Table of Contents

List of Figures iv

List of Tables v

List of Abbreviations vii

A. Introduction and Foundations 1

I. Relevance 2

II. Conceptualization 6

III. Research Background 8

III.1 Security Incidents' Economic Aspects 9

III.2 Service Failure Recovery 11

III.3 Data Breach Response 13

IV. Framework and Objectives 15

V. Research Outline 19

B. Studies on Data Breach Response 27

I. The Direct Effect Influencing Market Value 28

1. Study 1: Apologize or Justify? 29

1.1 Introduction 30

1.2 Related Work 32

1.3 Research Model and Hypotheses Development 36

1.4 Methodological Approach 39

1.5 Data Analysis and Results 43

1.6 Discussion of Implications and Future Research 47

1.7 Conclusion 50

1.8 Appendix 50

II. The Direct Effect Influencing Customer Behavior 52

1. Study 2: What to Do after a Data Breach? 53

1.1 Introduction 54

1.2 Practical Background and Related Research 57

1.3 Theoretical Framework 61

1.4 Research Design 69

1.5 Data Analysis and Results 73
1.6 Discussion and Implications 76
1.7 Conclusion 80
1.8 Appendix A 81
1.9 Appendix B 82
2. Study 3: Overcoming Digital Challenges 84
2.1 Introduction 85
2.2 Conceptual Background 86
2.3 Hypotheses Development and Research Model 91
2.4 Research Design 93
2.5 Analysis and Results 96
2.6 Discussion 101
2.7 Concluding Remarks 103
III. The Side Effect Influencing Customer Behavior 104
1. Study 4: Beware the Signals! 105
1.1 Introduction 106
1.2 Data Breach as a Service Failure 108
1.3 Highlighting the Perspectives on Data Breach Recovery 111
1.4 Method 119
1.5 Data Analysis and Results 121
1.6 Discussion 125
1.7 Conclusion 130
C. Contributions 131
I. Synthesis of Findings 132
II. Summary of Contributions and Implications 135
II.1 Research Contributions and their Implications 137
II.2 Practical Contributions and their Implications 141
III. Concluding Remarks 144
References 147
Appendix A. Overview of the Author's Contribution to the Studies xi

Appendix B. Overview of further Data Breach Response Studies xii
Appendix C. Curriculum Vitae xiv