	. . .			
	1983	$1984	1983	$1300
			. . .	
			1993	$3111

1993 EDITION

Military expenditures data in millions of 1983 dollars, from World Military Expenditures and Arms Trade dataset.

RETROSPECTIVE UNCERTAINTY

	1983 EDITION		1973 EDITION		ABSOLUTE PERCENT CHANGE
Pakistan	1973	$669	1973	$448	49 percent
	...				
	1977	$840			
	1978	$989			
	1979	$1066			
	...				
	1983	$1984	1983	$1300	34 percent
			...		
			1993	$3111	

Military expenditures data in millions of 1983 dollars, from World Military Expenditures and Arms Trade dataset.

INTER-SOURCE UNCERTAINTY

```
Pakistan  1973  $669
          ...
          1977  $840
          1978  $989
          1979  $1066
          ...
          1983  $1984
```

Military expenditures data in millions of 1983 dollars, from World Military Expenditures and Arms Trade dataset.

INTER-SOURCE UNCERTAINTY

	WMEAT
Pakistan	1973 $669
	...
	1977 $840
	1978 $989
	1979 $1066
	...
	1983 $1984

Military expenditures data in millions of 1983 dollars, from World Military Expenditures and Arms Trade dataset.

INTER-SOURCE UNCERTAINTY

	WMEAT		MILITARY BALANCE	
Pakistan	1973	$669	1973	$652
	...		...	
	1977	$840	1977	$819
	1978	$989	1978	$938
	1979	$1066	1979	$1050
	...		...	
	1983	$1984	1983	$1801

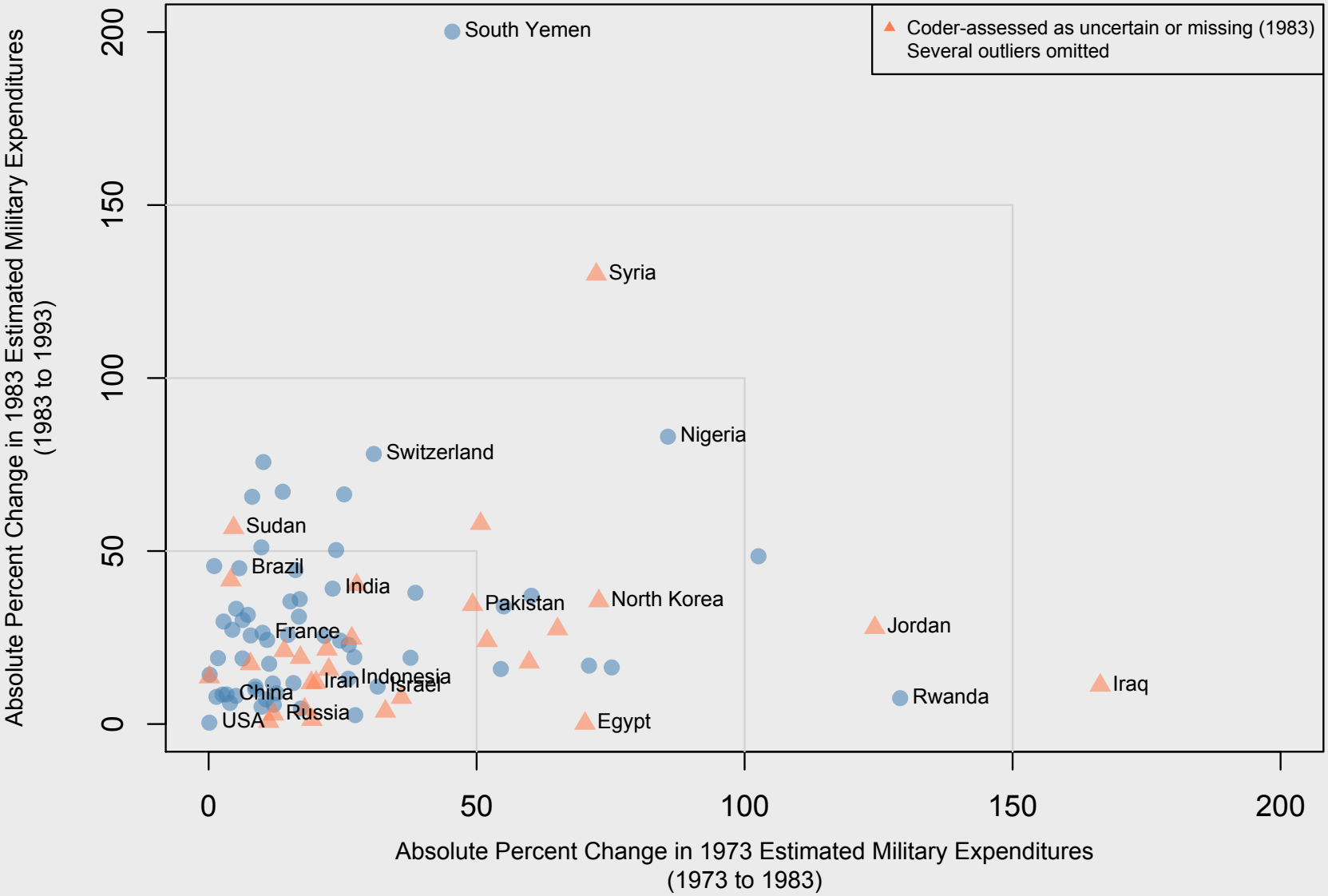
Military expenditures data in millions of 1983 dollars, from World Military Expenditures and Arms Trade dataset and the IISS Military Balance.

