Determinants of policy entrepreneur success in New York's local fracking struggles

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Overview

- Main question: What factors affect the success of local fracking policy entrepreneurs (PEs) seeking to get municipalities to pass anti-fracking policies?

- Main answers
  - Policy targets and advocacy activities appear to have virtually no impact on success.
  - Community characteristics only matter in some specifications.
  - Characteristics of PEs themselves, particularly their knowledge and activity level and reputation in the community, matter most for success.

Utica Shale Extent

Marcellus Shale

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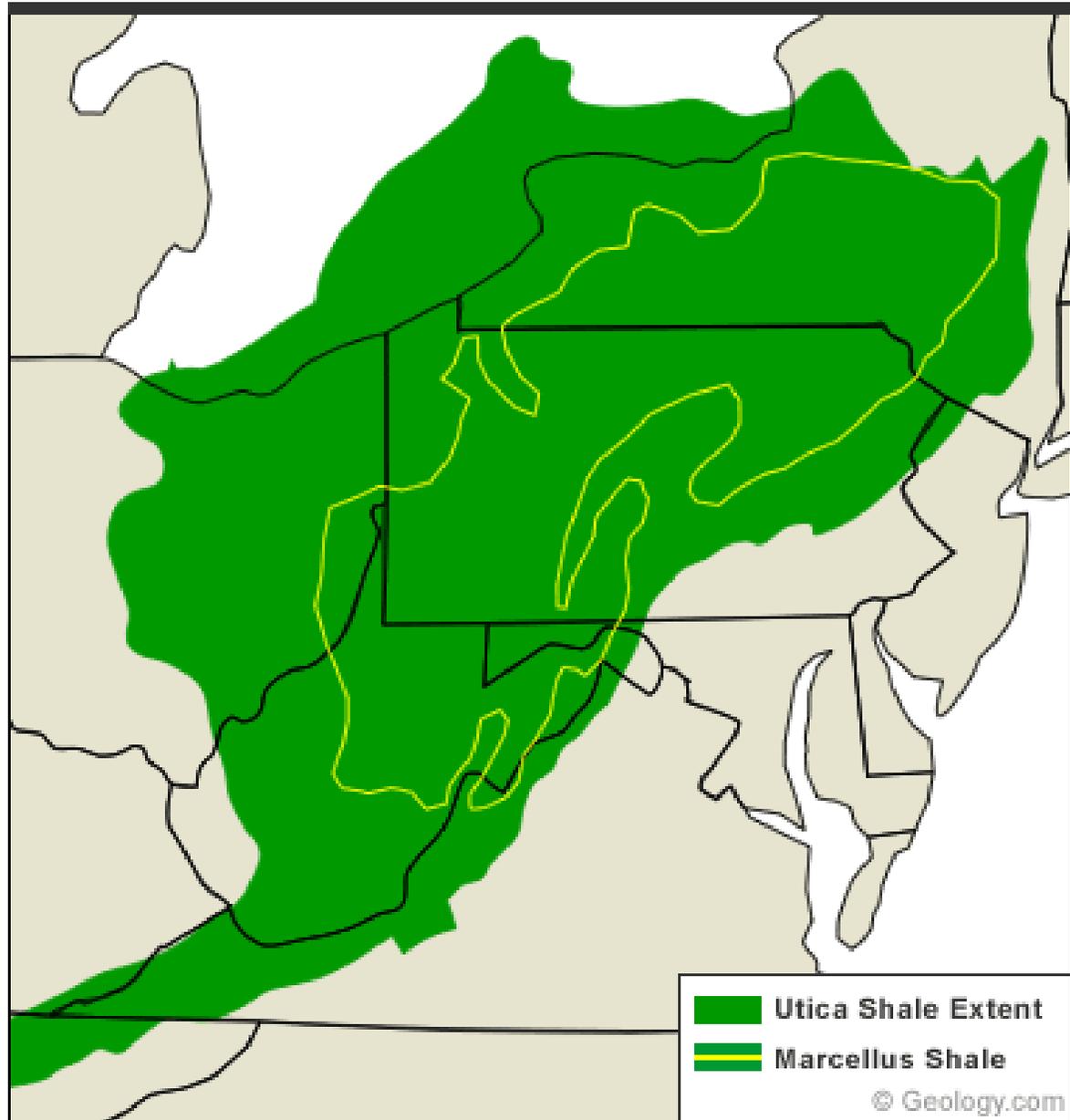
Here's the grassroots political story behind the New York fracking ban

By **Steven Mufson** December 18, 2014 ✉ 🐦 Follow @StevenMufson

Fracking protesters cheer outside New York Governor Andrew Cuomo's office in New York on Wednesday. (REUTERS/Andrew Kelly)

One of those foes is Helen Slottje, a Boston commercial lawyer who moved to Ithaca because her husband, David, joined a family business there. In 2009, Slottje said, she attended a community meeting about gas drilling that horrified her. She has been providing New York state towns free legal advice ever since, urging them to use their right to regulate local land use. This year, Slottje was given the Goldman Prize for grass-roots environmental activism.

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Municipal actions

Status

- Ban in place
- Movements for a ban or moratorium
- Moratorium (expirations vary)
- Marcellus Shale Formation extent
- Utica Shale Formation extent

High Volume Hydrofracking Bans, Moratoria, and Movements for Prohibitions in New York State

Updated December 30, 2014

0   40   80 Miles

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Municipal anti-ban movements

Status
- Pre-emptive resolution
- Considering pre-emptive resolution
- Marcellus Shale Formation extent
- Utica Shale Formation extent

Municipalities in Support of Hydrofracking in New York State

Source of resolutions data:
Joint Landowners Coalition of New York.
www.jlcny.org

Updated November 28, 2012

0   40   80 Miles

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Policy entrepreneurship

"I applaud the Albany Common Council's vote to ban fracking within their city limits," **said Buffalo Councilmember Joseph Golombek Jr., sponsor of Buffalo's fracking ban**. *"Many times, politicians are accused of putting their own interests before the community's. The Albany Common Council's vote, along with the votes conducted by many other municipalities in New York State, show that the citizens of their communities come first, especially when it deals the dangerous impact fracking has on the environment."*

"I'm proud to represent the Town of Dryden and I'm especially proud today," said Town Supervisor Mary Ann Sumner. "We stood up for what we knew was right. And we won. The people who live here and know the town best should be the ones deciding how our land is used, not some executive in a corporate office park thousands of miles away."

Municipal anti-fracking policy passage and PE advocacy in NY, 2008-2012
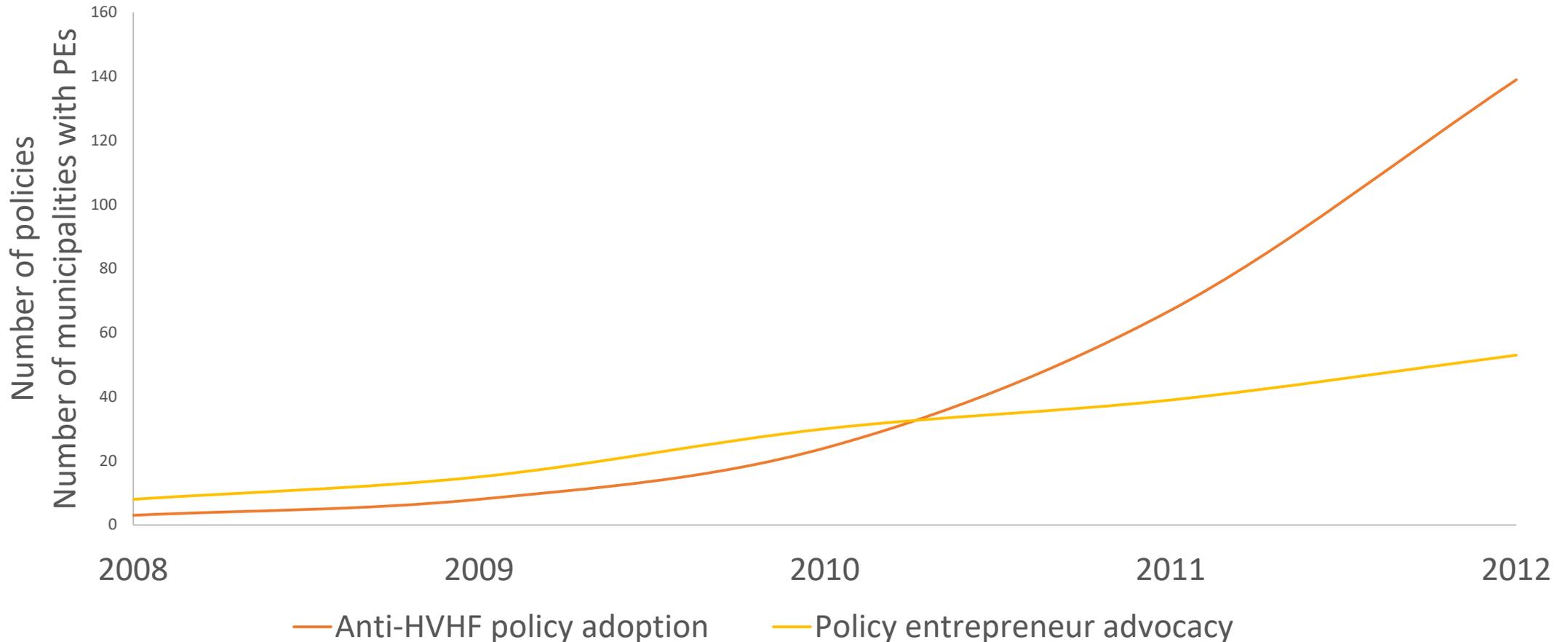
Literature/theory

