Advertising in the Market for Political support

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Political Competition

- Competition is fundamental to economic analysis
- Political actors compete too:
  - Internal competition (political parties, branches of government, checks and balances)
  - Competition between governments (local competition, federalism, international)
  - Competition with non-governmental groups (government vs. private provision of safety)
- Degree of competition varies
  - United States: serious political competition in all three dimensions
  - North Korea: little political competition

Political support

- Politicians compete for political support
- Contrary to common language, people do not "give" their support
- If people did, support would not be a valuable political asset but free
- Because support is valuable, people will be able to sell it
  - Direct: sell votes for policies or bribes
  - Indirect: *quid pro quo*
- If someone is selling support, there must be a market for it
- I will focus on the government's actions in the market for support

Political Advertising

- One way to compete is through advertising/communication
- Communication surrounds much of politics
- Voice is political action *par excellence*– Albert Hirschman (1970)
- Communication gets different names
- Uncertainty gives rise to persuasion– Anthony Downs (1957)
- Propaganda:
  - Hitler and Stalin (Arendt 1951)
  - Britain's Ministry of Information in WWI
- Advertising: campaign ads, "Come to North Dakota"

Models of Communication

- Belief-based models, Bayesian receivers :
  - Informative (Stigler 1961)
  - Signaling (Spence 1973, Nelson 1970, Milgrom & Roberts 1986)
  - Cheap-talk (Crawford & Sobel 1982)
  - Bayesian persuasion (Kamenica & Gentzkow 2011)

- Belief-Independent Models: Becker & Murphy (1993), Stigler & Becker (1977), Kaldor (1949)

Preliminary Results

- The use of propaganda by competing governments shares comparative statics with advertising by competing firms

1. More competition leads to less propaganda
2. Less costly propaganda leads to more propaganda
3. Propaganda is used less, but is more effective under more competition

Model

- A citizen has a utility function;

$$U(c, s, a)$$

  - c: private consumption good
  - s: political support
  - a: political advertising consumed (anything that changes cost of s)

- Budget constraint: $c \leq w_s s$
- $\frac{\partial U}{\partial s} < 0$, $\frac{\partial^2 U}{\partial s^2} < 0$: support is costly
- $\frac{\partial U}{\partial a} \lessgtr 0$: people may like or dislike advertising
- $\frac{\partial^2 U}{\partial s \partial a} > 0$: advertising decreases marginal cost of support

Politician

- A politician has a utility function

$$vs - w_s s - w_A A$$

  - v: marginal value of a unit of support
  - w_s: unit cost for support
  - w_A: unit cost for advertising
  - A: political advertising produced

- Partial equilibrium: v and w_A are exogenous

- A is given away at a price of zero
  - An alternate model involves buying/selling of advertisements directly

Actions and Timing

1. Politician commits to a payment w_s and produces advertising A
2. Citizen chooses a level of support s, consumption of advertising $a \leq A$, and consumption c
3. Payoffs realized

