Report on Bachelor Thesis

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

Student:	Tomáš Fiala
Advisor:	Dr. Martin Gregor
Title of the thesis:	Fish Wars: Dynamic Externality in Fishing

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

This thesis applies dynamic game theory to the common resource problems (mostly fishing on high sees), with the aim to discuss classic two-person results in N-person settings. It is a technically superior thesis which demonstrates the author's ability to dwelve even into non-trivial dynamic issues. The author is actually not so far from the current research frontier which analyzes the institutional and social determinants of overfishing. This literature is just a step-away extension to the author's stylized setups. I also appreciate section-long reflection of the model predictions in the context of experimental work and empirical evidence from international fishing.

In my reading, there are only a few minor shortcomings:

- It would be reasonable to explain how inconsistency relates to particular definitions of the strategy sets. For instance, inconsistency of an open-loop strategy is delivered by the fact that truncating the game delivers a brand *new* information to the player (i.e., the new realization of the state variable), whereas inconsistency under a full information patter cannot stem from this information revelation, as the best-response strategy is already fully history-dependent.
- On p. 12-13, the author argues that extending the strategy set from an open-loop strategies must preserve the equilibrium, and explains this by non-stochasticity. However, what changes with an introduction of new strategies is actually the structure of information sets (extending strategy set implies also splitting uninformative informations sets). This may render the original best-responses to be dominated by strategies that exploit an improved precision in the information sets. Thus, we need other mechanism to prove the property.
- In characterizing efficiency of open-loop equilibrium, I would reflect the thesis title and focused explicitly on the flow of dynamic externalities. The intuition for this equilibrium is that a deviation of the player imposes dynamic externality only upon his future extraction potential, hence he or she fully internalizes the dynamic externality.
- On p. 22, it is not quite clear how a player plays a trigger strategy against $N - 1 \gg 2$ players if a change in the state variable has to motivate a trigger-response harming all counter-players, even those who have not deviated.
- Typos: see Abstract in Czech, exclusive not exclude on p. 1, commas on several places

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

CATEGORY		POINTS
Literature	*(max. 20 points)*	20
Methods	*(max. 30 points)*	30
Contribution	*(max. 30 points)*	23
Manuscript Form	*(max. 20 points)*	18
TOTAL POINTS	*(max. 100 points)*	**91**
GRADE	**(1 – 2 – 3 – 4)**	**1**

NAME OF THE REFEREE: Dr. Martin Gregor

DATE OF EVALUATION: 7. 6. 2010

_____
Referee Signature