- Policy entrepreneurs = individuals who expend large amounts of time, energy, and resources trying to secure a preferred policy outcome and often have a significant influence on policy processes (Kingdon 1984; Mintrom 1997; Mintrom and Vergari 1998; Mintrom and Norman 2009; Oliver 2006; Weissert 1991).

- Teske and Schneider suggest that certain economic and political conditions facilitate PE *emergence* (e.g., slack budgets, opportunity for gaining political capital).
  - Presumably PEs are motivated by prospective success assessments.

- Institutions are posited to affect success, but this argument is often quite general (Christopolous 2006, Klein et al. 2009, Mintrom 2007, others).

Literature/theory

- There has been remarkably little study of factors that make policy more/less successful, particularly via a quantitative, cross-sectional approach.

- Underpinnings of this investigation (other than PE scholarship):
  - Punctuated Equilibrium Theory
    - Infrequent large policy changes
    - Many small incremental changes over time
  - Multiple Streams Framework
    - Policy windows are infrequent, transformative change opportunities
    - Policy entrepreneurs are key
  - Policy adoption scholarship
    - Mohr's motivation to innovate, obstacles to innovation, and strength of resources to overcome

Hypotheses

- *H1: Policy entrepreneurs (PEs) who have a greater number of facilitative characteristics will be more successful.*

- *H2: PEs who pursue policies that require less disruption to the policy status quo will be more successful.*

- *H3: PEs will be more successful when they employ advocacy strategies associated with larger disruptions in the policy status quo.*

Hypotheses

- *H4: PEs will be more successful in jurisdictions with more liberal tendencies.*

- *H5: PEs will be less successful in jurisdictions where the economic need for HVHF is more acute.*

- *H6: PEs will be more successful in jurisdictions where there is greater uncertainty about HVHF.*

NY survey

- Administered via postal mail in Summer 2014 to municipal clerks, following Schneider and Teske (1992, 1993a, 1993b) and Teske and Schneider (1994).

- 1539 NY cities, towns, and villages (excluding NYC)

- 31% response rate (n=480) using Dillman's Tailored Design Method

- Questions about . . .
  - Existence, behaviors, and characteristics of most active APE and most active PPE
  - Policy actions taken in the municipality concerning fracking
  - Community attitude towards fracking

Anti-fracking advocate sample: Policy DV

Success: Villages
- 0
- 1

Success: Towns & Cities
- 0
- 1
- Marcellus Shale extent
- Utica Shale extent
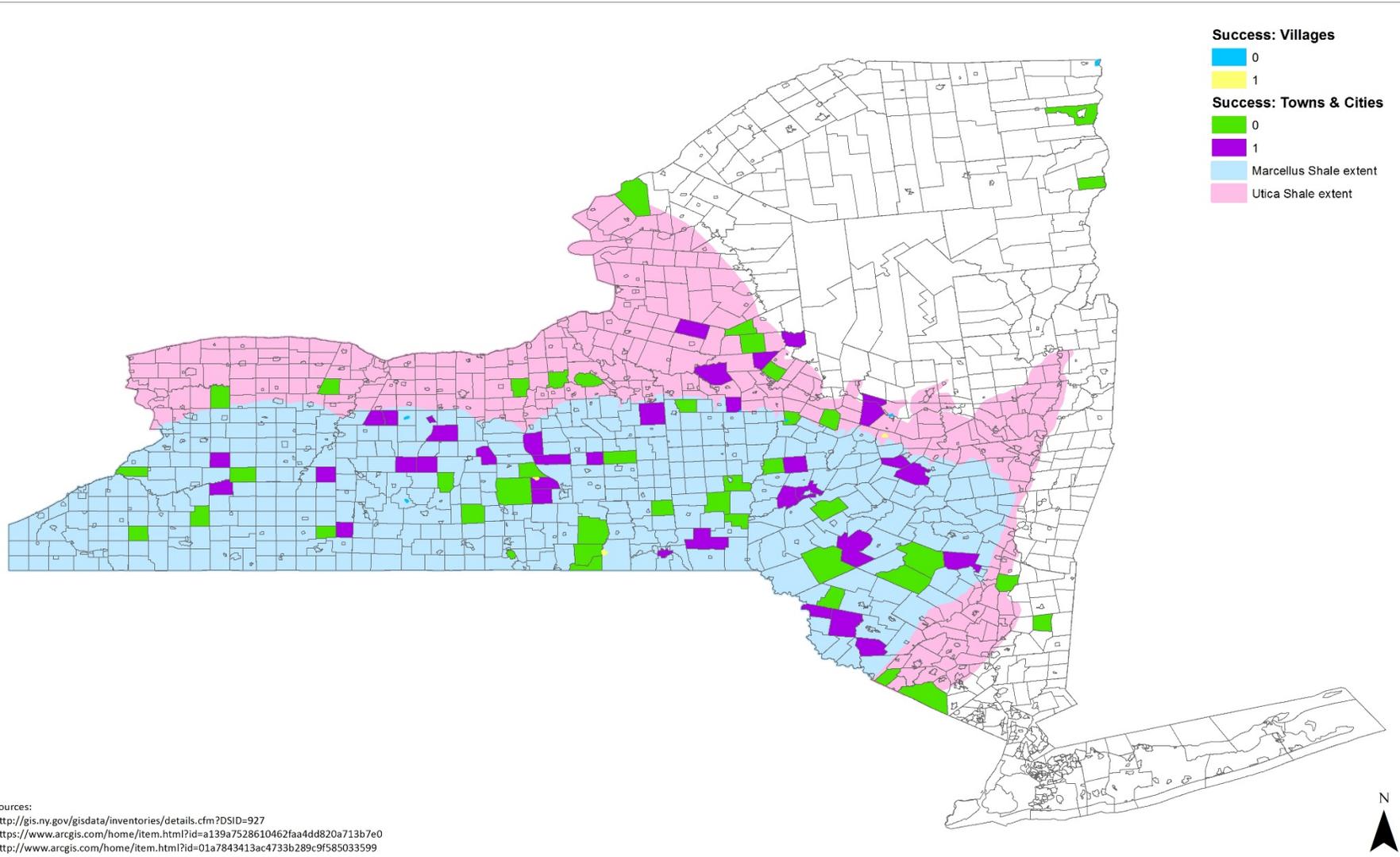
Anti-fracking advocate sample: Survey DV

Success: Villages
- 1: Minimally Successful
- 2: Somewhat Successful
- 3: Mostly Successful

Success: Towns & Cities
- 1: Minimally Successful
- 2: Somewhat Successful
- 3: Mostly Successful
- Marcellus Shale extent
- Utica Shale extent