INTER-SOURCE UNCERTAINTY

	WMEAT		MILITARY BALANCE		ABSOLUTE PERCENT CHANGE
Pakistan	1973	$669	1973	$652	3 percent
	...		...		
	1977	$840	1977	$819	3 percent
	1978	$989	1978	$938	5 percent
	1979	$1066	1979	$1050	1 percent
	...		...		
	1983	$1984	1983	$1801	9 percent

Military expenditures data in millions of 1983 dollars, from World Military Expenditures and Arms Trade dataset and the IISS Military Balance.

A LOOK AT THE DATA

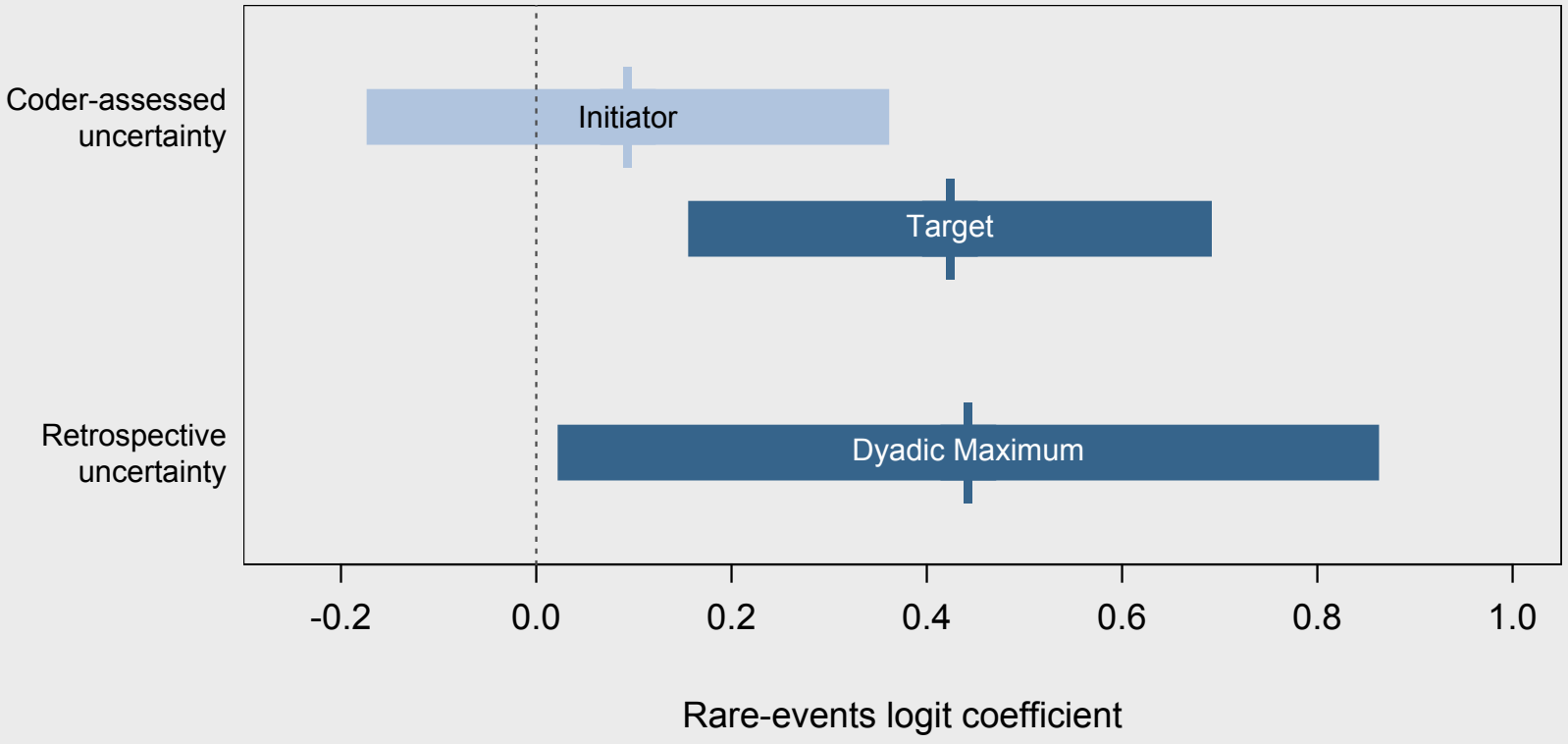


A PRELIMINARY TEST

A basic model of conflict initiation

- MID initiation in directed dyads, using rare-events logit
- Two uncertainty measures: coder-assessed (1983–1993) and retrospective (1973 and 1983)
