

SUMMARY OF THE DOCTORAL THESIS

Title: “Fintech for a greener future – the relationship between financial development, technological innovation and climate sustainability in Europe.”

Keywords: fintech, financial development, cryptoassets, sustainability

Ever since the Global Financial Crisis, the financial system has seen an accelerated level of technological innovation. This thesis analyzes the potential impact fintech innovation could have on financial development and climate sustainability in Europe, offering several key contributions to the academic literature. First, the thesis examines the connection between financial development, digitization, and education to showcase the stark contrast between Europe’s established and developing economies.

Next, the thesis casts its focus on the fast-growing cryptoassets market, including Decentralized Finance (DeFi) and emerging Central Bank Digital Currencies (CBDCs) which could collectively influence financial development. Using portfolio theory, the thesis questions whether cryptoassets hold intrinsic value, or whether they are more of use as investment assets. The thesis also conducts a thorough review of the potential threats to financial stability which the fast-growing DeFi market poses. DeFi promises to offer a decentralized alternative to money with smart contracts taking the place of financial intermediaries. In light of crypto developments, a number of central banks worldwide have been investigating the potential introduction of CBDCs. This thesis examines how the countries of Central and Eastern Europe might be affected by the possible implementation of a CBDC, a study which carries important lessons for the financial development of the region.

A prominent critique of cryptoassets, including Bitcoin, has been their detrimental effect on the environment. The thesis proceeds to examine the dynamic connection between environmental degradation and financial development within the European Union. It also explores the extent to which firms should have an individual responsibility to improve their offering of environmentally sustainable financial products.

Finally, the thesis examines how sustainability practices and company market value are evolving, focusing on the quickly expanding Fintech sector. The increasing relevance of environmental, social, and governance (ESG) challenges has made it imperative to understand how sustainability initiatives impact the performance of businesses.

TABLE OF CONTENTS

INTRODUCTION	1
Thesis objectives	3
Digitalization and economic growth	4
Digitalization and education	5
Fintech innovation	7
Financial development, digitalization, and the environment	9
CHAPTER 1. DIGITALIZATION, EDUCATION AND FINANCIAL DEVELOPMENT IN EUROPE	14
1.1. Introduction	14
1.2. Literature Review	16
1.3. Data and Methodology	20
1.4. Results	26
1.5. Discussion	34
1.6. Conclusion	39
CHAPTER 2. THE RISE OF CRYPTO-ASSETS	41
2.1. Introduction	41
2.2. Short History of Crypto-Assets	42
2.3. Literature Review	43
2.4. Data and Methodology	48
2.5. Results and Discussion	51
2.6. Conclusion	68
CHAPTER 3. CENTRAL BANK DIGITAL CURRENCY ADOPTION IN CENTRAL AND EASTERN EUROPEAN COUNTRIES	70
3.1. Introduction	70
3.2. Literature Review	72
3.3. Data and Methodology	76
3.4. Results and Discussion	80
3.5. Conclusions	84
CHAPTER 4. THE DYNAMIC RELATIONSHIP BETWEEN FINANCIAL DEVELOPMENT AND THE ENVIRONMENT	86
4.1. Introduction	86
4.2. Literature Review	91
4.3. Data and Methodology	95
4.4. Results and Discussion	105
4.5. Conclusions	123
CHAPTER 5. THE POTENTIAL OF FINTECH IN ADDRESSING ENVIRONMENTAL CHALLENGES	128
5.1. Introduction	128
5.2. Literature Review	130
5.3. Data and Methodology	133
5.4. Results and Discussion	135
5.5. Conclusion	142
THESIS CONCLUSIONS	144
REFERENCES	151
ABBREVIATIONS AND ACRONYMS	189
LIST OF FIGURES	192
LIST OF TABLES	193