BACHELOR'S THESIS EXAMINER REPORT

PPE – Bachelor's in Politics, Philosophy and Economics
Faculty of Social Sciences, Charles University

Thesis title:	**Collective action problem in international climate governance**
Student's name:	**Nathanael Illies**
Referee's name:	**Jakub Tesař**

Criteria	Definition	Maximum	Points
Major Criteria			
	Contribution and argument (quality of research and analysis, originality)	**50**	43
	Research question (definition of objectives, plausibility of hypotheses)	**15**	12
	Theoretical framework (methods relevant to the research question)	**15**	15
Total		***80***	70
Minor Criteria			
	Sources, literature	**10**	10
	Presentation (language, style, cohesion)	**5**	5
	Manuscript form (structure, logical coherence, layout, tables, figures)	**5**	5
Total		***20***	20
TOTAL		***100***	90

Plagiarism-check (URKUND) match score:
The plagiarism-check did not find any substantial overlap with existing sources.

Reviewer's commentary according to the above criteria:

This thesis focus on the issue of international climate governance, analysing the collective actions problems the big players emitters face when trying to deal with emissions abatements. The thesis review the specific contexts of China, the USA, India and the European Union, proposing plausible representations of contexts these countries find themselves in through game-theoretical models. Author convincingly shows that even though the specific "games" differ, they all feature the basic characteristics of the collective action problem (aka free-rider problem).

In his thesis, the author shows good knowledge of game theory. He identifies the key issues regarding climate governance for each country and skilfully applies the relevant game-theoretical models. Even though the author does not develop his own models (the thesis applies existing models), there is a clear added value of elaborating which models to use and modify them for the issue in question. This is the most clearly visible with application of Olson's collective defense problem for different attitudes of EU countries with respect to climate actions.

The thesis is written in excellent academic English, featuring a clear and well-structured argument. The author is knowledgeable of the relevant academic literature, which he skilfully combines with sources on the most recent data (emissions statistics, attitude surveys, etc).

There are minor imprecision with respect to several parts of the thesis:

- section 3.2: not clear why is the game limited to only two strategies, why the mixed strategy is not allowed (partially abate)
- section 3.6: *p* should not reflect the *number* of abating countries, but rather their *share* of emissions (bigger countries should have more impact)
- section 3.6: not clear why are technological spillover limited to abating countries, does not the other benefit from the technological advancements too?
- section 3.9: if the game is not symmetric, and relative gains matter, than repeated game is hardly stable (if the opponent is gaining systematically more, it is a problem in competitive setting)
- section 4.5: president would not propose the agreement on level of 2, but something like 1.9 (or even 1.99) – that would secure the pass through the Senate for sure (not with probability 50%)
- section 6.2: can we assume that "players bear the same costs of additional emissions reductions" (p. 35)? I doubt the plausibility of such assumption in the EU context

But those are really details, the overall grasp of the models is very solid (exceeding the bachelor level).

Where the thesis in its final form lacks some depth is the concluding chapter. The discussion of the limitation could be expanded, reflecting further on how these limitations impact its conclusions. But what the reader miss the most is probably a deeper reflection of how these individual problems (well identified and discussed) aggregate to one environmental regime. Are the proposed solutions to individual games mutually compatible? Wouldn't mitigating one problem hinder the cooperative solution in another? And can we envision a system which would, e.g., address the domestic concerns of multiple countries at once (instead of adjusting the regime to the needs of one country)?

Proposed grade (A-B-C-D-E-F): I my view the thesis is a **borderline A/B**. I would condition the better grade on addressing well the following questions.

Suggested questions for the defence are:

- Are the proposed solutions to individual games mutually compatible? Wouldn't mitigating one problem hinder the cooperative solution in another?
- The presented games do not reflect the time development of the climate crisis. How would they change if we consider the gradually growing costs of international climate inaction?

I recommend the thesis for final defence.

Mgr. Jakub Tesař, Ph.D.

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Referee Signature