

ELIZABETH JACOMIJN KLITSIE

Strategic renewal in institutional contexts

The paradox of embedded agency

**Somethink
completely
different.**

100+ funny, inspirational and
thought-provoking one-liners.

Mwah

**Somethink
completely
different.**

100+ funny, inspirational and
thought-provoking one-liners.

Mwah

**Strategic Renewal in Institutional Contexts:
The paradox of embedded agency**

**Strategic Renewal in Institutional Contexts:
The paradox of embedded agency**

Strategische Vernieuwing in Institutionele Omgevingen:
De paradox van vernieuwing in vaste patronen

Thesis

to obtain the degree of Doctor from the
Erasmus University Rotterdam
by command of the
Rector Magnificus

Prof.dr. H.A.P. Pols

and in accordance with the decision of the Doctorate Board.

The public defence shall be held on
Friday the 18th of May at 11:30 hrs

by

Elizabeth Jacomijn Klitsie
born in Rotterdam

Erasmus University Rotterdam

The Erasmus University logo, featuring a stylized, handwritten-style script of the word "Erasmus" in a dark color.

Doctoral Committee

Doctoral dissertation supervisor:

Prof. dr. H.W. Volberda

Other members:

Prof. dr. L.C.P.M. Meijs

Prof. dr. R. Suddaby

Prof. dr. A.J. Groen

Co-supervisor:

Dr. S. Ansari

Erasmus Research Institute of Management – ERIM

The joint research institute of the Rotterdam School of Management (RSM)
and the Erasmus School of Economics (ESE) at the Erasmus University Rotterdam
Internet: <http://www.erim.eur.nl>

ERIM Electronic Series Portal: <http://repub.eur.nl/>

ERIM PhD Series in Research in Management, Number 444

ERIM reference number: EPS-2018-444-S&E

ISBN 978-90-5892-500-8

© 2018, Elizabeth Jacomijn Klitsie

Design: PanArt, www.panart.nl

This publication (cover and interior) is printed by Tuijtel on recycled paper, BalanceSilk®

The ink used is produced from renewable resources and alcohol free fountain solution.

Certifications for the paper and the printing production process: Recycle, EU Ecolabel, FSC®, ISO14001.

More info: www.tuijtel.com

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the author.



Table of Contents

Acknowledgements.....IX

Introduction1

Strategic Renewal through Institutional Entrepreneurship1

Dissertation overview.....3

Study 1: Institutional perspectives on strategic renewal5

Study 2: Being different for a reason: how over- and under-compliance are related to higher performance6

Study 3: Maintenance of Cross-Sector Partnerships: the Role of Frames in Sustained Collaboration.....8

Study 4: Creating and disrupting to explore: how different types of institutional work by actors relate to different firm wide innovation outcomes.....10

Declaration of contribution12

References.....14

Study 1. Institutional perspectives on strategic renewal.....19

Introduction19

Strategic renewal26

Discussion29

Study 2. Being different for a reason: how over- and under-compliance are related to higher performance33

Abstract33

Introduction34

Literature review37

Regulatory fit.....40

Over-compliance and substantive performance42

Regulatory fit and substantive performance.....43

Under-compliance and substantive performance43

Regulatory fit and symbolic performance45

Methods.....47

Research setting and data collection	47
Construct measurement	48
Reliability and validity	49
Results	50
Discussion	52
Theoretical implications	52
Managerial implications	54
Limitations and directions for future research	56
Conclusion	56
References	58
Tables and diagrams	62
Appendices	66
 Study 3. Maintenance of Cross-Sector Partnerships: the Role of Frames in Sustained Collaboration	 69
Abstract	69
Introduction	70
Cross-Sector Partnerships and Collaborations	77
Types of cross-sector partnerships (XSPs)	78
XSP life cycle	79
The role of framing in sustaining collaboration	81
Research context, design and methods	83
Research context	83
Methods	85
Data collection	86
Data analysis	88
Findings	89
Multiple frame sources and frame variation	89
Frame selection	90
Other frame selection mechanisms	94
Frame retention	96
Discussion	97
Frame selection	98
Selection through internal alignment	99
Frame retention	103

A Model for Frame Plurality in XSP's	104
Contributions	107
Limitations and Future Research Avenues	110
Conclusion	110
References	112
Tables and Figures	118
Study 4. Creating and disrupting to explore: how different types of institutional work by actors relate to different firm wide innovation outcomes	129
Abstract	129
Introduction	130
Institutional work and Innovation	132
Methods	137
Research setting and data collection	137
Construct measurement	138
Reliability and validity	139
Findings	140
Discussion	141
Theoretical implications	141
Methodological implications	142
Managerial implications	142
Conclusion	143
References	144
Tables	147
Appendices	150
Conclusion and Discussion.....	153
Summary (English).....	161
Samenvatting (Nederlands)	165
About the Author	169
Author Portfolio.....	171

