

Report on Bachelor Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University in Prague

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| Student: | Andrea Pospíšilová |
| Advisor: | Dr. Martin Gregor |
| Title of the thesis: | Tragedy of the Commons |

OVERALL ASSESSMENT (provided in English, Czech, or Slovak):

This thesis, motivated by recent Nobel Prize awarded to Elinor Ostrom for the work in the economics of common property (commons), is an extensive survey to exactly this topic. It reviews several studies in the field published after year 2000, jointly with more classic literature. It is an interesting intersection of public economics, institutional economics, and elementary game theory. The author did a lot of own calculations to provide fresh look on models that capture various issues in the provision of commons.

The length is perhaps compromising the quality, albeit only in minor aspects:

- Notation is inconsistent across the work. The strategic variable is either x or e (or even Strategy 1 and 2), the prizes are $f(X)$ or $V(e)$. Instead of opportunity cost of collective action (essentially indirect utility), I would like to see direct utility of consumption.
- The current version combines too many different contexts to deliver a consistent message. A closer look on a single issue (e.g., income and social heterogeneity, or dynamics of expropriation discussed only in two-period setting in Sec. 2.4) would be more promising.
- Prisoner's Dilemma (PD) is not a necessary benchmark for the analysis of the game. In fact, in the present shape it is rather counter-intuitive. On Table 2.1, payoffs are in years of imprisonment, hence are effectively minimized, not maximized. It is not easy to explain cost $c.x$. (Is it forgone appropriation? If so, then how can an individual consume a share of forgone appropriations X ?) The link between PD and commons is actually only general in the presence of a unique inefficient Nash equilibrium. A *necessary* condition for this is that an efficient profile allows for a unilateral (or bilateral) deviation. It is exactly this trivial condition which unifies all game that do not deliver Pareto-efficient profile, and it goes far beyond the particular payoffs in PD.
- Several setups in the thesis would need more thorough look on the assumptions and more careful interpretation. For example, a two-stage contest assumes the group's ability to jointly aggregate (collective action) efforts in the acquisition of the commons in Stage 1, but then presumes a genuinely non-cooperative division in Stage 2. These are two opposite concepts in a single game without any discussion on the source of this dichotomy.
- Typos: end of p. 15, brackets on p. 52

SUMMARY OF POINTS AWARDED (for details, see below):

| CATEGORY | POINTS |
|---------------------------------------|-----------|
| Literature (max. 20 points) | 20 |
| Methods (max. 30 points) | 20 |
| Contribution (max. 30 points) | 20 |
| Manuscript Form (max. 20 points) | 18 |
| TOTAL POINTS (max. 100 points) | 78 |
| GRADE (1 – 2 – 3 – 4) | 2 |

NAME OF THE REFEREE: Dr. Martin Gregor

DATE OF EVALUATION: 7. 6. 2010

Referee Signature