

5. Agency problems

This chapter is based on the script by Michael Stimmelmayer.

In the following we address questions such as:

- To what extent can political representatives exploit their political power to appropriate resources for themselves?
- Can voters discipline politicians just through the implicit incentives elections offer?
- To what extent does the agency problem between politicians and voters depend on the economic and political environment?

⇒ The conflict of interest between rent-maximizing politicians and voters is subject of the **Public Choice School**.

⇒ According to the **Chicago School**, however, the forces of political competition will drive down politicians' rents.

The agency problems discussed encompass both preelection and postelection politics:

- Preelection politics are characterized by the fact that candidates commit to their announced politics, contrary to
- Postelection politics where candidates do not commit to their announced politics.

5.1 Efficient Electoral Competition

To start with, we analyze how the agency problem between rent-seeking politicians and voters affects the outcome of the standard median voter model introduced in Chapter 3.

In order to introduce rent-seeking politicians we assume that politicians

- provide public goods, g , and
- take two types of rents,
 - (1) exogenous, non-pecuniary ego-rents, R , from holding office and
 - (2) endogenous pecuniary rents r .

5.1 Efficient Electoral Competition

- Given the pecuniary rents r , the government budget constraint reads

$$\tau y = g + r, \quad (23)$$

where τ denotes the tax rate and y the average income of citizens.

- Moreover, assume there are two candidates competing for the office. The objective function of candidate P is

$$E(v_P) = p_P(R + \gamma r) \quad (24)$$

5.1 Efficient Electoral Competition

Parameter γ ($0 \leq \gamma \leq 1$) - exogenously given:

- γ measures the transaction costs associated with taking rents (i.e. hiding the activities).
- The higher is γ the lower are the transaction costs for rent appropriation.

5.1 Efficient Electoral Competition

- There is a large number of citizens who differ in income.
- The preferences for citizen i are given by

$$W^i(g) = c^i + H(g). \quad (25)$$

where c : consumption, g : public goods provision. $H(g)$ is assumed to be concave, i.e., $H'(g) > 0$ and $H''(g) < 0$.

- Consumption for citizen i is given by

$$c^i = (1 - \tau)y^i. \quad (26)$$

- Given these ingredients (esp. (23) and (26)), the citizens' policy preferences can be characterized as

$$W^i(q) = [y - (g + r)] \frac{y^i}{y} + H(g). \quad (27)$$

5.1 Efficient Electoral Competition

The timing is as follows

- 1 Platforms $q_P(g_P, t_P)$ are announced.
- 2 Elections are held.
- 3 The winner's platform is implemented.

Since all voters agree that rents are a waste, there is still a conflict over the amount of spending on the public good g .

Therefore, each citizen just votes for the candidate that gives him/her the highest utility.

5.1 Efficient Electoral Competition

The probability of winning for candidate A is

$$p_A = \begin{cases} 0 & \text{if } W^m(g_A, r_A) < W^m(g_B, r_B) \\ \frac{1}{2} & \text{if } W^m(g_A, r_A) = W^m(g_B, r_B) \\ 1 & \text{if } W^m(g_A, r_A) > W^m(g_B, r_B) \end{cases}$$

That is to say, the median voter is pivotal.

Results: In this model the public goods provision is optimal from the median voters point of view and there will be no rents to politicians.

$$g_A = g_B = g^m = H_g^{-1}\left(\frac{y^m}{y}\right) \quad \Rightarrow \quad r_A = r_B = r^m = 0.$$

5.1 Efficient Electoral Competition

Intuition:

- Assume that candidate A's policy is further away, utility-wise, from the unanimously preferred policy $g^m = H_g^{-1}\left(\frac{y^m}{y}\right)$ than the policy of candidate B.
- Then candidate A can get a discontinuous jump in the probability to win by moving closer to g^m .
- The same is true for candidate B and hence they both move to g^m .

