



The Strategic Determinants of Oil Stockpiling Behavior

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Background: Global Framework

- The International Energy Agency (IEA)
 - Founded in 1975 in response to the Arab Oil Embargo
 - Comprised of OECD countries
 - Goal: provide collective defense against oil supply shortages
- IEA Oil Stockpiling Framework
 - Nations must hold petroleum stocks equivalent to 90 days' worth of net petroleum imports
 - This requirement can be met in two basic ways:
 - Public stocks owned by a government or quasi-public agency
 - Mandates for industry to hold emergency stocks



Project Overview

- **Key assumption:** the choice of oil stockpiling strategy is a fundamentally consequential policy choice
 - Purchasing public stocks – expensive, highly effective
 - Mandating industry storage – minimizes costs, ineffective
- Research question: **What drives differences in nations' approach to strategic oil stockpiling?**
- Answer grounded in **international relations (IR) theory**
 - IR aspires to explain patterns of interactions between nations
 - Realist school: unitary rational actors, national security focus
 - Oil stockpiling is conceptualized as a form of “state behavior”



The Model

The Drivers of National Oil Stockpiling Strategies			
		Primary Threat Addressed by Oil Stocks	
		Economic Vulnerability	Security Vulnerability
Market Power Conferred by Oil Stocks	Large	High Economic Vulnerability: Significant Government Involvement	Significant Government Involvement and Industry Mandates
		Low Economic Vulnerability: Limited Government Involvement/ Cost Minimization	
	Small	Limited Government Involvement/ Cost Minimization	Significant Government Involvement



Empirical Strategy

- Quantitative assessment
 - Panel analysis of the level of government-owned oil stocks in IEA countries from 1984-2012
 - Key takeaway: variables representing security vulnerability outperform those representing economic vulnerability
- Case analysis
 - Qualitative assessment of oil security policy in the United States, Sweden, and the Czech Republic
 - Factors identified in this project drive the discourse on energy security and oil stockpiling in each country



