

# Report on Bachelor / Master Thesis

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

<b>Student:</b>	<b>Bc. Pavla Mikulíková</b>
<b>Advisor:</b>	<b>Prof. Roman Horváth, Ph.D.</b>
<b>Title of the thesis:</b>	<b>Natural Catastrophes and Financial Development</b>

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

*Please provide a short summary of the thesis, your assessment of each of the four key categories, and an overall evaluation and suggested questions for the discussion. The minimum length of the report is 300 words.*

### **Short summary**

The thesis examines the effect of financial development on natural catastrophes. It significantly extends previous scarce literature because it explicitly examines the different types of financial development (depth, stability, efficiency, and access to finance) as well as the different types of natural catastrophes (biological, geophysical, ...). The author collects a large (panel) database for most of the countries in the world over the last six decades. Using standard fixed effects and GMM estimators, the thesis finds that catastrophes undermine financial development. However, the effect is quite heterogeneous, and some types of catastrophes matter for some types of financial development. The thesis finds that depth and stability are negatively affected by disasters. Interestingly, the effect is more pronounced (detrimental) for low-income countries.

### **Contribution**

This is a very solid empirical work on the topic that has not been extensively analyzed. I am aware of only a couple of studies on the effect of natural catastrophes on financial development. This thesis extends previous literature in many aspects. It takes on board the multidimensionality of financial development and examines the effect of catastrophes on financial depth, the efficiency of financial intermediaries, financial stability, and access to finance (most papers examine the effect of catastrophes on economic development, the effect on financial development is examined rarely and if it is examined, it is mostly financial depth but not other types of financial development). It also uses more recent data than previous studies. I also like the distinction between high- and low-income countries finding that especially low-income countries are vulnerable to catastrophes. I am sure that the revised version of the thesis is publishable in some field journal specializing on environmental, financial or development issues.

### **Methods**

The thesis uses fixed effect and GMM estimators. This is a sensible choice for panel data setting. Using the GMM is important to address the endogeneity of natural catastrophes. Given that the specific timing of natural catastrophes is difficult to predict, one would be inclined to assume that the catastrophes represent an exogenous shock. However, there are anticipation effects. If a country can undertake some measures in time  $t-1$  that would influence the effect of catastrophes in  $t$  on financial development in  $t+1$ , then the estimated effect of catastrophes on financial development would be underestimated. Kahn makes this argument in his 2005 Review of Economics and Statistics paper, and I am happy to see that this thesis follows his ideas carefully. The author of this thesis notices well on page 25 that: „Higher-income countries could implement some preventive measures (e.g., building dykes, insurance, catastrophic bonds) to reduce the potential future damage of a disaster. Thus, the real impact of a disaster would be smaller, and the effect of disasters on financial development would be underestimated.“ There are a number of robustness checks to assess the stability of the estimated relationships.

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## Literature

The literature survey contains both an overview of financial development as well as natural catastrophes literature. The coverage of the literature is quite extensive, and all major studies are cited and properly discussed.

## Manuscript form

The manuscript is well-organized. The introduction explains what the paper does and how it extends the previous literature. The next section summarizes the literature. This is followed by the data description and econometric models. Next, the empirical results are presented. Conclusions followed by the appendix with the details on data description and additional regression results are positioned at the end of the thesis.

There are not many typos. The text is clear and easy to follow.

## Overall evaluation and suggested questions for the discussion during the defense

In my opinion, this is a great thesis, which required serious effort to collect the large database. It estimates the effect of natural catastrophes on financial development using panel data. It extends the previous literature by considering different types of financial development (i.e., not only depth but also financial stability, the efficiency of financial intermediaries, and access to finance). The thesis is well-written and reads well. Given the topicality of the thesis (interactions between environmental and financial issues), I suggest the thesis can also be considered for some awards.

In my view, the thesis fulfills the requirements for a master thesis at IES, Faculty of Social Sciences, Charles University. I recommend it for the defense and suggest a grade A. The results of the Urkund/Turnitin analysis do not indicate significant text similarity with other available sources.

*Possible questions for defense:*

*Are natural catastrophes a main determinant of financial development? Or are there other more important determinants? When could natural catastrophes be a main determinant?*

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

<b>CATEGORY</b>	<b>POINTS</b>
<i>Contribution</i> (max. 30 points)	29
<i>Methods</i> (max. 30 points)	28
<i>Literature</i> (max. 20 points)	20
<i>Manuscript Form</i> (max. 20 points)	20

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TOTAL POINTS	<i>(max. 100 points)</i>	97
GRADE	(A – B – C – D – E – F)	A

**NAME OF THE REFEREE: Prof. Roman Horváth, Ph.D.**

**DATE OF EVALUATION: 14th January 2023**

*Digitally signed  
Roman Horvath*

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**Referee Signature**

**EXPLANATION OF CATEGORIES AND SCALE:**

**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.*

**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.*

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

**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.*

**Overall grading:**

TOTAL	GRADE
91 – 100	A
81 - 90	B
71 - 80	C
61 – 70	D
51 – 60	E
0 – 50	F