- Other IVs: Capability ratio, rivalry, alliances, geography, temporal dependence

A PRELIMINARY TEST: RESULTS



BUT, WAIT... ENDOGENEITY!

Our measure may just be a proxy for hostility, with no independent effect for uncertainty

Peaceful states could lead to higher measures

- Salience, credible threats
- But this isn’t so bad

BUT, WAIT... ENDOGENEITY!

Our measure may just be a proxy for hostility, with no independent effect for uncertainty

Conflict-prone states could lead to higher measures

- Surprise, larger/more complex militaries
- Initiator vs. target results, interaction with rivalry

BUT, WAIT... SECRECY!

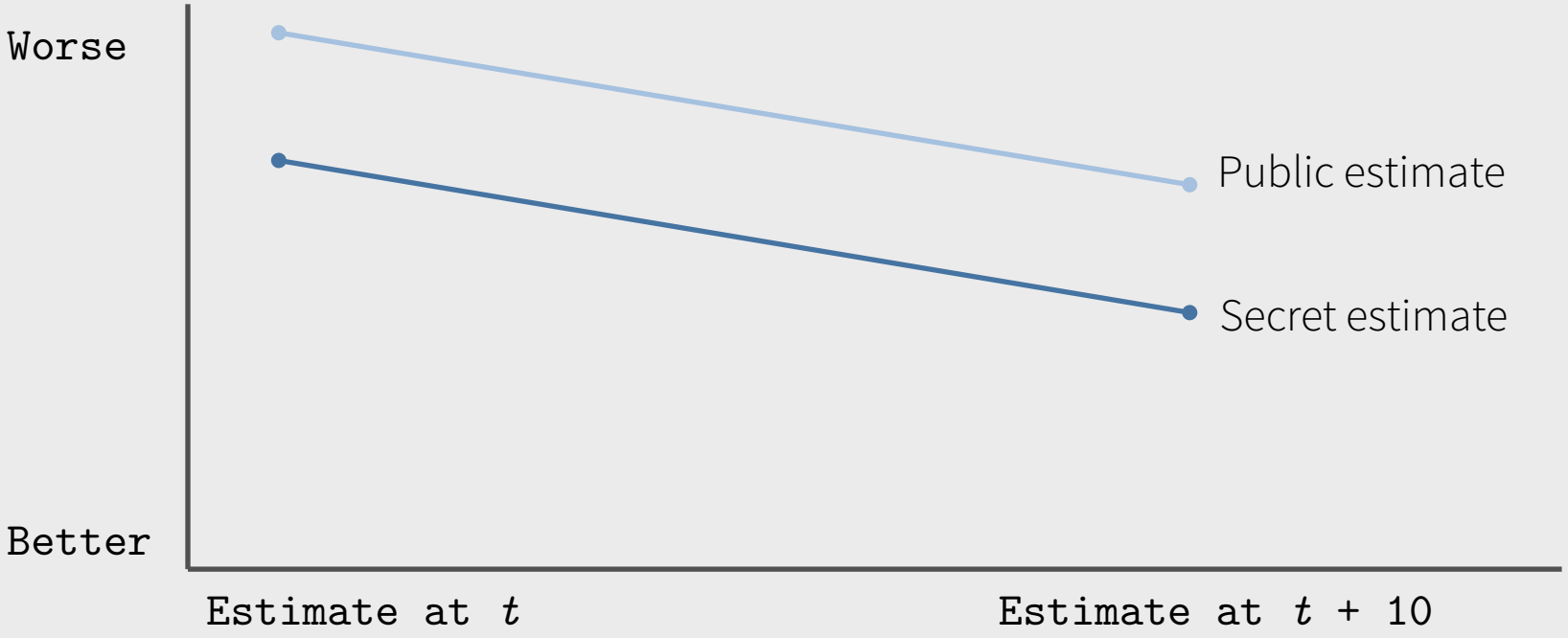
Public estimates might differ from secret ones