N
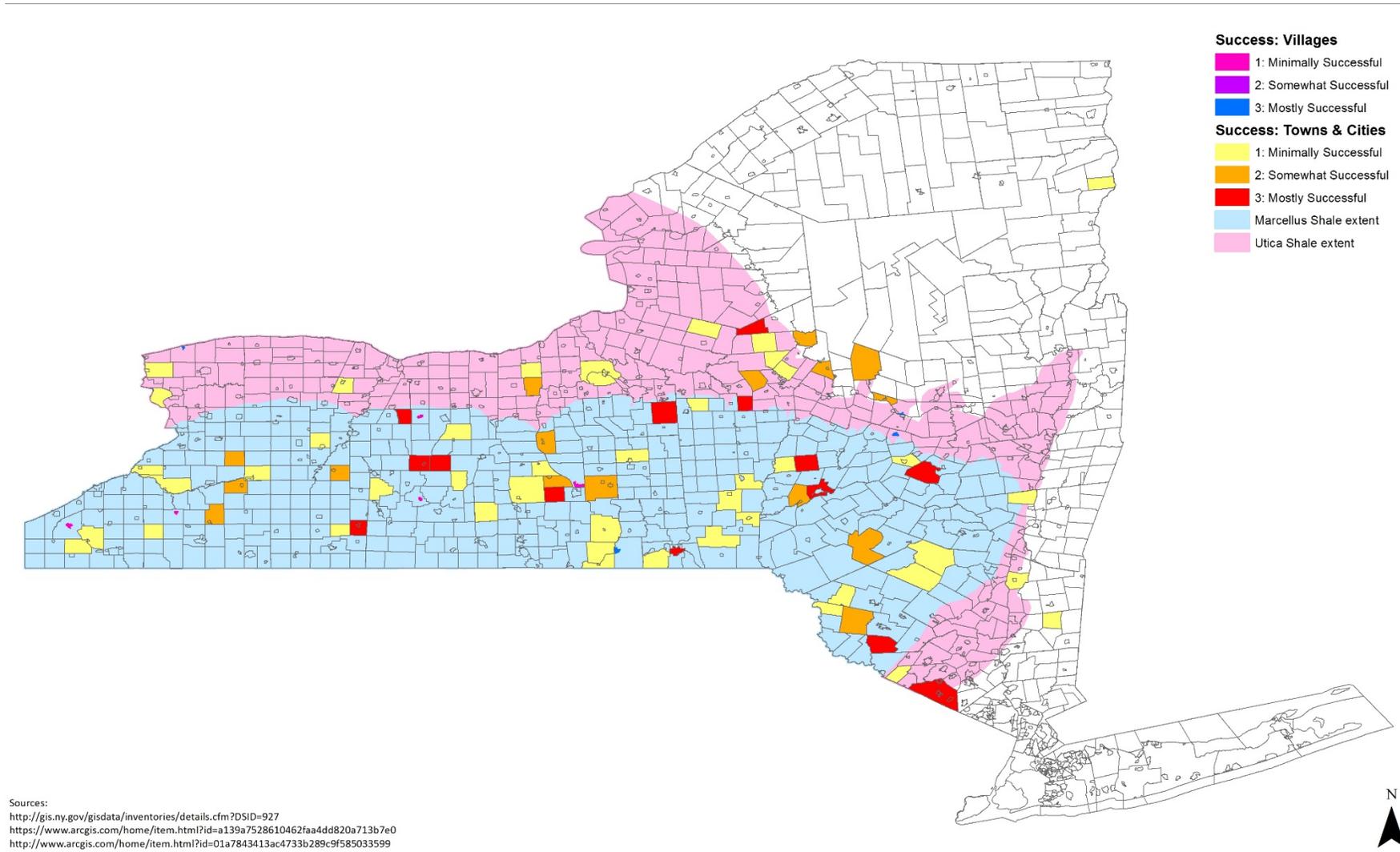
Data analysis

- Bivariate and multivariate regression used to assess the relationship between policy advocate success and demographic and socioeconomic covariates, advocate characteristics, policy targets, and advocacy strategies.

- Success defined in two ways:
  - By the survey assessment (SA; respondent is the municipal clerk), who nominated the advocates and rated their success on a 1-3 scale.
  - By whether the municipality passed a fracking policy (policy passage, PP) consistent with the advocate's stance, 2008-2012.
  - Results are largely consistent.

Non-response bias

- Citizens in responding municipalities are . . .
  - Less likely to vote for a Democratic presidential candidate
  - Better educated
  - Wealthier
  - Less likely to overlay shales
  - More likely to own their homes

- Responding municipalities are/have . . .
  - Towns (rather than villages or cities)
  - Wealthier
  - Less densely populated
  - Smaller (population size)
  - Less past or present oil and gas drilling
  - Larger land area

All differences are slight except for population size.

Local regulation of fracking

- Typically 3-4 ways a municipality might regulate fracking
  - Rights-based ordinances
  - Zoning or zoning revisions
  - Bans and moratoria
  - Resolutions

- In addition to passing bans and moratoriums, municipalities may
  - Specify setbacks from homes, businesses, and public areas
  - Limit or condition road use
  - Require performance bonding for infrastructure damage
  - Prohibit HVHF operator use of wastewater treatment facilities

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LOCAL LAW # 3 , 2011

A LOCAL LAW
IMPOSING A MORATORIUM
ON HEAVY INDUSTRY WITHIN
THE TOWN OF ANDES
COUNTY OF DELAWARE

WHEREAS, the Town of Andes has received requests from its citizens concerning the need to address and possibly regulate heavy industry in the Town: and

WHEREAS, the Town Board has discussed several recommendations for proposed actions, surveys and statutory changes to accomplishment such regulation within the Town; and

WHEREAS, the Town of Andes is also considering local laws to preserve roadways in the Town, as well as other related statutes that may effect the quality of life for all Town residents, and these local laws, if implemented, would have a significant impact on the overall development and regulation of land and road use within the Town;

NOW THEREFORE, BE IT ENACTED by the Town Board of the Town of Andes as follows:

Section 1. PURPOSE

The current local laws of the Town of Andes as currently written may be inadequate to address certain uses of property within the Town. The anticipation of possible heavy

TOWN OF DANBY LOCAL LAW #3 OF 2011

AMENDMENTS TO TOWN OF DANBY ZONING ORDINANCE

A LOCAL LAW AMENDING AND CLARIFYING THE TOWN OF DANBY, TOMPKINS COUNTY, NEW YORK, ZONING ORDINANCE TO PROHIBIT GAS AND PETROLEUM MINING AND RELATED ACTIVITIES

BE IT ENACTED BY THE TOWN BOARD OF THE TOWN OF DANBY AS FOLLOWS

SECTION 1:   TITLE AND APPLICABILITY – The Town of Danby hereby adopts this local law, to be known as the Town of Danby Local Law Number___ of 2011 (the "Local Law)."

SECTION 2:   PURPOSE – The purpose of this Local Law is to clarify, update, and amend the Town of Danby Zoning Ordinance by, among other things: clarifying allowed uses relative to light industrial uses and operations; clarifying allowed uses relative to gas and oil mining and hydraulic (and other) fracturing; and to ensure that Town of Danby zoning laws comport with the Town of Danby Comprehensive Plan.

SECTION 3:   DEFINITIONS – The following definitional terms are added to Appendix I, entitled "Definitions," of the Town of Danby Zoning Ordinance, and these terms shall have the meanings shown:

Town of Dansville

Local Law No. 1 of the year 2012

A local law entitled "Town of Dansville Road Preservation Law"

Be it enacted by the Town Board of the Town of Dansville as follows:

Section 1. Title.

This local law may be cited as the "Town of Dansville Road Preservation Law".

Section 2. Authority for this Local Law.

The Town Board of the Town of Dansville enacts this local law under the authority granted by Section 10 of the New York State Municipal Home Rule Law, New York State Constitution Article IX § 2(c)6, Town Law, subsection 1(ii)(a)(6), subdivision 2 of section 23-0303 of the Environmental Conservation Law, Highway Law Section 140, Highway Law section 320, Tow Law section 130, and Vehicle and Traffic law section 1660.

Section 3. Purpose.

The purpose of this local law is to maintain the safety and general welfare of Town residents ar other using Town highways by regulating high impact commercial activities that have the potential to adversely impact roads and property. The intent is to protect the Town roads and property from damage from endeavors that typically require high frequency use of heavy equipment with heavy loads. It is the intent

Bivariate regression: PE characteristics and success	Coeff. (St. Err) PP (2 cat)	Coeff. (St. Err) SA (3 cat)
Social acuity (friendly and easy to get along with)		
Internal networking (knew a lot of people in the municipality)		
Internal networking (knew a lot of government officials in the municipality)	0.82 (0.44)*	
Internal networking (knew a lot of prominent people in the municipality)	1.15 (0.56)**	
External networking (knew a lot of government officials in the region or state)		
External networking (knew a lot of prominent people in the region or state)		
Resources (spent a lot of time trying to get the municipality to take policy action)		0.97 (0.45)**
Resources (spent a lot of money trying to get the municipality to take policy action)		
Political acumen (very informed about how municipal government operates)	1.45 (0.47)***	1.10 (0.44)***
Substantive knowledge (shale gas/HVHF)	1.17 (0.45)***	1.43 (0.45)***
Substantive knowledge (policy)	1.11 (0.49)**	2.00 (1.59)***
Reputation (well-respected by many people in the municipality)	0.91 (0.44)**	1.14 (0.44)***
# of PE characteristics (H1)	0.21 (0.09)***	0.29 (0.09)***

