

CONTROLLING CORRUPTION: ROLE OF BUREAUCRATIC COMPETITION, PUNISHMENT AND MEDIA

List of Addendum to the Thesis

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Addendum 1. Footnote 32 in section 3.3, page 61 at the end of line 8 which reads as:
We assume Nash Bargaining protocol in determination of bribe. Under alternative bargaining protocol of Take-It-Or-Leave-It (TIOLI, henceforth) the results go through under certain conditions. We discuss the results under TIOLI in Appendix 2.

Addendum 2. “Appendix” on page 95 should read as “Appendix 1”.

Addendum 3. “Appendix 2” appears on page 103. It reads as:

Consider Proposition 1. Under Nash-bargaining, if the firm chooses I_a , it accepts the bribe if $r \geq b_e$. Now, instead of Nash Bargaining, under TIOLI, we have:

$$b_e = r$$

Now, if the official chooses to ask for a bribe, his payoff is given by $(1 - \lambda)b_e - \lambda F$. On the other hand, the payoff for honest behaviour is 0. Thus, the official will ask for a bribe if and only if $(1 - \lambda)b_e - \lambda F > 0$.

$$\Rightarrow (1 - \lambda)r - \lambda F > 0$$

$$\Rightarrow F < \frac{(1-\lambda)r}{\lambda} = F_e$$

Note that under Nash Bargaining $b_e = \frac{r}{2}$, and $F_e = \frac{(1-\lambda)r}{2\lambda}$.

Now let us consider a firm that chooses NI_a . The firm accepts the bribe if $(1 - \gamma)r - \gamma F \geq b_c$. Now, for TIOLI:

$$b_c = (1 - \gamma)r - \gamma F$$

Thus, if the official asks for a bribe, his payoff is given by $b_c - \gamma F = (1 - \gamma)r - \gamma F - \gamma F$ and the payoff for honest behaviour is 0. Thus, the official will ask for a bribe if and only if:

$$(1 - \gamma)r - 2\gamma F > 0$$

$$\Rightarrow F < \frac{(1-\gamma)r}{2\gamma} = F_c$$

Note that b_c remains the same as under Nash Bargaining.

$$\text{Now, under TIOLI, } F_e - F_c = \frac{(1-\lambda)r}{\lambda} - \frac{(1-\gamma)r}{2\gamma} = r \cdot \frac{2\gamma - \lambda - \lambda\gamma}{2\lambda\gamma}$$

$$= r \left(\frac{2\gamma - \lambda(1+\gamma)}{2\lambda\gamma} \right)$$

$$F_e - F_c \geq 0 \text{ as } 2\gamma - \lambda(1 + \gamma) \geq 0$$

$$\Rightarrow \frac{2\gamma}{(1+\gamma)} \geq \lambda \text{ where } \frac{2\gamma}{(1+\gamma)} < 1 \text{ and we also have } \lambda < 1.$$

Hence, if the condition $\frac{2\gamma}{(1+\gamma)} < \lambda$ is satisfied, then all the results continue to hold even under TIOLI offer. In this chapter we assume that γ is reasonably less than λ such that the inequality $\frac{2\gamma}{(1+\gamma)} < \lambda$ holds. Hence, $F_e - F_c < 0$ and Proposition 1 holds.

Now, if it was so that the inequality is reversed such that $F_e > F_c$, some results in this chapter might alter. For instance, in figure 3.2a, the zones marked as (collusion & extortion), (collusion), and (no bribe) will now become (collusion & extortion), (extortion), and (no bribe). Accordingly, some of the results with regards to existence of the different corruption distribution will alter.

Addendum 4. In the last paragraph of page 50 after the 7th line, the following line is added: We assume that the government can only observe whether corruption has taken place and not the revenue r .

Addendum 5. In section 4.3, page 116, after the first line, it has been added: We assume Nash Bargaining protocol to arrive at the equilibrium. We do not have a normative rule to determine which offense should be penalised more, and hence we assume same penalty for both types of corruption.

Addendum 6. Footnote 42 has been added in section 4.2, page 113, which reads as: Since the modelling of this chapter is similar to chapter 3, with the additional component of moral cost, the rationale for symmetric penalties remains same as that of chapter 3.

Addendum 7. In page 107, first paragraph, in the eighth line, it must read as: In this chapter we do not pursue a normative analysis, however, we do recognize that collusion creates a negative externality which is a cost to society and hence it is important to reduce corruption.

Addendum 8. In page 134, after the last line, it must read as: The decrease in marginal corruption due to an increase in γ is higher than the same due to an increase in F , i.e., with a unit increase in γ more number of officials refrain from corruption compared to an unit increase in F . However, this result holds only if the compliance cost is very high. The reason for the same is a high compliance cost leads to a positive reapplication cost threshold which incentivises firms to choose either I_a or NI_a .