- Several possibilities

BUT, WAIT... SECRECY!

Public estimates might differ from secret ones

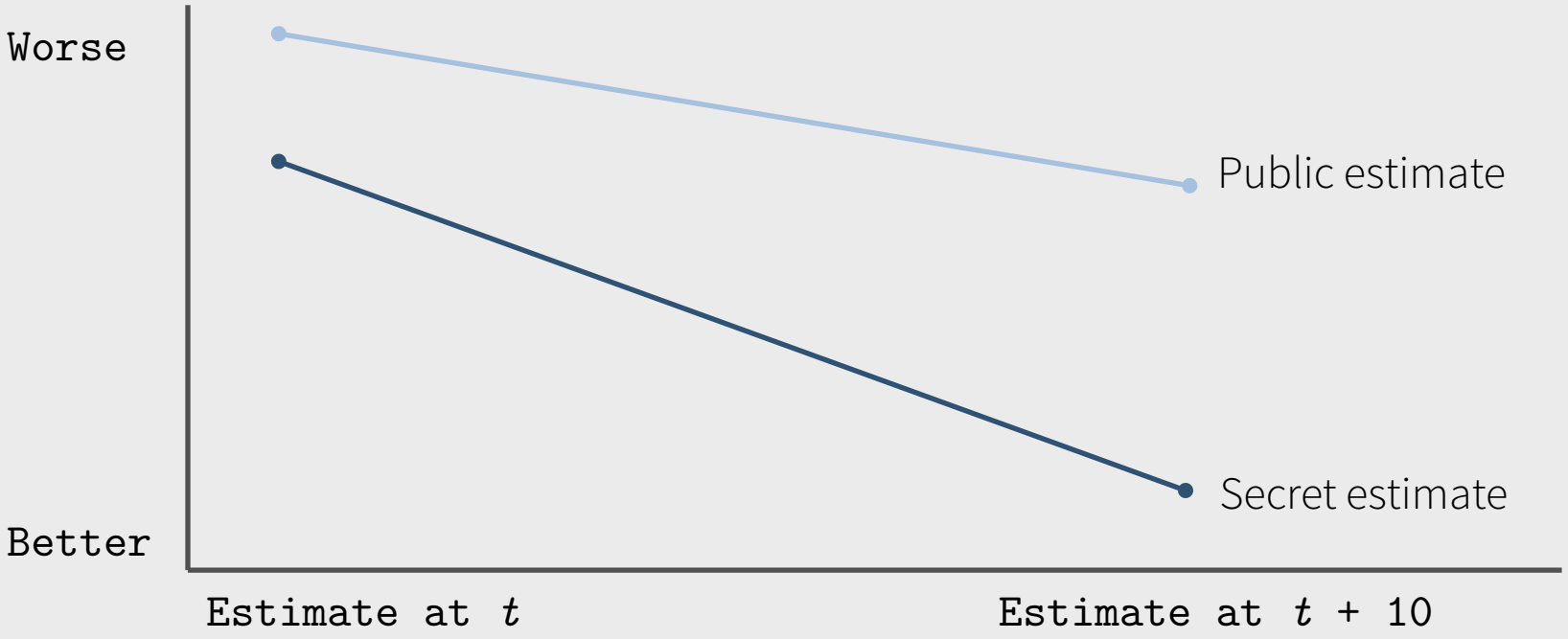
Secret estimates could be uniformly better



BUT, WAIT... SECRECY!