5.1 Efficient Electoral Competition

Conclusion:

- The rents are driven down to zero because of the stiff "Bertrand" competition between politicians.
- Despite the conflict in interest among voters regarding public spending, the prize for winning the election keeps politicians honest.

5.2 Inefficient Electoral Competition

Now we assume that

- candidates have ideological or personal attributes (a nice or ugly tie / smile, etc.) in addition to their platforms.
- voters have preferences over these attributes.

⇒ *Probabilistic Voting Model* as introduced in Chapter 3.

Accordingly, candidate A's probability of winning reads (with $W = \sum_J \alpha^J W^J$)

$$p_A = \frac{1}{2} + \psi [W(g_A, r_A) - W(g_B, r_B)] \quad (28)$$

where ψ : level of uncertainty of the ideological popularity of B (high ψ implies little uncertainty about the preferences).

5.2 Inefficient Electoral Competition

Candidate P again maximizes

$$E(v_P) = p_P(R + \gamma r) \quad (29)$$

and the first-order condition with respect to public goods provision is equal to

$$\frac{\partial E(v_P)}{\partial g_A} = (R + \gamma r_A) \frac{\partial p_A}{\partial g_A} = (R + \gamma r_A) \psi W_{g_A}(g_A, r_A) = 0. \quad (30)$$

⇒ This implies that the level of public good provision is socially optimal as $W_{g_A}(g_A, r_A) = 0$ whatever level of r .

5.2 Inefficient Electoral Competition

The first-order condition with respect to rent extraction is equal to

$$\frac{\partial E(v_P)}{\partial r_A} = (R + \gamma r_A) \frac{\partial p_A}{\partial r_A} + p_A \gamma = -(R + \gamma r_A) \psi + \frac{1}{2} \gamma \leq 0. \quad (31)$$

because $\frac{\partial p_A}{\partial r_A} = -\psi$ and $p_A = \frac{1}{2}$ in equilibrium.

⇒ Unlike in the previous section, a marginal increase in rents does not imply discrete jumps in the probability of winning.

⇒ This is true since competition is less stiff than before as candidates are no perfect (or even close) substitutes anymore.

5.2 Inefficient Electoral Competition

Politicians will therefore take

$$r^* = \max \left[0, \frac{1}{2\psi} - \frac{R}{\gamma} \right]. \quad (32)$$

⇒ Rents are not competed away!

- The result is due to the fact that the candidates are no longer perfect substitutes for all voters.
- Swing voters by definition consider the candidates perfect substitutes and punish a rent-seeking candidate, but other voters do not because of their ideological preferences.
- The crux is that the candidates do not know who is a swing voter and who is not. This weakens electoral competition.

5.2 Inefficient Electoral Competition

- If the politicians consider to take more rents, the probability to lose is weakened by the uncertainty (as captured by ψ).
- The more uncertainty (the lower ψ) the larger is the scope for rents.
- Similarly, a lower exogenous value of holding office, R , and a lower transaction cost (higher γ), promote high endogenous rents.
- A broader interpretation is that ideological dispersion should lead to high costs (large rents) of government spending (empirical evidence?).

5.2 Inefficient Electoral Competition

Empirical evidence

- Predictions: *Ceteris paribus*, we should observe an association between rents + high/inefficient gov. spending and ideological dispersion/electoral instability.
- Alesina, Easterly and Baqir (1997): Model that links heterogeneity of preferences across ethnic groups in a city to the amount and type of the public goods supplied.
- Results:
 - More ethnically diverse jurisdictions in the US have higher spending and higher deficits / debt per capita...
 - ... yet devote lower share of spending to core public goods like education and roads.

⇒ Positive correlation between the size of the government and ethnic/linguistic fragmentation.

