

Report on Bachelor / Master Thesis

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

Student:	Filip Juřena
Advisor:	RNDr. Michal Červinka, Ph.D.
Title of the thesis:	Arrow-Debreu Model of General Equilibrium

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

The aim of the thesis is to summarize the theory of Arrow-Debreu model of general equilibrium. The author also explains why this model can be considered as an application of the generalized Nash equilibrium problem. The main original contribution of the thesis is an example of a 2 x 2 x 2 model, which is computationally solved and whose sensitivity analysis (with respect to introduction of taxes, changes in technologies) is presented. Finally, several applications of the Arrow-Debreu model are mentioned.

It should be noted first that the thesis can be very confusing for someone familiar with advanced microeconomics (as exposed in the textbook by Mas-Colell, Whinston and Green (1995), for example) because of the term Arrow-Debreu equilibrium, which is an extension of the competitive (or Walrasian) equilibrium considered in the thesis (Chapter 19.C vs 10.B in MWG). The Arrow-Debreu equilibrium, as considered in microeconomics and finance, assumes state-contingent (Arrow-Debreu) commodities, i.e. the equilibrium deals with the world subject to uncertainty. This is in contrast with the world described in the thesis and could lead to several false claims (e.g. ...time does not appear in the Arrow-Debreu model as well (p. 28)). Therefore, I think it is a pity that the author did not distinguish the two concepts in the introduction and instead wrote that the two concepts are the same (p. 7).

Apart from this confusion, the thesis is written well and the author has demonstrated that he mastered a part of advanced microeconomic theory and basics of GAMS software. On the other hand, I miss a research question in the thesis and a wider original contribution, as the 2 x 2 x 2 model is routinely used in microeconomic courses (albeit, only analytical solutions are used).

Overall, I suggest a good (2) grade.

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

CATEGORY	POINTS
<i>Literature</i> (max. 20 points)	18
<i>Methods</i> (max. 30 points)	22
<i>Contribution</i> (max. 30 points)	20
<i>Manuscript Form</i> (max. 20 points)	18
TOTAL POINTS (max. 100 points)	78
GRADE (1 – 2 – 3 – 4)	2

NAME OF THE REFEREE: *Tomáš Adam*

DATE OF EVALUATION: 7 June 2015



Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

Strong Average Weak
20 10 0

METHODS: *The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.*

Strong Average Weak
30 15 0

CONTRIBUTION: *The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.*

Strong Average Weak
30 15 0

MANUSCRIPT FORM: *The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.*

Strong Average Weak
20 10 0

Overall grading:

TOTAL POINTS	GRADE		
81 – 100	1	= excellent	= výborně
61 – 80	2	= good	= velmi dobře
41 – 60	3	= satisfactory	= dobře
0 – 40	4	= fail	= nedoporučuji k obhajobě