Public estimates might differ from secret ones

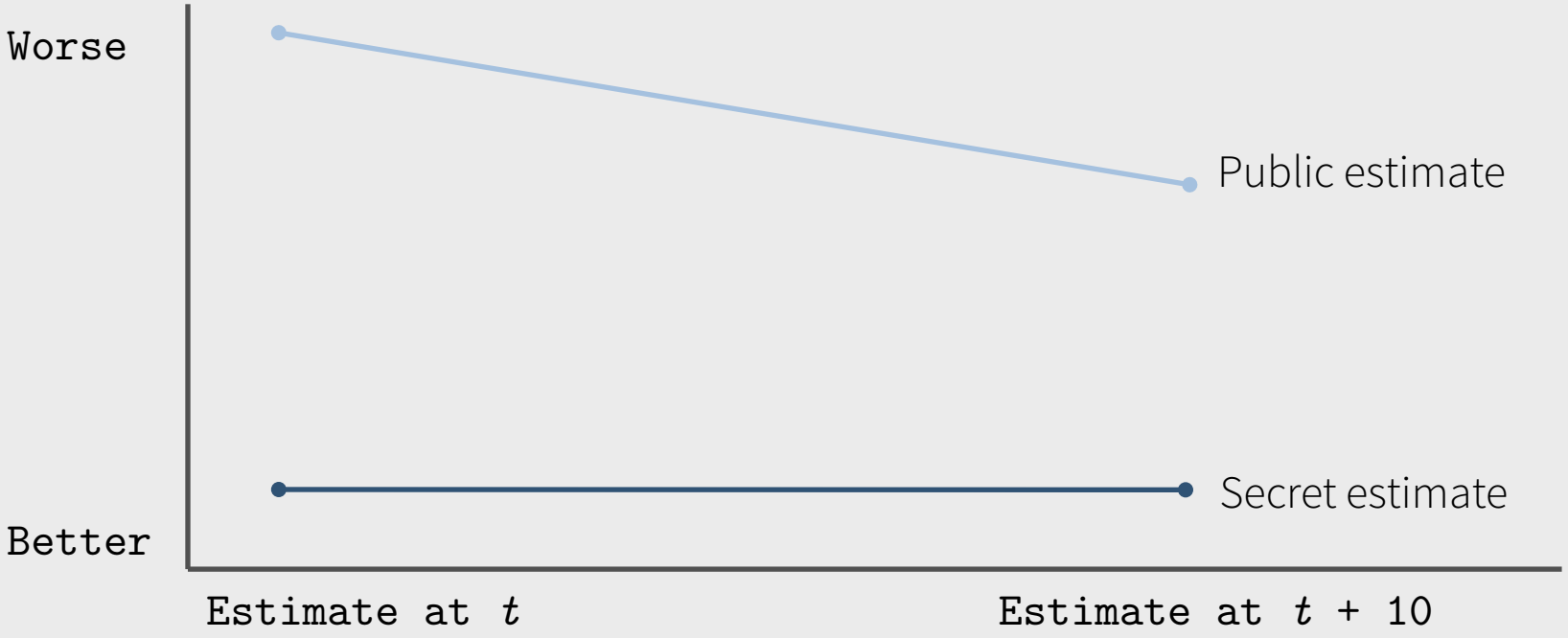
Secret estimates could be better, sometimes



BUT, WAIT... SECRECY!

Public estimates might differ from secret ones

Secret estimates could be unrelated to public ones



BUT, WAIT... SECRECY!

- Public estimates might differ from secret ones
  - Secret estimates could be unrelated to public ones
    - But public estimates are linked to government statements
    - Robustness checks without P-5 and without neighboring states

WHAT'S NEXT FOR US

A substantial data collection task

Turn preliminary test into a real test

“Known unknowns” versus “unknown unknowns”

The determinants of uncertainty

THANK YOU

Any comments are appreciated