5.2 Inefficient Electoral Competition

Conclusion

- If the probability function is non-continuous (i.e., if candidates are perfect substitutes) the intense competition between the candidates drives down rents.
 - If the probability function is, however, continuous (i.e., candidates have different personal characteristics), then this creates uncertainty about who will vote for whom.
- ⇒ This uncertainty is used by the candidates to extract rents.
- If $\psi = 0$, then there is complete uncertainty, and the candidates can get away with anything since their platforms do not affect the probability to win.
 - If ψ is high (there is little uncertainty), then a bad behavior will be punished by the voters in the election.

5.3 Enforceability, Verifiability, Observability

Until now we have assumed that candidates can commit to their platforms.

- ⇒ But this is not always a reasonable assumption.
- ⇒ What if the candidates cannot make binding commitments?

To analyze this, assume that there is a cost of producing public goods, θ , which is unknown to the citizens.

A higher θ means that provision has become more costly.

5.3 Enforceability, Verifiability, Observability

In the subsequent model the timing is the following

- 1 Platforms (g, τ) are announced.
- 2 Elections are held.
- 3 θ is realized.
- 4 The winner's platform is implemented.

So the government budget constraint is

$$\tau y = \theta g + r \quad (33)$$

and the level of efficient taxes (when $r = 0$) is therefore

$$\tau^*(\theta) = \frac{\theta g^*(\theta)}{y}. \quad (34)$$

5.3 Enforceable and Verifiable Promises

Consider first the case when there exists a judiciary that can enforce the promises politicians make.

- The candidates still maximize

$$E(v_P) = p_P(R + \gamma r) \quad (35)$$

with respect to g and r taking into account that θ is uncertain.

- The incentives are as sharp as in the previous model.
- ⇒ Whoever moves closer to the state-contingent policy the voters desire will discontinuously increase his/her probability of winning.

5.3 Enforceable and Verifiable Promises

- So the result is that

$$g_A(\theta) = g_B(\theta) = g^*(\theta) \quad (36)$$

and

$$r_A(\theta) = r_B(\theta) = 0 \quad (37)$$

- ⇒ The combination of enforceability, verifiability, and electoral competition is thus sufficient to ensure implementation of the efficient state-contingent policy even though the cost of providing the public good is unknown.

5.3 Enforceable Nonverifiable Promises

Suppose now that the judiciary can enforce promises but that the state θ is unverifiable.

Moreover, we assume for the moment that the cost can only take on two values, $\bar{\theta}$ and $\underline{\theta}$.

- ⇒ That is, the state-contingent platforms cannot be enforced.
- ⇒ The winner will always misreport claiming that the expensive state, $\bar{\theta}$, has evolved and pocket the rest.
- ⇒ So, the best voters can hope for is an optimal policy in the expensive state.

5.3 Enforceable Nonverifiable Promises

Competition between politicians leads them to converge

$$g_A(\theta) = g_B(\theta) = g^*(\bar{\theta}), \quad (38)$$

and

$$\tau_A = \tau_B = \frac{\bar{\theta} g^*(\bar{\theta})}{y}. \quad (39)$$

This comes directly from the budget restriction.

- ⇒ Equilibrium policy thus eliminates rents in the expensive state $r(\bar{\theta}) = 0$.
- ⇒ But it is also possible that it is in fact cheap to produce the public good, $\underline{\theta}$.
- ⇒ Since the politicians lie about the state of the world, they are in general able to take rents.

5.3 Enforceable Nonverifiable Promises

To see this, substitute the tax rate that citizens always have to pay

$$\tau = \frac{\bar{\theta}g^*(\bar{\theta})}{y} \quad (40)$$

into the budget constraint (11) and we get

$$\frac{\bar{\theta}g^*(\bar{\theta})}{y}y = \theta g + r. \quad (41)$$

⇒ The elected candidate therefore captures the rents

$$r(\underline{\theta}) = (\bar{\theta} - \underline{\theta})g^*(\bar{\theta}). \quad (42)$$

5.3 Nonenforceable Nonverifiable Promises

In the previous section, agreements could ex post be enforced which, at the very least, served as putting a higher cap on the rents politicians could take.