Bivariate regression: PE policy actions and success	Coeff. (St. Err) PP (2 cat)	Coeff. (St. Err) SA (3 cat)
Low policy disruption (opposing resolution)		
Low policy disruption (no municipal lease)		
Medium policy disruption (road use)		
Medium policy disruption (bonding)		-2.14 (1.07)**
Medium policy disruption (restrictive zoning)		
High policy disruption (moratorium)		
High policy disruption (ban)		
High policy disruption (preventative zoning)		
Policy disruptiveness (H2)		

Bivariate regression: PE strategies and success	Coeff. (St. Err) PP (2 cat)	Coeff. (St. Err) SA (3 cat)
Low strategy disruptiveness (letter/email)		
Low strategy disruptiveness (contact own officials)		
Low strategy disruptiveness (contact outside officials)		
Medium strategy disruptiveness (attend public meeting)		
Medium strategy disruptiveness (circulate petition)		
Medium strategy disruptiveness (give presentation)		
High strategy disruptiveness (form group)		
High strategy disruptiveness (direct action)	2.07 (1.12)*	
Strategy disruptiveness (H3)		

Bivariate regression: PE success and socioeconomic and demographic covariates	Coeff. (St. Err) PP (2 cat)	Coeff. (St. Err) SA (3 cat)
Democratic vote share (H4)		
Socioeconomic status (H4, H5)		
Per capita municipal revenue		
HVHF uncertainty		-0.11 (0.14) -0.72 (0.25)

Socioeconomic status is the sum of two correlated variables (mean 0, stdev 1): residents with a high school degree or equivalent by age 25 and per capita income ($r=0.44$, $p \leq 0.00$, n=89).

HVHF uncertainty sums components of six survey questions, three with the format "What statement best describes how [X] view(s) shale gas drilling?" and three phrased "Between 2008 and today, how did the way [X] view(s) shale gas drilling change?", where X = (1) people in the municipality, (2) elected municipal legislators, and the (3) municipal chief executive. The first three had a 1-5 response scale, ranging from "very positively" to "very negatively," while the second three had a 1-4 scale ("more positively," "more mixed," "more negatively," and "did not change"). *HVHF uncertainty* sums the number of times that a respondent selected a response associated with uncertainty: "Both positively and negatively (mixed feelings)" and "[X]'s views about shale gas drilling became more mixed," respectively.

Modeling approach

- Deductive (D) : Variables testing H1-H6

- Exploratory (E): Variables statistically significant in bivariate regression

- Full models (all variables in D or E specification) and reduced models (variables significant in F)

- Dependent variables: policy passage (PP) and survey assessment (SA)

- Logistic regression (PP) and partial proportional odds ordered logistic regression (SA)

D PP F

Policy passage = # of characteristics (H1)** + policy disruptiveness (H2) + strategy disruptiveness (H3) + Dem (H4) + socioeconomics (H4, H5) + unemployment (H5) + per capita muni rev (H5) + HVHF uncertainty (H6)

D PP R

Policy passage = # of characteristics***

D PP R: Success as a function of # of PE characteristics
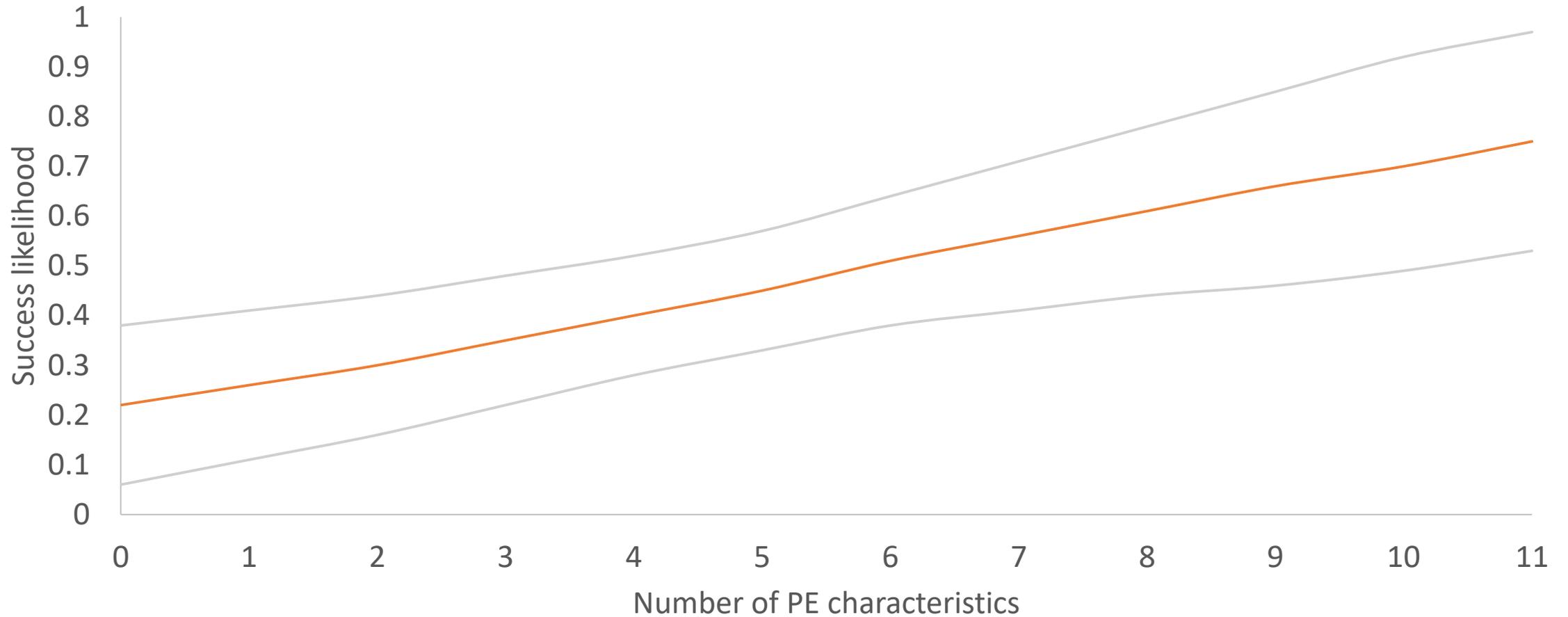
E PP F

Policy passage = # of characteristics (H1)* + internal networking, local officials (H1~) + internal networking, local prominent ppl (H1~)** + political acumen (local gvt.) (H1~)** + substantive knowledge (fracking) (H1~) + substantive knowledge (policy) (H1~)* + high strategy disruptiveness (direct action) (H3~)* + HVHF uncertainty (H6)

E PP R

Policy passage = # of characteristics (H1) + internal networking, local prominent ppl (H1~)^ + political acumen (local gvt.) (H1~)** + substantive knowledge (policy) (H1~)** + high strategy disruptiveness (direct action) (H3~)