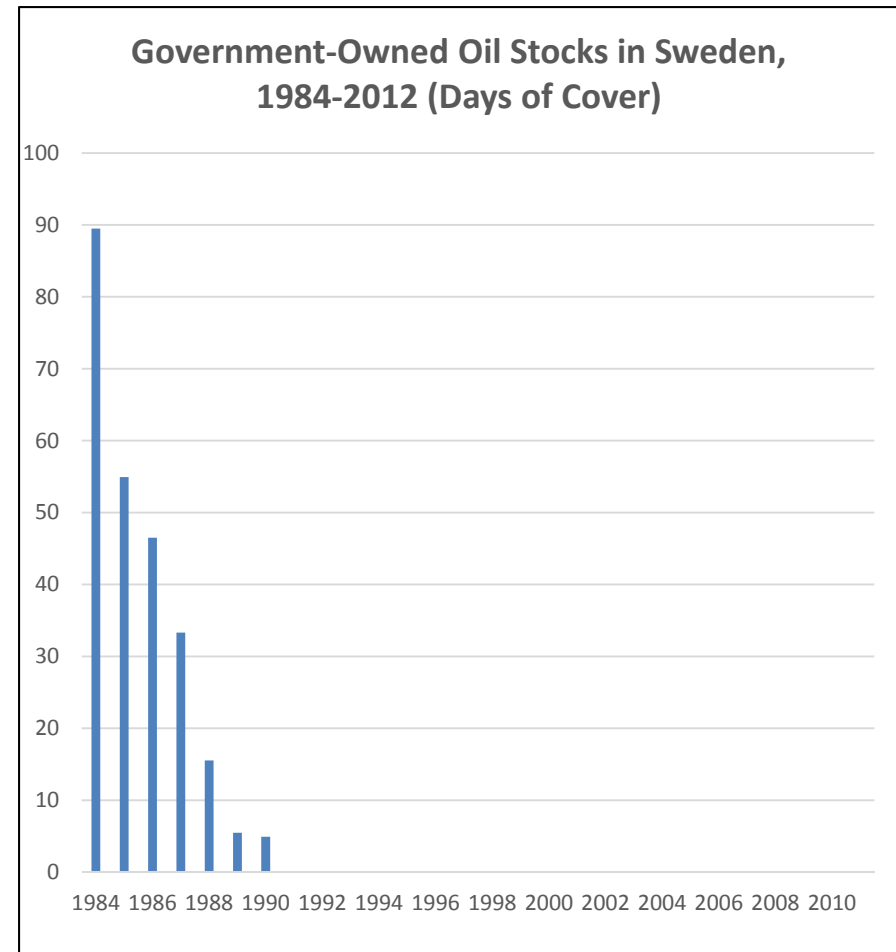
The United States

- Independent variables
 - Economic vulnerability becomes paramount by the 1980's
 - Market power of the Strategic Petroleum Reserve (SPR) is enormous – 4.4 million barrels per day
- Policy outcome
 - The Department of Energy evaluated the choice between public and private approach → chose public stocks
 - Market power and economic vulnerability have driven drive the SPR debate
 - The U.S. cost-benefit approach is unique in the IEA
- *The logic of large nations and collective action*



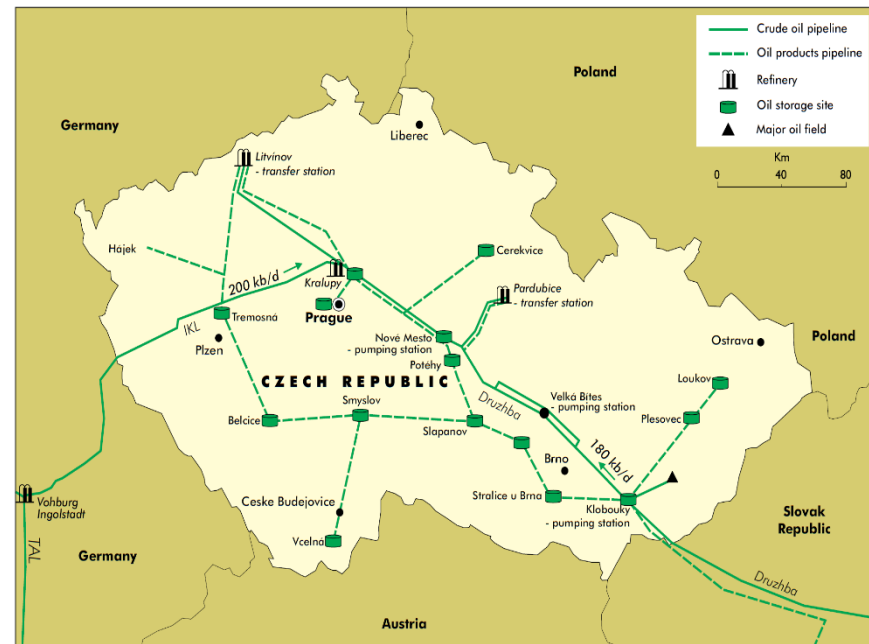
Sweden

- Independent variables
 - Small economic vulnerability
 - No market power
- Policy outcome
 - Neutrality and trade → initially poured resources into oil stocks
 - Market globalizes → transition to cost minimization
- *Incentive to free-ride drives policy outcome*



The Czech Republic

- Independent variables
 - No Market power
 - **National security vulnerability**
- Policy Outcome
 - Minimizing dependence on Russia
 - Energy is treated as a matter of national sovereignty
 - Resource-intensive approach to oil stockpiling
- *National security outweighs incentive to free-ride*



Source: International Energy Agency (2014)



Conclusions

- International relations theory buttresses our understanding of oil stockpiling by highlighting the full array of policy drivers
- Collective action logic explains stockpiling outcomes where energy security is primarily a prosperity issue
 - The benefits of a government-intensive strategy outweigh the costs in nations with substantial market power
 - Nations that cannot impact the market free-ride
- Where energy security is a national security issue, governments expend tremendous resources on building an effective petroleum stockpile



Oil Stockpiling Going Forward

- Non-IEA countries
 - key to the future of oil stockpiling
 - Future research should focus outside of the IEA
- China's unique position
 - Security and economic concerns both play a role in SPR debates
 - Substantial stockpiling
 - Key question: partnering?