However, if contracts cannot be enforced there is nothing that stops politicians from fully exploiting the voters.

This implies that the solution is

$$g(\theta) = 0, \quad \tau(\theta) = 1, \quad r(\theta) = y.$$

⇒ There would be no public goods provision, and all incomes would be captured by politicians as rents.

5.3 (Non-)Enforceable Nonverifiable Promises

Conclusion:

- When the candidates can only enter into non-verifiable contracts with the voters, the candidates will use the uncertainty to extract rents for themselves.
- The larger the uncertainty about θ , the larger are the rents.
- This suggests that in countries with more volatile political environments there is higher and more wasteful spending.
- We note that politicians also have incentives to make public activities non-transparent.
- If contracts cannot be enforced, however, voters are fully exploited.

5.4 Electoral Accountability

- In case Leviathan behavior is punished by the electorate, a policy which extracts a good proportion of rents would be ruinous for politicians.
- Therefore, if politicians aim to stay in office in the next period, it might be advisable to take less rents away.
- In order to analyze the disciplining effect of repeated elections we now consider a two-period model and allow for a continuous realization of θ .

5.4 Rents from Incumbent Power

In the dynamic framework the timing is as follows

- 1 θ is realized and observed.
- 2 Voters set a reservation utility for electing the incumbent.
- 3 The incumbent sets policy.
- 4 Elections are held in which voters select between an incumbent and an opponent.

Moreover, we assume that

- ⇒ the incumbent and the opponent are identical in all respects
- ⇒ the only reason for not reelecting the incumbent is to punish him/her.

5.4 Rents from Incumbent Power

The different timing requires a reformulation of the incumbent's objective

$$E(v_P) = \gamma r + p_I R \quad (43)$$

which fully reflects the incumbent policymaker's discretion over current rents, r .

- ⇒ (S)he could, if (s)he wanted to, act as in the previous section and maximize r .
- ⇒ However, at stake in the election are future rents captured by R , which can be interpreted as the expected value of holding office from the next period and on.
- ⇒ We assume that the voters coordinate on the same voting strategy, i.e., punishing the incumbent for bad behavior and rewarding him for good behavior.

5.4 Rents from Incumbent Power

This voting strategy boils down to the following probability for candidate I (the incumbent) to win

$$p_I = \begin{cases} 1 & \text{if } W[g(\theta), r(\theta)] \geq \bar{w}(\theta) \\ 0 & \text{otherwise} \end{cases} \quad (44)$$

where $\bar{w}(\theta)$ is the voters' reservation utility.

- ⇒ This voting strategy creates a trade-off for the incumbent: Either (s)he pleases the voters to earn reelection, or (s)he does not.

5.4 Rents from Incumbent Power

The incumbent's first alternative is to please the voters,

⇒ (S)he maximizes the rents, given the restriction that (s)he will be reelected, $p_I = 1$.

$$r(\theta) = y - \theta g^*(\theta) - \bar{w}(\theta) + H[g^*(\theta)]. \quad (45)$$

Proof:

- The announced policy of the incumbent is designed as to stay in office, that is generating at least the reservation utility of voters

$$W[g(\theta), r(\theta)]r = \bar{w}(\theta). \quad (46)$$

- Given the citizens' preferences (25), we can write

$$\bar{w}(\theta) = c + H(g). \quad (47)$$

5.4 Rents from Incumbent Power

- Moreover, given the citizens' consumption expenditures and the government budget constraint, consumption is

$$c = y - (\theta g + r). \quad (48)$$

- Inserting in the above utility function (47) and solving for r yields:

$$r(\theta) = y - \theta g^*(\theta) - \bar{w}(\theta) + H[g^*(\theta)]. \quad (49)$$

- ⇒ So, the incumbent satisfies the voters by giving them $W[g(\theta), r(\theta)] = \bar{w}(\theta)$ and pockets the rest of the rents for him/her-self.