E PP R: Success as a function of political acumen and substantive policy knowledge
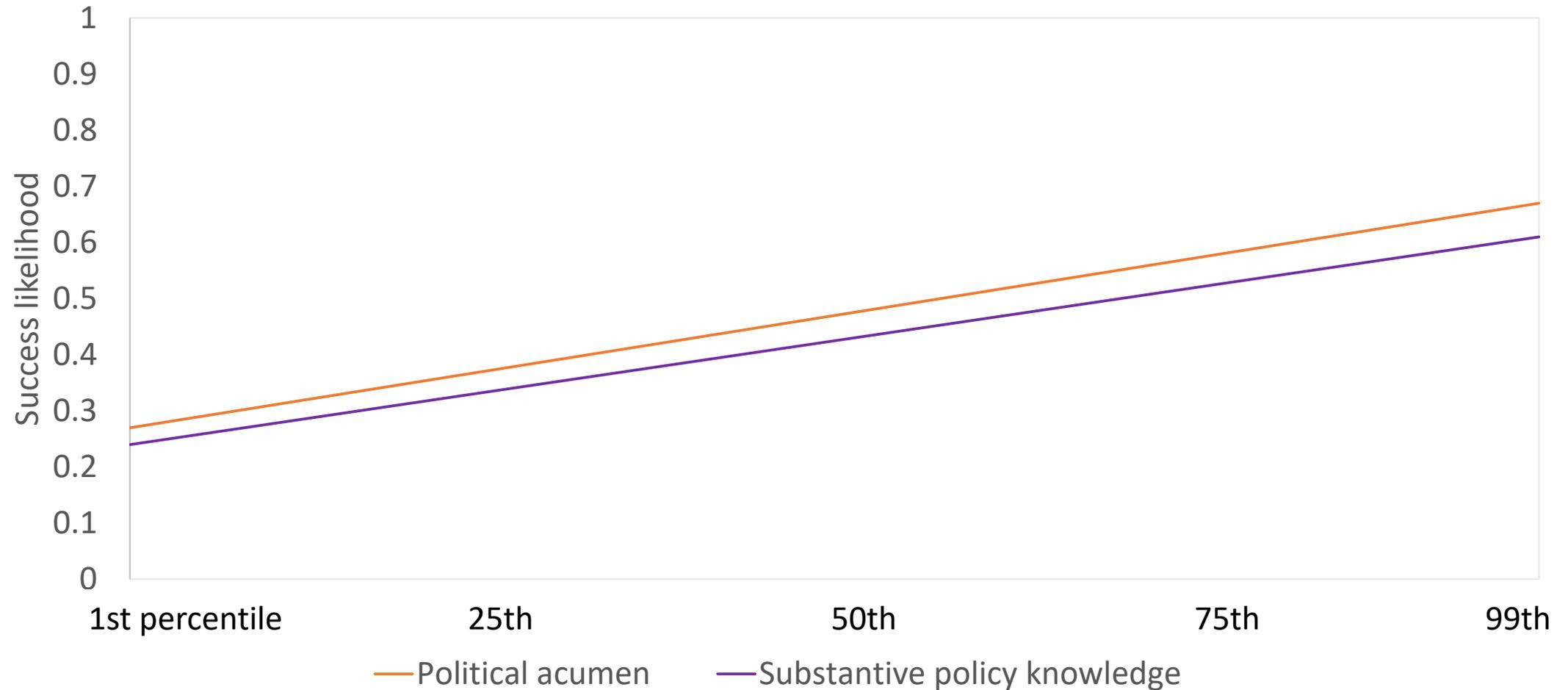
D SA F

Survey assessment = # of characteristics (H1)*** + policy disruptiveness (H2) + strategy disruptiveness (H3)* + Dem (H4) + socioeconomics (H4, H5)*** + unemployment (H5)* + per capita muni rev (H5) + HVHF uncertainty (H6)***

D SA R

Survey assessment = # of characteristics (H1)*** + strategy disruptiveness (H3)** + socioeconomics (H4, H5)*** + unemployment (H5)* + HVHF uncertainty (H6)***

Low success

High success

Medium success
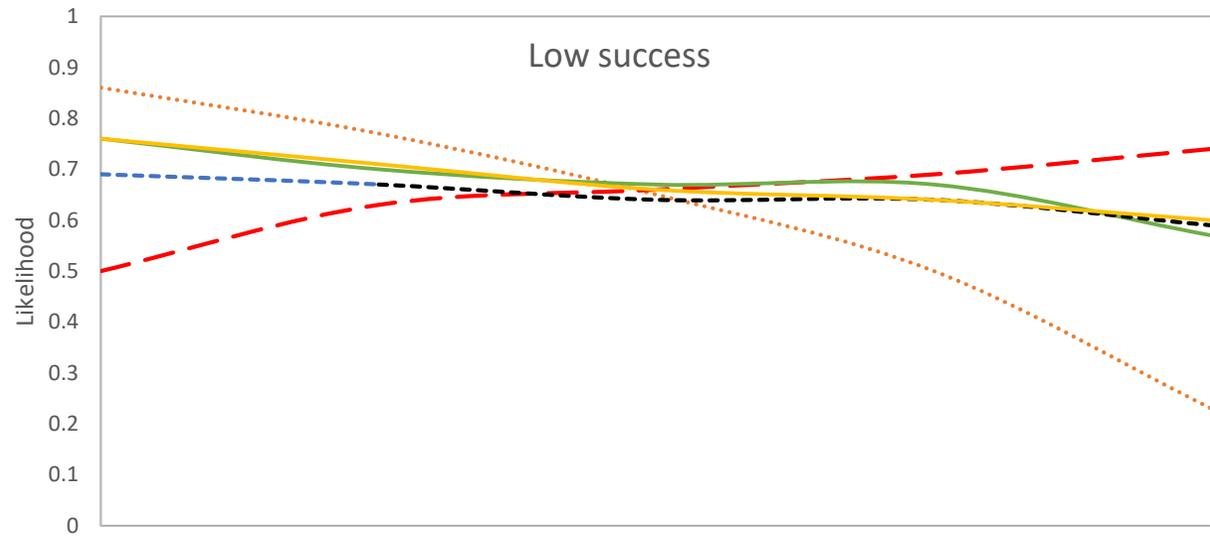
characteristics — SES — Strategy disruptiveness — HVHF uncertainty — Unemployment

D SA R take-home points

Variable	Predicted probability of success, 25th → 75th percentile of IV		
	Low	Medium	High
# of characteristics (H1)	-27%	+14%	+14%
Strategy disruptiveness (H2)	-3%	+18%	-16%
Unemployment (H4)	-7%	+27%	-25%
Socioeconomics (H4, H5)	+6%	-23%	+17%
HVHF uncertainty (H6)	-3%	+27%	23%

E SA F

Policy passage = # of characteristics (H1) + political acumen (local gvt.) (H1~)** + substantive knowledge (fracking) (H1~) + substantive knowledge (policy) (H1~)** + resources (time) (H1~)* + reputation (H1~) + medium policy disruption (bonding) (H2~)** + HVHF uncertainty (H6)*

E SA R

Policy passage = political acumen (local gvt.) (H1~)*** + substantive knowledge (policy) (H1~)*** + resources (time) + medium policy disruption (bonding) (H2~)*** + HVHF uncertainty (H6)*