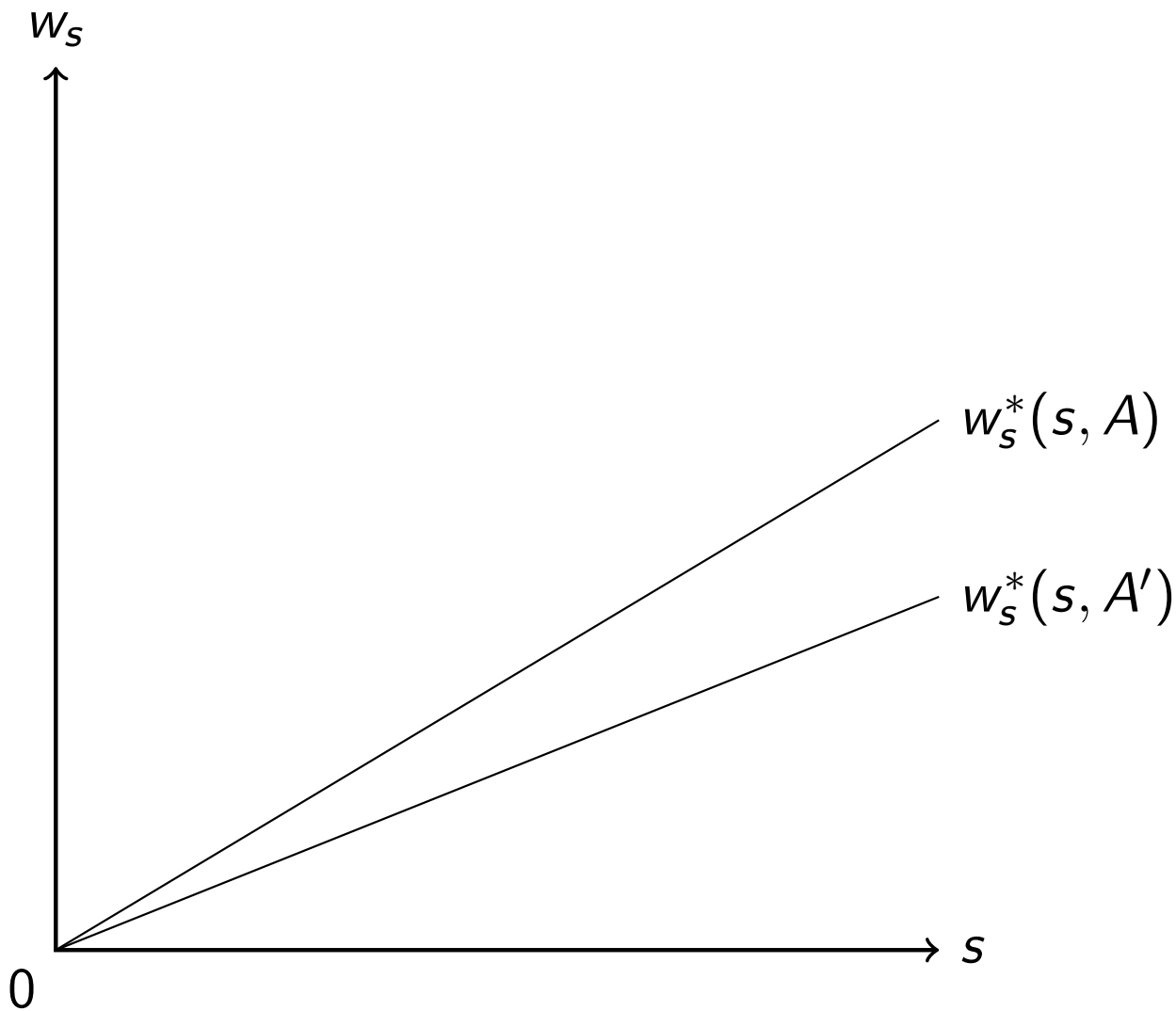
Citizen's Problem

- Given w_s and A, the citizen solves

$$\begin{aligned} \max_{c,s,a} \quad & U(c,s,a) \\ \text{subject to} \quad & c \leq w_s s \\ & a \leq A \\ & c \geq 0, a \geq 0. \end{aligned}$$

- In equilibrium, $c = w_s s$ and $a = A$
- Supply curve of support: $s^*(w_s, A)$
- Inverse supply curve of support: $w_s^*(s, A)$
  - Minimum wage to induce supply s

Support supplied, $A' > A$



Politician's Problem

- Maximize given a supply curve

$$\begin{aligned} \max_{w_s, A} \quad & vs - w_s s - w_A A \\ \text{subject to} \quad & s = s^*(w_s, A). \end{aligned}$$

- Or maximize given an inverse supply curve

$$\begin{aligned} \max_{s, A} \quad & vs - w_s s - w_A A \\ \text{subject to} \quad & w_s = w_s^*(s, A) \\ & s = s^*(w_s, A). \end{aligned}$$

Politician's Problem

- Simplifying notation,

$$\max_{s,A} \quad vs(A) - w_s(s, A)s(A) - w_A A.$$

- $s(A)$ and $w_s(s, A)$ incorporate the citizen's best-response
- FOCs:

$$v = w_s \left(1 + \frac{1}{\epsilon_s}\right)$$

$$\frac{\partial s}{\partial A}(v - w_s) - \frac{\partial w_s}{\partial A} s = w_A$$