5.4 Rents from Incumbent Power

The incumbent's second alternative is not to please the voters.

- The best policy is then to follow the Leviathan-like policy and to extract all rents, implying $r = y$.
- However, the question remains under which circumstances does the incumbent please the voters?
- The incumbent will please the voters, if the rents from doing so are larger than the "*Hit and Run*" Policy, i.e. if

$$\gamma r(\theta) + R \geq \gamma y. \quad (50)$$

5.4 Rents from Incumbent Power

- Voters prefer that rents be as small as possible.
- If coordination is possible, voters should set the reservation utility such that the incumbent is indifferent between staying in office and running away

$$\gamma r(\theta) + R = \gamma y. \quad (51)$$

- Thus, equilibrium rents are

$$r(\theta) = \max\left[0, y - \frac{R}{\gamma}\right] = r^*, \quad (52)$$

and independent of the realization of θ .

5.4 Rents from Incumbent Power

- Note that to achieve this level of equilibrium rents, the voters' reservation utility must be

$$\bar{\omega}(\theta) = y - \theta g^*(\theta) - r^* + H[g^*(\theta)]. \quad (53)$$

- So, voters have to give up some rents to avoid that the incumbent extracts a maximum level of rents and runs away.
- We note that whereas the voters' utility is state-contingent, the equilibrium rents are not.

5.4 Rents from Incumbent Power

What determines the equilibrium rents?

- A higher value of the intrinsic (exogenous) rents R keep equilibrium rents down.
- A higher rent-extraction costs (lower γ) keep equilibrium rents down.
- In addition, a larger tax base (higher y) increases rent extraction, since the incumbent may use its powers to extract maximum rents from the voters and a larger available tax base makes this discretion more threatening, and the voters have to renounce larger rents.

5.4 Rents from Asymmetric Information

In the following case we assume that the realization of θ is not observable for the voters.

- Under this framework, the incumbent can earn informational rents due to asymmetric information.

This is, (s)he will independently of the realization of θ announce a high θ and raise taxes accordingly, but provide the efficient amount of the public good. If θ is low, the excess revenues are kept as rents.

- Since the voter cannot observe θ , their best strategy is to choose a non-state-contingent cutoff level.

5.4 Rents from Asymmetric Information

- So, citizen will reelect the incumbent if his/her policy platform ensures the non-state-contingent cutoff level of voters' utility.

$$p_I = 1 \quad \text{if} \quad \omega \geq \varpi. \quad (54)$$

- The incumbent will, however, only please the voter if it is cheap enough to do so, i.e. if θ is low.
 - If θ is high, pleasing the voters is too expensive relative to exploiting one's discretionary short-run power.
- ⇒ So, each level of ϖ implies a critical level of θ^* , below which the incumbent pleases the voters and above which (s)he will extract maximal rents and run away.

5.4 Rents from Asymmetric Information

- Therefore, the respective policy of the incumbent is set such that

$$\omega = \begin{cases} \varpi(\theta^*) & \text{for } \theta \leq \theta^* \\ 0 & \text{for } \theta > \theta^* \end{cases} \quad (55)$$

with

$$\varpi(\theta) = y - \theta g^*(\theta) - r^* + H[g^*(\theta)]. \quad (\text{cf. 53})$$

- Accordingly, the voters will only enjoy their reservation utility in case a low θ is realized - otherwise the incumbent will behave Leviathan-like and extract maximum rents.

