

Report on Master Thesis

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Student:	Tomáš Fiala
Advisor:	Martin Gregor
Title of the thesis:	Global Games

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

Global games have been introduced into the theory more than two decades ago, yet they have grown in popularity only recently thanks to a revival of interest in modeling of massive shifts of beliefs caused by recent shocks in the financial markets. Global games are potentially promising in terms of addressing macro and financial issues such as sunspot equilibria or valuation of assets and instruments when policy regimes are endogenous to market behavior, but on the other hand are technically very demanding. The main reason is that the global games abolish standard structure of uncertainty where stochastic fundamentals are driven by properties that are common knowledge, and rather allow for private signals that affect beliefs on the fundamentals as well as beliefs on the opponents' signals. Thus, any author working in this tradition primarily has to model the structure of higher-order beliefs. To build this structure carefully (see Section 2.3 in this thesis) is a genuinely challenging topic on the Master level.

The primary goal of Master thesis presented by Tomáš Fiala has been to cover the essential contributions in modeling of higher-order beliefs and raise conclusions on their differences. This is not a pure survey work; any reflection upon several theoretical concepts requires to understand importance of the building stones of the models, and ability to differentiate between essential and auxiliary assumptions. This goal has been, in my view, met satisfactorily. Most of my comments were indeed properly reflected.

Section 2 serves as a sufficient motivation; it compares the traditional refinement literature (Harsanyi) to global games that represent a modern alternative explaining equilibrium through perturbations. Section 2 covers 2x2 model that is later extended to a continuum of players in Section 3. This Section is valuable because it constitutes a clear point, namely it shows consequences of having strategic uncertainty about the other types' information (think of a degree of optimism or pessimism).

As a next step, Tomáš relaxes some of the core assumptions of the global games. Namely, payoff homogeneity is changed into payoff heterogeneity. Now, the strategic uncertainty is not only about the *other types' information*, but also about the other *types' incentives*. The main question was whether the relaxation leads to drastically different consequences or not, and what the equilibrium properties would be. A leading inspiration has been de Mesquita's (2010) setting. Tomáš managed to add substantial number of (somewhat rough) results to this particular alternative to the classic global games. These results are conveyed in Section 4 (and preliminary applications in Section 5), and deserve further work under a strong leadership in economic theory. (Tomáš has completed first-year coursework at CERGE and is expected to undertake this work under supervision of Jakub Steiner.)

Given the number of typos, the thesis clearly appears not to be perfectly polished, and it contains many (minor) points that could have been introduced differently and more accessibly to the general reader. Nevertheless, it constitutes a nice piece of hard theoretical work and thus, in my opinion, deserves to be graded **excellent**.

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

CATEGORY	POINTS
<i>Literature</i> (max. 20 points)	19
<i>Methods</i> (max. 30 points)	29
<i>Contribution</i> (max. 30 points)	19
<i>Manuscript Form</i> (max. 20 points)	16
TOTAL POINTS (max. 100 points)	83
GRADE (1 – 2 – 3 – 4)	1

NAME OF THE REFEREE: *Martin Gregor, PhD*

DATE OF EVALUATION: *August 27, 2012*

Referee Signature