- ϵ_s: elasticity of supply of political support

Elasticity of Supply

- Consider the first FOC,

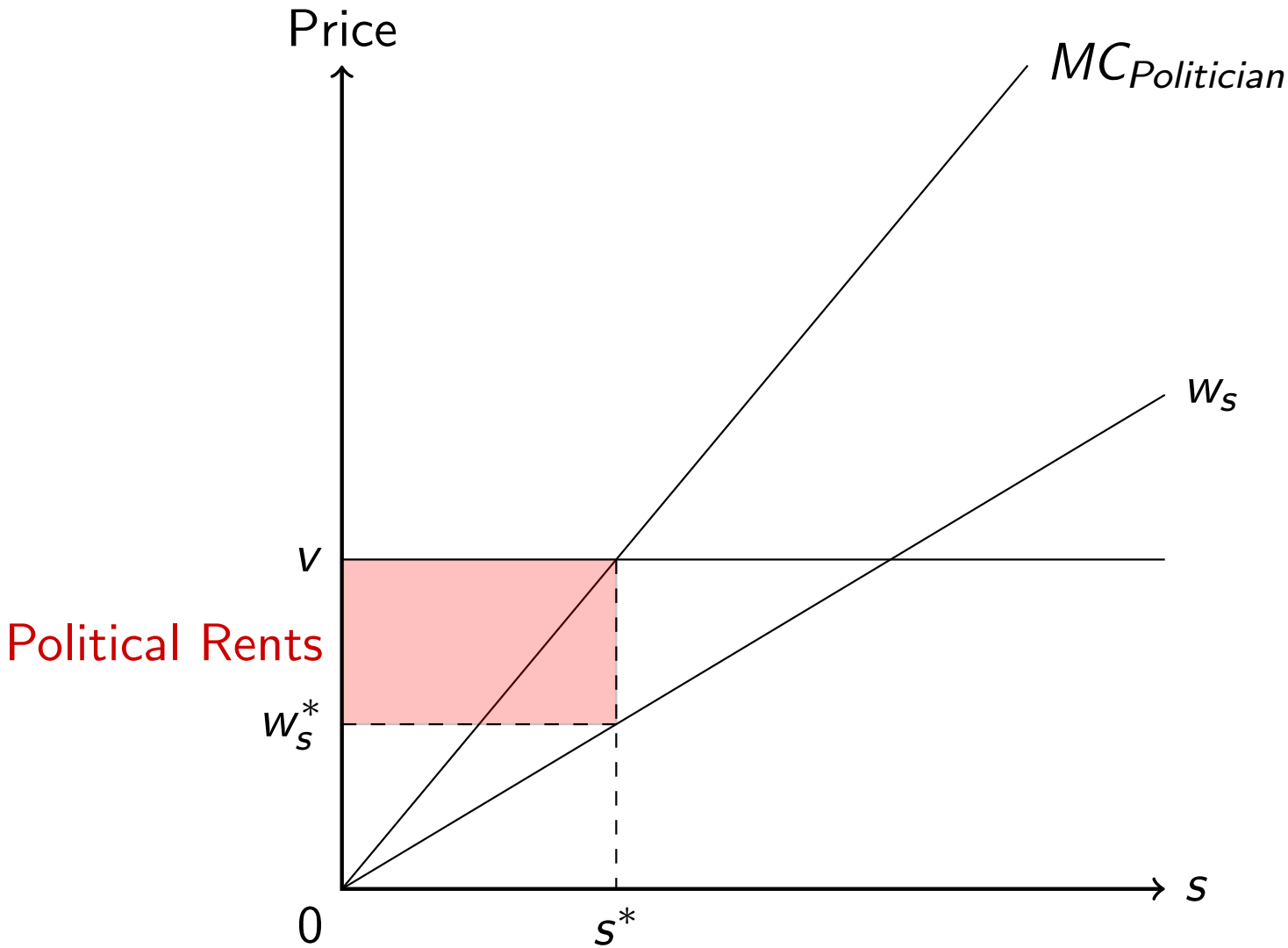
$$v = w_s \left(1 + \frac{1}{\epsilon_s}\right) \tag{1}$$

- $\left(1 + \frac{1}{\epsilon_s}\right)$ captures how much the politician can "markdown" or underpay for support, relative to benefits v

- More inelastic supply $\Rightarrow$ more markdown, more political rents

- If there is a perfectly elastic supply curve and support is positive, $v = w_s$ and the politician receives no surplus.

Monopsony, Fixing A



Elasticity and Competition

- Political competition is embedded in the elasticity of supply
- Ignoring advertising, suppose citizens can provide support to n identical politicians

$$U(c, s) = U\left(c, \sum_{i=1}^{n} s_i\right)$$

- Cournot competition:

$$\max_{s_i} \quad v s_i - w_s(s) s_i.$$

Elasticity and Competition

- Cournot competition:

$$\max_{s_i} \quad v s_i - w_s(s) s_i .$$

- FOC:

$$v = w_s + s_i \frac{dw_s}{ds} \frac{ds}{ds_i}$$

- Using $\frac{ds}{ds_i} = 1$ and $s_i = \frac{s}{n}$

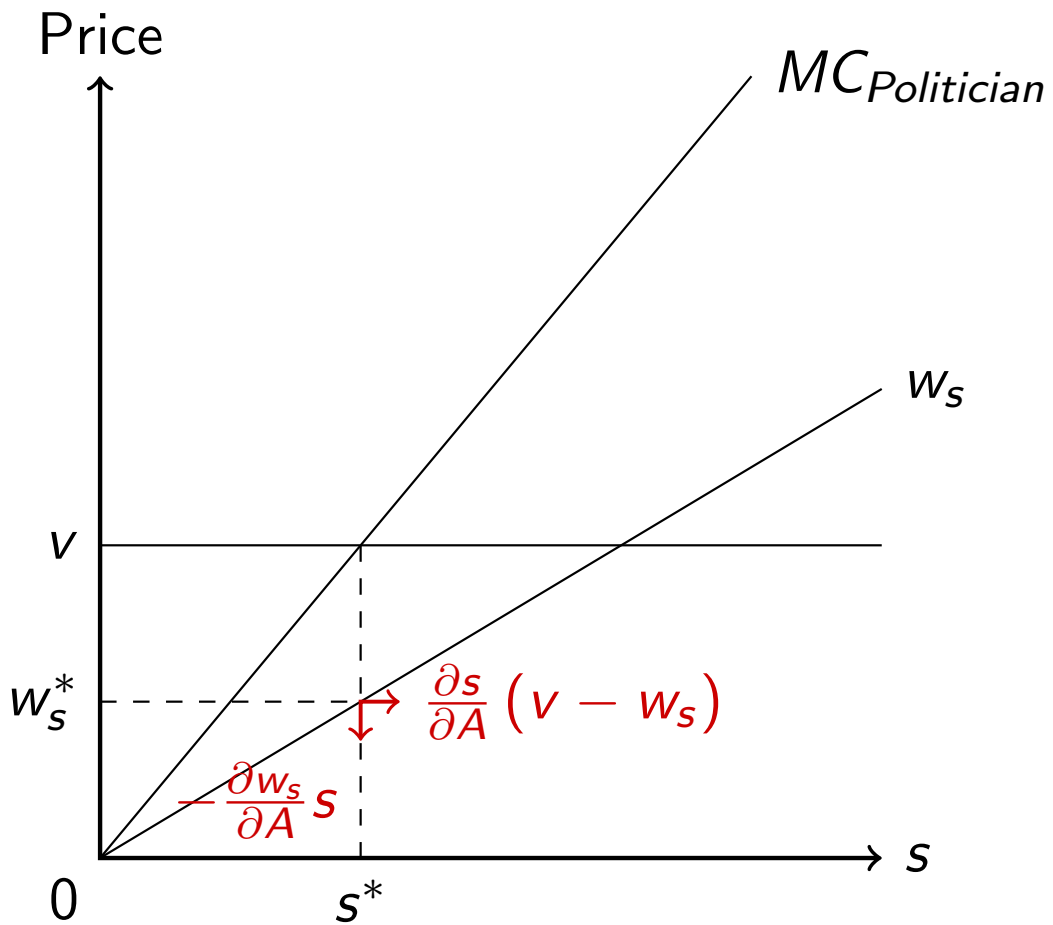
$$v = w_s + \frac{s}{n} \frac{dw_s}{ds}$$

$$v = w_s \left(1 + \frac{1}{n} \frac{1}{\epsilon_s} \right)$$

- ϵ_s is the industry elasticity
- Increase $n \Rightarrow$ increase politician's elasticity

Monopsony, Choosing A

$$\text{FOC for } A: \quad \frac{\partial s}{\partial A}(v - w_s) - \frac{\partial w_s}{\partial A} s = w_A$$



- Because advertising is given away freely and the citizen accepts it, it must be that
  1. $\frac{\partial U}{\partial A} \geq 0$: people enjoy advertising (fireworks, fighter jets at football games, festivals), but aren't charged directly
  2. $\frac{\partial s}{\partial A} > 0$: if used, free advertising must increase support

Advertising Comparative Statics

$$\frac{\partial s}{\partial A}(v - w_s) - \frac{\partial w_s}{\partial A}s = w_A$$

- Greater $v - w_s \Rightarrow$ smaller $\frac{\partial s}{\partial A} \Rightarrow$ greater P
  - Less competition for support leads to more advertising (such as during wars for stable governments)
- Lower $w_A \Rightarrow$ greater A
  - Lower cost leads to more advertising (as when the government owns the media directly)
  - Radio increased political support first for Weimar government and then the Nazis (Adena, Enikolopov, Petrova, Santarosa, & Zhuravskaya 2015)
- More effective advertising $\frac{\partial w_s}{\partial A} \Rightarrow$ greater A

To Extend

- Make more explicit the background of the partial equilibrium model
- Forced propaganda (a form of taxation)
- Downstream competition or monopoly for the provision of propaganda
  - Besley and Prat (2006): more media competition is more costly for the government
  - Enikolopov, Petrova and Zhuravskaya (2011): more media competition led to 8.9% less votes for Russian government

Thanks