5.4 Rents from Asymmetric Information

Given the above state policy, voters' expected utility reads

$$E(\omega) = \int_{\underline{\theta}}^{\theta^*} \varpi(\theta^*) \cdot f(\theta) \cdot d\theta + \int_{\theta^*}^{\bar{\theta}} 0 \cdot f(\theta) \cdot d\theta = F(\theta^*)\varpi(\theta^*). \quad (56)$$

Note: According to convention, capital F denotes the *cumulative distribution function* and lower-case f stands for the *probability density functions*. The former can be defined in terms of the latter according to

$$F(\theta^*) = \int_{\underline{\theta}}^{\theta^*} f(\theta) d\theta \quad \iff \quad \frac{d(F(\theta))}{d\theta} = f(\theta).$$

\Rightarrow So, voters' expected utility amounts to $F(\theta^*)\varpi(\theta^*)$.

5.4 Rents from Asymmetric Information

The announced policy in (55) implies a trade-off for voters:

The voters can insist on a higher utility by increasing their required utility ϖ - but then voters will be pleased less often, since it becomes more attractive for the incumbent to run away / to behave myopically.

Proof: Differentiating (55) yields

$$\frac{d\theta^*}{d\varpi} = \frac{1}{\varpi_{\theta}(\theta^*)} < 0, \quad \text{since}$$

$$\varpi_{\theta}(\theta^*) = -g^*(\theta^*) < 0 \quad \text{envelop theorem (see (53)).} \quad (57)$$

5.4 Rents from Asymmetric Information

- We conclude, that a higher required utility level of voters, ϖ , implies a lower level of θ^* such that the incumbent will more often decide not to please the voters.
- The optimal cut-off level θ^* thus has to satisfy the first-order condition (cf. (56))

$$\frac{\varpi_{\theta}(\theta^*)}{\varpi(\theta^*)} = -\frac{f(\theta^*)}{F(\theta^*)}. \quad (58)$$

- The incumbent's optimal choice of θ^* is uniquely determined if the hazard rate, r.h.s. of (58), is monotonically decreasing.

The hazard rate denotes the escape rate, so the rate of transition out of the current state.

5.4 Rents from Asymmetric Information

- Finally, we infer that the provision of the public good
 - ...is optimal, if θ is below the threshold θ^* and the incumbent pleases the voters.
 - is zero in the case of default $\theta > \theta^*$.

$$g = \begin{cases} g^*(\theta) & \text{for } \theta \leq \theta^* \\ 0 & \text{for } \theta > \theta^* \end{cases} \quad (59)$$

- The equilibrium rents are conditional on the realization of θ and read

$$r(\theta) = \begin{cases} r^* + [\tau^*(\theta^*) - \tau^*(\theta)]y + H[g^*(\theta)] - H[g^*(\theta^*)] & \text{for } \theta \leq \theta^* \\ y & \text{for } \theta > \theta^* \end{cases} \quad (60)$$

5.4 Rents from Asymmetric Information

Conclusion

- The incumbent's rents are higher under asymmetric information for all realizations of θ except of θ^* .
- When the public good is cheap (θ is low), the incumbent satisfies the voters in the cheapest possible way and pockets the rest for him- or herself.
- When the public good is expensive (θ is high), the incumbent extracts maximum rents, $y = r$, and accepts defeat in the future period. No public good is provided in this case.

5.5 Career Concerns

In general elections could have three different roles

- 1 to select among alternative economic policies
- 2 to hold incumbents accountable ex post for bad behavior
- 3 to select the most competent politician

In this chapter we will focus on the third role of elections. Accordingly, politicians have an additional incentive to perform well before elections and not to extract rents in order to appear talented or competent to voters.

5.5 Career Concerns

The following model is a two period model, $t \in (1, 2)$ and we assume that

- 1 the marginal utility of the public good is constant and that
- 2 the tax rate τ is fixed at the upper limit $\bar{\tau}$

⇒ The trade-off faced by politicians is either to use the (fixed) tax revenue providing some public good or pocketing it for oneself.

Moreover, the voters preferences are described by

$$\omega_t = y(1 - \bar{\tau}) + \alpha g_t, \quad (61)$$

where $\alpha \geq 1$ denotes an exogenous parameter.