Low success

Political acumen	Substantive policy knowledge
Bonding policies	HVHF uncertainty

High success

Policy acumen	Substantive policy knowledge
Bonding policy	HVHF uncertainty

Medium success

Policy acumen	Substantive policy knowledge
Bonding policy	HVHF uncertainty
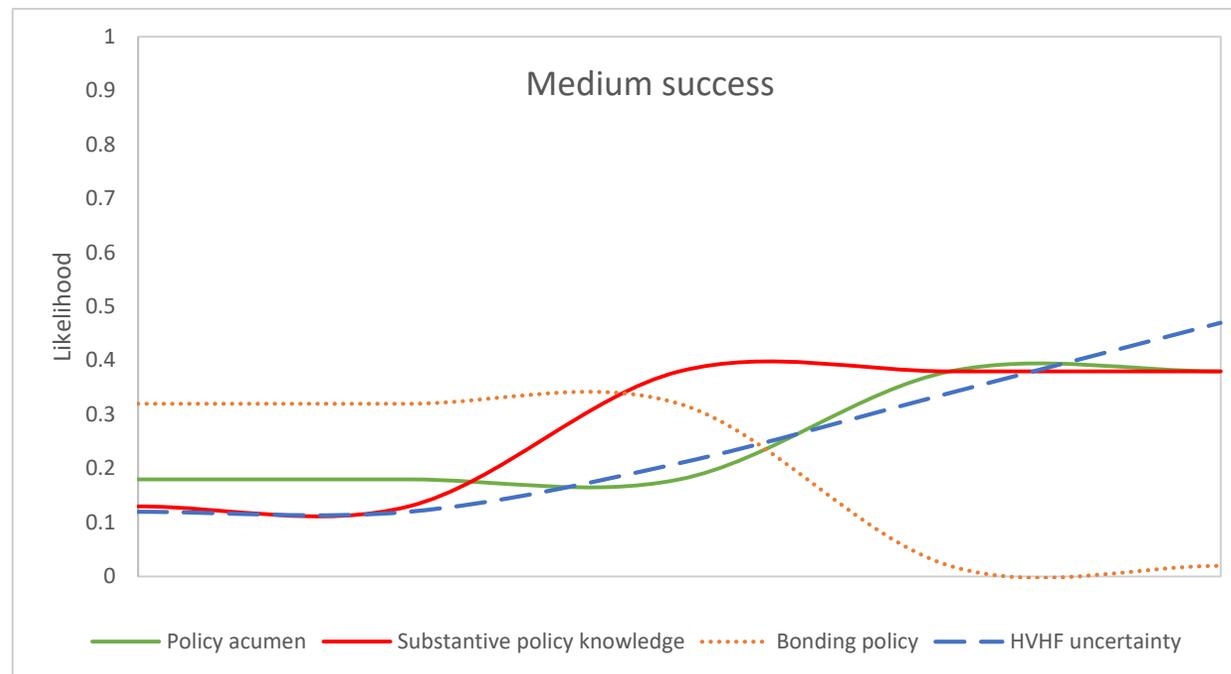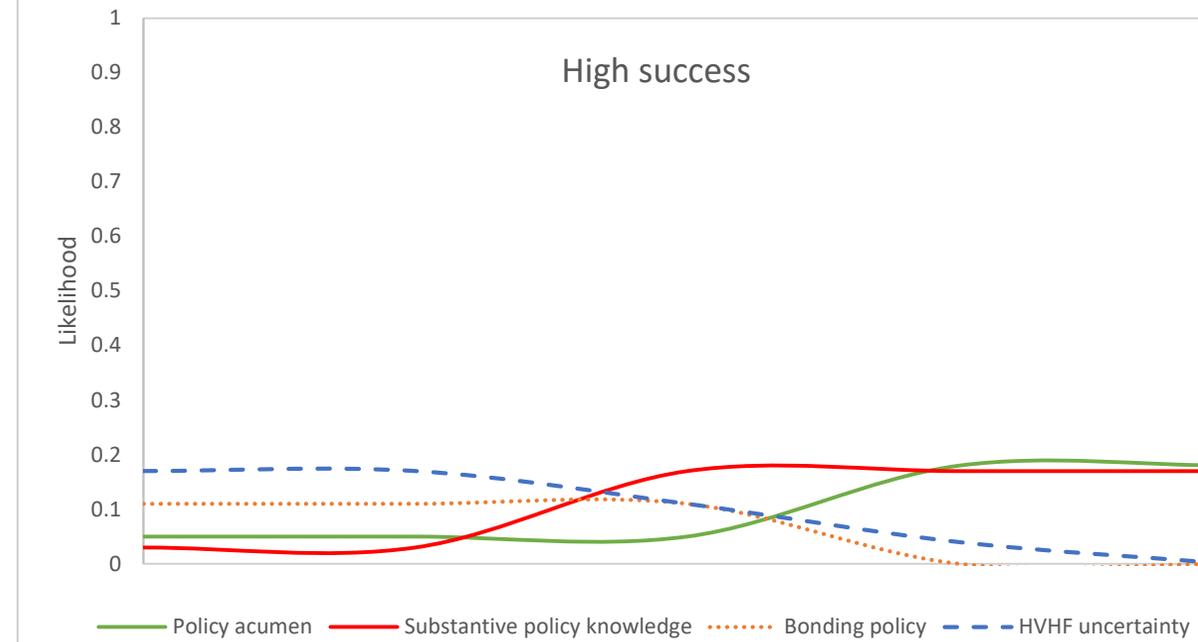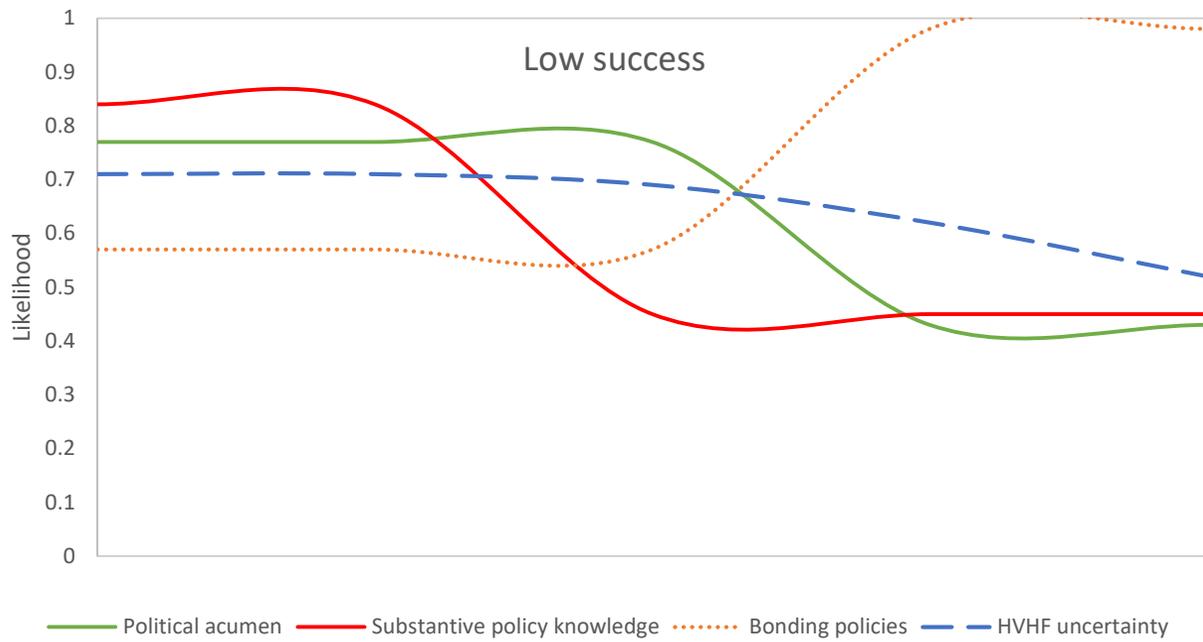
E SA R take-home points

Variable	Predicted probability of success, 25th → 75th percentile of IV		
	Low	Medium	High
Political acumen (local government) (H1~)	-34%	+20%	+13%
Substantive knowledge (policy) (H1~)	-40%	+25%	+17%
Bonding policy (H2~)	+41%	-30%	-11%
HVHF uncertainty (H6)	-9%	+21%	-13%

Results consistent across PP and SA

- Political acumen (knowledge of local government) facilitates PE success.

- Substantive knowledge about the HVHF policy that a PE is promoting facilitates PE success.

- HVHF uncertainty in a community hinders success.

- Never significant: Political partisanship, per capita municipal revenue, policy disruptiveness (though a component is).

Other notable results

- PEs who promote bonding policies are significantly likely to be less successful.

- Number of characteristics facilitates success when subcomponents are not considered in the same model.
  - When subcomponents are considered, policy acumen and substantive knowledge are significant and number of characteristics is not.

Take-home points

- Community demographics, the policy actions sought by PEs, and the types of advocacy activities pursued appear largely unrelated to success.
  - HVHF uncertainty is significant, but it is not clear whether this is a cause or effect of PE activity.

- Characteristics of the PEs themselves are most influential.

- PEs are more successful in securing local anti-fracking policies when . . .
  - They are more knowledgeable about the policies they are promoting.
  - They are more informed about how municipal government operates.

Challenges and issues

- The analysis is cross-sectional; chicken-versus-egg problem.
  - E.g.: Were PEs more successful because of their characteristics, or were those characteristics attributed to them because of their success?

- Accounting for "policy windows" at the community level may help explain additional variation.

- It would be useful to test hypotheses in a context where the situation to which policies are responding have had on-the-ground impacts.

- Samples are still not very large.
  - Would be useful to consider more variables.
  - The SA analyses in particular may be fragile.

Questions?

