

Table of Contents

List of Figures	iv
List of Tables	v
Acronyms	vii
A. Foundation.....	1
I. Introduction	2
I.1 Motivation.....	2
I.2 Research Gaps and Research Questions.....	5
I.3 Structure of the Thesis	8
I.4 Research Context and Design	10
I.5 Anticipated Contributions	12
II. Theoretical Background	15
II.1 Knowledge-based Perspectives and Their Importance for Digital Innovation in Incumbent Firms	15
II.2 Digital(izing) Business Ecosystems and the Role of Boundary Resources	20
II.3 Pre-understanding of Knowledge Integration in Incumbent Firms Impacted by Digital Innovation.....	22
B. Studies on Digital Innovation in Incumbent Firm Contexts from a Knowledge Integration Perspective	25
I. Understanding Knowledge Integration and Its Interaction with Digital Innovation.....	26
1 Study 1: Knowledge Integration and Digital Innovation – Towards a Multi-Dimensional Framework.....	27
1.1 Introduction	28
1.2 Design of Literature Review	29
1.3 Findings.....	30
1.4 Discussion and Implications.....	35
1.5 Limitations	38
1.6 Appendix A: Literature Review Concept Matrix.....	39
II. Scaling Knowledge Integration through Boundary Resources in Digital(izing) Business Ecosystems	40
1 Study 2: Digital at the Edge – Antecedents and Performance Effects of Boundary Resources Deployment	41
1.1 Introduction	42

1.2	Theoretical Background	44
1.3	Theoretical Framework and Hypotheses Development	47
1.4	Methodology.....	50
1.5	Findings.....	55
1.6	Discussion of Findings	63
1.7	Implications	66
1.8	Limitations and Future Research	68
1.9	Appendix A: Variable Description.....	70
2	Study 3: Leveraging “AI-as-a-Service” – Antecedents and Consequences of Using Artificial Intelligence Boundary Resources	71
2.1	Introduction	72
2.2	Theoretical Background	73
2.3	Hypotheses Development.....	76
2.4	Methodology.....	78
2.5	Findings.....	82
2.6	Discussion of Findings	87
2.7	Implications	88
2.8	Limitations and Future Research	89
III.	Managing Knowledge Integration in Incumbent Firm Contexts Impacted by Digital Innovation	90
1	Study 4: Digital Innovation in Industrial-Age Firms – Managing the Balancing Act of Knowledge Integration	91
1.1	Introduction	92
1.2	Theoretical Background	93
1.3	Methodology.....	96
1.4	Findings.....	98
1.5	Discussion and Implications.....	105
1.6	Limitations, Future Research and Conclusion	106
C.	Contributions.....	109
I.	Findings and Results	110
1.1	Findings Regarding the Understanding of Knowledge Integration and Its Interaction with Digital Innovation	110
1.2	Findings Regarding the Scaling of Knowledge Integration through Boundary Resources in Digital(izing) Business Ecosystems	113
1.3	Findings Regarding the Management of Knowledge Integration in Incumbent Firm Contexts Impacted by Digital Innovation.....	118
1.4	Synthesis: A Knowledge Integration Perspective on Digital Innovation in Incumbent Firm Contexts.....	121

II.	Implications	126
II.1	Implications for Research.....	126
II.2	Implications for Practice	130
III.	Limitations and Future Research	133
III.1	Limitations	133
III.2	Future Research Opportunities	134
IV.	Conclusion.....	137
References		139
Appendix		viii