5.5 Career Concerns

The government budget constraint is

$$g_t = \eta(\bar{\tau}y - r_t), \quad (62)$$

- where η reflects the politician's "competence" in providing the public good (same in both periods).
- So, a higher η indicates a more competent politician and η is identical to $\frac{1}{\theta}$ in the previous model (but different interpretation).
- η is uniformly distributed over $[1 - \frac{1}{2\xi}, 1 + \frac{1}{2\xi}]$ such that its expected value is 1 and its density is ξ .

Moreover we assume that rents are non-negative but smaller than the total amount of tax revenue available, $r_t \leq \bar{r} < \bar{\tau}y$.

5.5 Career Concerns

- The period one objective of the incumbent is

$$v_I = r_1 + p_I \beta (R + r_2), \quad (63)$$

where $0 < \beta < 1$ represents the respective discount factor of the incumbent and p_I the probability of the incumbent's reelection.

- Finally we assume, that no policy commitments are possible ahead of the election.

5.5 Career Concerns

The timing of the game is as follows

- 1 The incumbent chooses rents in period one, r_1 , without knowing his/her own competence, η .
- 2 η is realized and the amount of public good is determined residually according to (62).
- 3 The elections are held.
- 4 Rents in the second period, r_2 , are set and public goods are once again determined residually to satisfy (62).

5.5 Career Concerns

- Given this structure, no politician has an incentive to behave well in period two (since the game ends).
- ⇒ Therefore, each politician will appropriate maximum rents in period two, $r_2 = \bar{r}$, and public spending in period two is: $g_2 = \eta(\bar{\tau}y - \bar{r})$.
- Even though voters cannot discipline politicians in period two, voters are better off in period two with a more competent politician.
- ⇒ Thus, voters will use the election to dismiss incompetent politicians but to reappoint competent ones.
- ⇒ Note: the incumbent will be reappointed if his/her estimated competence $\tilde{\eta}$ is larger than 1, since the expected competence of the opponent is $E(\eta) = 1$.

5.5 Career Concerns

Equilibrium Behavior and Outcome:

The voters know the incumbent's objective (63) and observe the amount of public good, g_1 , provided in period one.

⇒ Since citizens know g_1 and $\bar{\tau}$ they can compute the solution to the incumbent's optimization problem, \tilde{r}_1 .

⇒ Given \tilde{r}_1 , the citizen can form an estimate of the incumbent's competence according to

$$\tilde{\eta} = \frac{g_1}{\bar{\tau}y - \tilde{r}_1}. \quad (64)$$

5.5 Career Concerns

- The incumbent is reelected, if his/her estimated competence $\tilde{\eta}$ is larger than the opponent's competence, i.e. larger than 1.

$$\tilde{p}_I = \begin{cases} 1 & \text{if } \tilde{\eta} \geq E(\eta) = 1 \\ 0 & \text{otherwise} \end{cases} \quad (65)$$

- Since the incumbent sets r_1 (s)he also knows g_1 which follows from the government's budget constraint, (62).
- Moreover, the event $\tilde{\eta} \geq 1$ is equivalent to

$$\eta \geq \frac{\bar{\tau}y - \tilde{r}_1}{\bar{\tau}y - r_1}. \quad (66)$$

5.5 Career Concerns

- ...such that the incumbent's probability of reelection states

$$p_I = \frac{1}{2} + \xi \left[1 - \frac{\bar{\tau}y - \tilde{r}_1}{\bar{\tau}y - r_1} \right]. \quad (67)$$

- Accordingly, the size of rents appropriated in period one, r_1 , affects the incumbent's probability of being reelected since it coincides with the incumbent's competence.
- Thus, the incumbent's maximization problem states

$$\begin{aligned} \max \quad & v_I = r_1 + p_I \beta (R + r_2) \\ \text{s.t.} \quad & p_I = \frac{1}{2} + \xi \left[1 - \frac{\bar{\tau}y - \tilde{r}_1}{\bar{\tau}y - r_1} \right]. \end{aligned} \quad (68)$$