Occupations of Policy Entrepreneurs

n=68
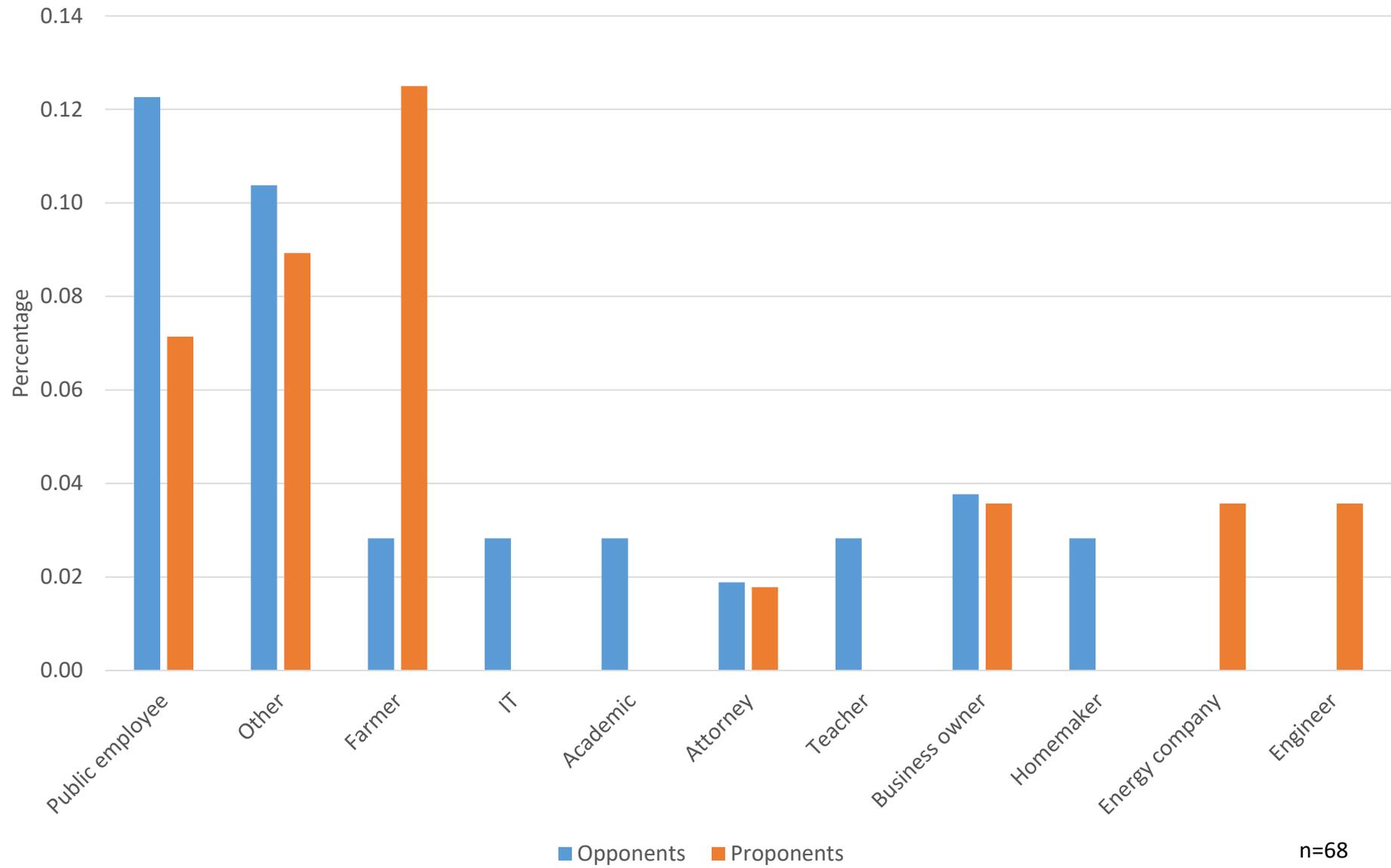
Organizational Affiliation of Policy Entrepreneurs
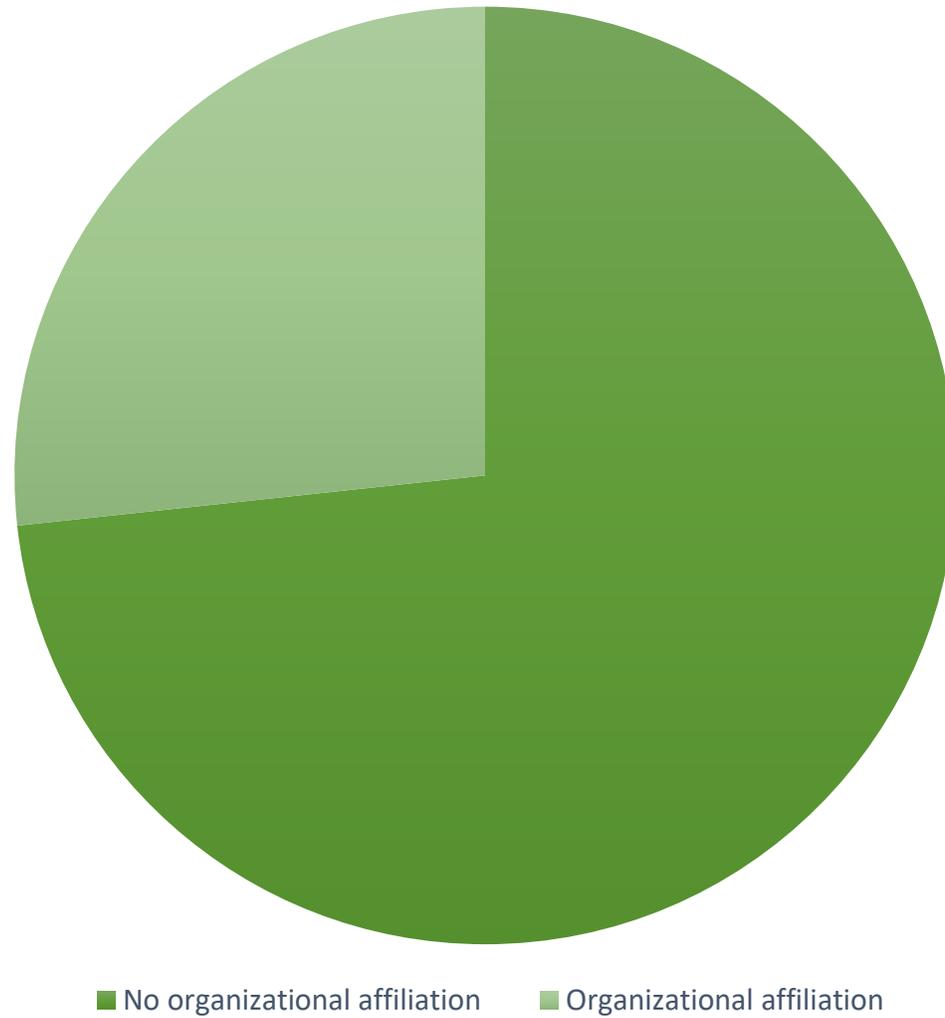
No organizational affiliation   Organizational affiliation

n=106

Note: Differences of proportions among opponents and proponents are not statistically significant.

Active on Other Issues?

Note: Differences of proportions among opponents and proponents are not statistically significant.

44
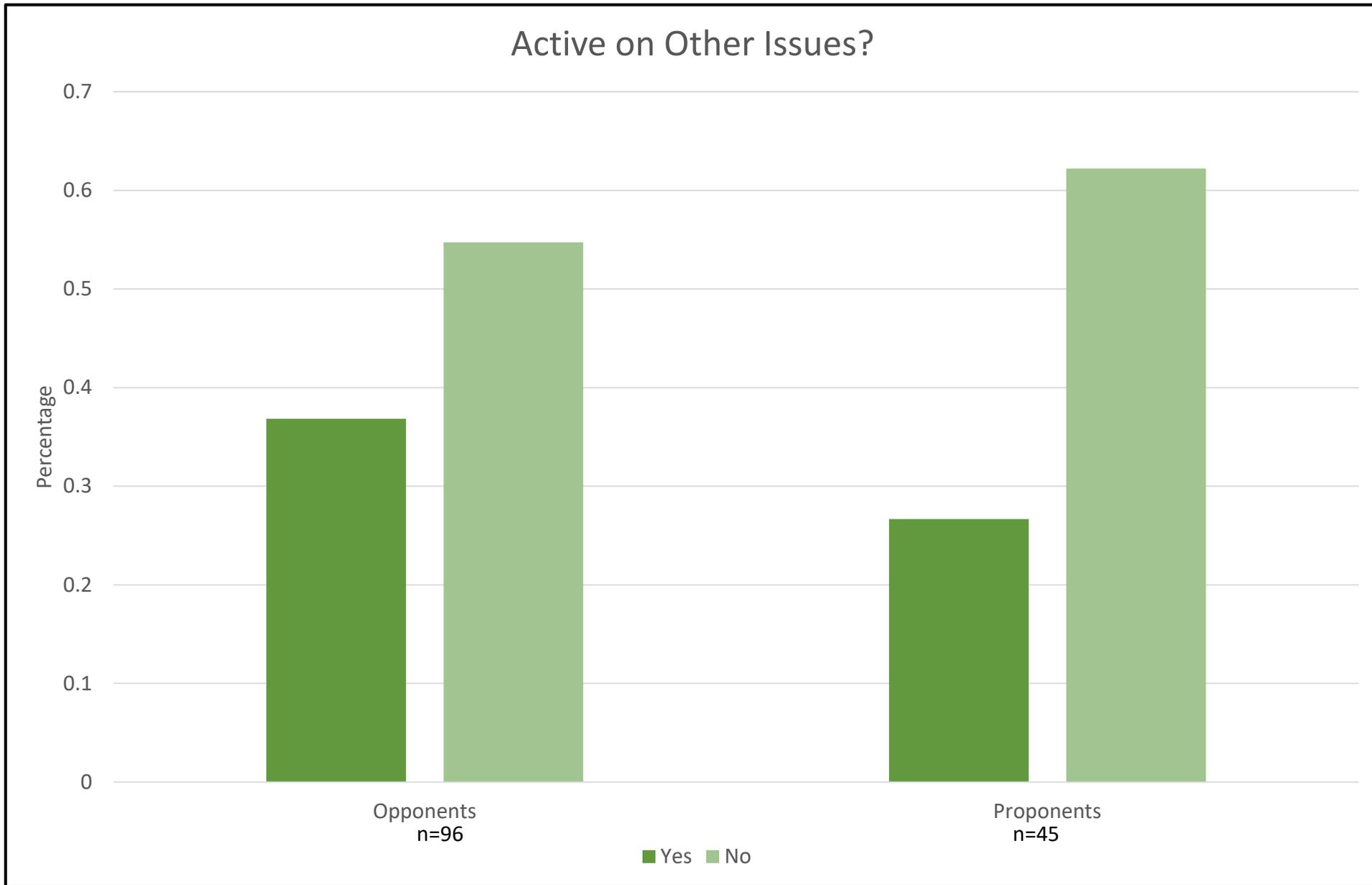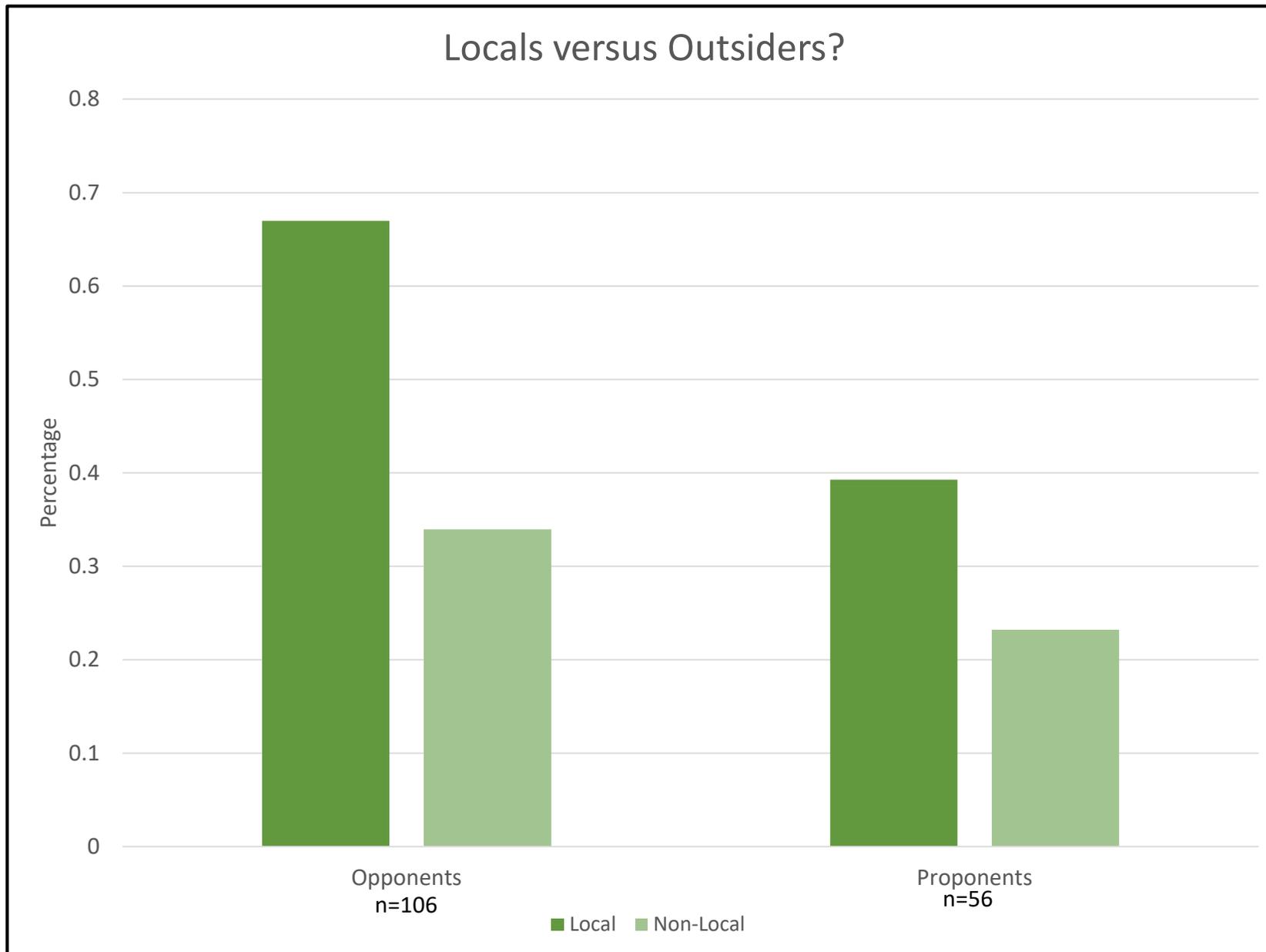
Note: Differences of proportions among opponents and proponents are not statistically significant.

Bivariate regression: PE characteristics and success	Coeff (St. Err) SA_bin (2 cat)	Coeff. (St. Err) PP (2 cat)	Coeff. (St. Err) SA (3 cat)
Social acuity (friendly and easy to get along with)			
Internal networking (knew a lot of people in the municipality)			
Internal networking (knew a lot of government officials // municipality)		0.82 (0.44)*	
Internal networking (knew a lot of prominent people in the municipality)		1.15 (0.56)**	
External networking (knew a lot of government officials // region/ state)			
External networking (knew a lot of prominent people in the region or state)			
Resources (spent a lot of time trying to get the municipality to take policy action)	0.98 (0.46)**		0.97 (0.45)**
Political acumen (very informed about how municipal government operates)	1.13 (0.47)**	1.45 (0.47)***	1.10 (0.44)***
Substantive knowledge (shale gas/HVHF)	1.47 (0.47)***	1.17 (0.45)***	1.43 (0.45)***
Substantive knowledge (policy)	1.96 (0.51)***	1.11 (0.49)**	2.00 (1.59)***
Reputation (well-respected by many people in the municipality)	1.65 (0.53)***	0.91 (0.44)**	1.14 (0.44)***
# of PE characteristics (H1)	0.28 (0.10)***	0.21 (0.09)***	0.29 (0.09)***

Bivariate regression: Policy actions and success	Coeff (St. Err) SA_bin (2 cat)	Coeff. (St. Err) PP (2 cat)	Coeff. (St. Err) SA (3 cat)
Low policy disruption (opposing resolution)			
Low policy disruption (no municipal lease)			
Medium policy disruption (road use)			
Medium policy disruption (bonding)	-2.09 (1.07)*		-2.14 (1.07)**
Medium policy disruption (restrictive zoning)			
High policy disruption (moratorium)			
High policy disruption (ban)			
High policy disruption (preventative zoning)			
Policy disruptiveness (H2)			

Bivariate regression: PE strategies and success	Coeff (St. Err) SA_bin (2 cat)	Coeff. (St. Err) PP (2 cat)	Coeff. (St. Err) SA (3 cat)
Low strategy disruptiveness (letter/email)			
Low strategy disruptiveness (contact own officials)			
Low strategy disruptiveness (contact outside officials)			
Medium strategy disruptiveness (attend public meeting)			
Medium strategy disruptiveness (circulate petition)			
Medium strategy disruptiveness (give presentation)			
High strategy disruptiveness (form group)			
High strategy disruptiveness (direct action)		2.07 (1.12)*	
Strategy disruptiveness (H3)			

Bivariate regression: PE success and socioeconomic and demographic covariates	Coeff (St. Err) SA_bin (2 cat)	Coeff. (St. Err) PP (2 cat)	Coeff. (St. Err) SA (3 cat)
Democratic vote share (H4)			
Socioeconomic status (H4, H5)			
Per capita municipal revenue			
HVHF uncertainty			-0.11 (0.14) -0.72 (0.25)

D SAB F

Survey assessment (binary, SAB) = # of characteristics (H1)*** + policy disruptiveness (H2) + strategy disruptiveness (H3) + Dem (H4) + socioeconomics (H4, H5) + unemployment (H5) + per capita muni rev (H5) + HVHF uncertainty (H6)

D SAB R

SAB = # of characteristics (H1)***

E SAB F

SAB = # of characteristics (H1)** + political acumen (local gvt.) (H1~)*** + substantive knowledge (fracking) (H1~) + substantive knowledge (policy) (H1~)* + resources (time) (H1~)** + reputation (H1~)*** + medium policy disruption (bonding) (H2~)*** + HVHF uncertainty (H6)*

E SAB R

SAB = # of characteristics (H1)** + political acumen (local gvt.) (H1~)*** + substantive knowledge (policy) (H1~)*** + resources (time) (H1~)** + reputation (H1~)*** + medium policy disruption (bonding) (H2~)***

E SAB R: Success as a function of sig. variables