5.5 Career Concerns

- So, the incumbent's first order condition reads

$$1 - \frac{\xi(\bar{\tau}y - \tilde{r}_1)}{(\bar{\tau}y - r_1)^2} \beta(R + \bar{r}) = 0. \quad (69)$$

- In equilibrium, politicians' optimal choice must coincide with the voters conjectures resulting in $r_1 = \tilde{r}_1$. Optimal rents appropriated in the first period are hence given by

$$r_1 = \bar{\tau}y - \xi\beta(R + \bar{r}). \quad (70)$$

- Moreover, as we assume that $r_1 = \tilde{r}_1$, the probability of the incumbent's reelection becomes $P_I = \frac{1}{2}$ what coincides with our assumption that the incumbent does not know his/her own level of competence.

5.5 Career Concerns

- Similar to the former model, voters assess their welfare just before the election and will only reelect the incumbent if (s)he delivers sufficiently high welfare, ϖ .
- Substituting (70) in the government budget constraint, we get for the provision of the public good in period one, g_1 ,

$$g_1 = \eta(\xi\beta(R + \bar{r})). \quad (71)$$

- If the incumbent, however, provides less of the public good in period one, (s)he is assumed to be less competent and therefore will not be reelected.

5.5 Career Concerns

- Thus we can express the probability of being reelected in terms of the voter's reservation utility in period one

$$\tilde{p}_I = \begin{cases} 1 & \text{if } \omega_1 = y(1 - \bar{\tau}) + \alpha G(\eta) \geq \varpi \\ 0 & \text{otherwise} \end{cases} \quad (72)$$

with $\varpi = y(1 - \bar{\tau}) + \alpha \xi \beta (R + \bar{r})$.

- If citizens, however, do not reelect the incumbent it is not because they want to punish him/her, but because they anticipate a higher welfare in the next period if they inaugurate a more competent candidate for the next period.

5.5 Career Concerns

Empirical evidence

- Predictions of the models:
 - Politicians can be disciplined with the help of elections
 - Voters elect competent politicians
- Whether this is possible depends on the institutional framework, i.e. payment of politicians, term limits,...

5.5 Career Concerns

Empirical evidence

- Ferraz and Finan (2008): Effect of wages of politicians on selection and performance in Brasil
- Study: Do higher wages attract politicians of a better quality and improve political performance?
- Approach: Use of exogenous variation in the salaries of local legislators across Brazil's municipal governments. (Discontinuities in wages across municipalities due to a constitutional amendment defining caps on the salary acc. to municipal population)
- Main findings: Increases in salaries not only attracts more candidates, but more educated ones. Higher salaries also increase legislative productivity (more bills submitted and approved, provision of more public goods).

5.5 Career Concerns

Empirical evidence

- Besley (2004): Effect of wages of politicians on congruence between politicians and citizens
- Study: Are ideological positions of US Governors more related to their citizens' ones in states where wages are higher?
- Main findings: If wages are higher, congruence is higher. This is consistent with either a selection effect (ideologically more "congruenced" politicians are (re-)elected) or an incentive effect (deviations by politicians are punished).

5.5 Career Concerns

Conclusion

- We have seen, that elections may enforce discipline on elected incumbents. However, such a disciplining device requires backward-looking voting behavior.
- A higher value of holding office (larger R) or higher rent extraction cost (lower γ) keep equilibrium rents down, while a higher tax base (larger y) increases rents.
- Moreover, rents are higher under asymmetric information, since the incumbent satisfies the voter in the cheapest possible way and pockets the rest for him- herself.
- Finally, rents are lower, the lower the range of uncertainty of the candidate's competence (higher ξ) and the larger is the value of winning the election, as captured by $\beta(R + \bar{r})$.

References

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