Acknowledgements

Some people have contributed to the work in this book professionally and others have in indirect ways. The first category I will discuss chronologically. I want to thank Frans Van den Bosch for helping me make the step from industry back to the academic world, and Marten Stienstra for guiding me through the first year. I am also grateful to Henk Volberda for guiding me throughout the PhD process, for making time when needed and for letting me set my own goals and supporting those. Shaz Ansari I want to thank for sharing his impressive knowledge and writing skills with me. Further I am also grateful for the support of Marc Baaij and Patricia De Wilde-Mes and I want to thank Anna Nadolska and Vareska van de Vrande for being an inspiration. Other colleagues have helped me by making the days spent at university (much) more enjoyable. Thank you Roxana, Ruxi, Katrin, Ingrid, Saeedeh, Thijs, Carolien, Jurriaan, Agnieszka and Magdalena. I would also like to take this chance to thank Miho, Kim, Tineke, Natalija, and Marleen for their kind and patient support on all kinds of administrative issues. I must also thank the department of Strategic Management and Entrepreneurship at RSM, ERIM, and Erasmus Trustfonds for their generous support.

Indirect contributors to this book include my unforgettable, inspirational and incredibly missed father Jan Klitsie and my grandfather Wim Klitsie, who never lost hope that this book would one day really be here and who missed it by a few months. This book would not be here without my little sister Liselotte -who is my big example- and my sister Susanne and brother Barend. My mother Annemieke deserves special thanks for countless peptalks, cheat days as well as days of babysitting. Also, I am grateful to John and Suzan, who have always been so proud of me. Lastly, I am thankful for the support of my own family, which formed in parallel to the process of getting my PhD. John, thank you for always being there. Floris and Annabel, I hope to set a good example for you.

Chapter 1

Introduction

Strategic Renewal through Institutional Entrepreneurship

Organizations' simultaneous urge to change as well as to remain stable is a broadly studied paradox in management literature (e.g., March, 1991; Leana and Barry, 2000; Barreto and Baden-Fuller, 2006; Klärner and Raisch, 2013). Organizations that are embedded in their institutional environments have stronger survival chances than those that are not (Baum and Oliver (1991; 1992). While a desire to reduce uncertainty drives resistance to change, change is pursued by actors in organizations to achieve or maintain a competitive advantage.

If actors are subject to processes that make them similar, how are they able to devise and carry out new practices? Institutional entrepreneurship literature attempts to address this paradox by combining institutional theory with the concept of agency, and investigating how new institutions are formed or existing ones are transformed (Maguire et al, 2004). Institutional entrepreneurship literature often explains institutional entrepreneurship as the result of circumstances that allow a company to vary its behavior, either due to network position (Greenwood and Suddaby, 2006) or paradigm uncertainty (a.o. Dorado, 2005; Seo and Creed, 2002). Yet this variation in behavior is also bounded by an actor's embeddedness. Leca and Naccache (2006: p. 628) note that 'to remain coherent with institutional theory, a model of institutional entrepreneurship must provide a model of change in which actors can create and change institutions without disembedding from the social world.' A theory that incorporates a firm's embeddedness as well as motivation for change is not yet fully formed.

Institutional entrepreneurship literature has been criticized for using an overly voluntaristic point of view (Battilana, Leca and Boxenbaum, 2009). Especially accounts at the organizational level of analysis often portray institutional entrepreneurs as a specific class of people (Garud et al. 2002; Greenwood et al. 2002; Lounsbury 2002; Maguire et al, 2004). However, as

Lounsbury and Crumley (2007: 1007) state ‘a more complete account of institutional entrepreneurship (...) would attend not only to the variety of actors that contribute to a particular change to be explained, but also to their relation to wider meaning systems and theories embedded in cultural elements such as categories, conventions, and discourse’. More recent work focuses on macro level, where the institutional conditions that frame engagement are taken into account (Dorado, 2005). These include technological disruptions (Greenwood & Suddaby, 2006) and policy and regulatory changes (Kellogg, 2009). In a review of institutional entrepreneurship literature, Battilana et al. (2009: p. 90) conclude that the levels of analysis used by scholars in this field should be expanded. The authors urge future research to include individual and community levels next to organizational and organizational field-level research. Dorado (2013: 534) adds that ‘a focus on macro-conditions (...) advances our understanding of institutional entrepreneurship by explaining why individuals can become institutional entrepreneurs, not why they will’. Instead, the author suggests that the group-level is most appropriate to analyze institutional entrepreneurship as it expands understanding of the conditions under which individuals assume the risks of institutional entrepreneurship (Dorado, 2013). These varying views on the appropriate level of analysis to study institutional entrepreneurship indicate that, although many instances of the phenomenon have been analyzed, there is controversy as to the mechanisms that underlie the occurrence as well as the success of institutional entrepreneurship. As most scholars focus on one level of analysis, studies that attempt to remedy this controversy are sparse. In order to address this gap in the literature, the objective of this PhD project is;

To increase academic and managerial understanding of the drivers and performance effects of institutional entrepreneurship at micro- and macro-levels of analysis

Dissertation overview

To attain the objective of this dissertation, we investigate institutional entrepreneurship at several levels of analysis. To structure our enquiry, we formulate a number of research questions that are addressed in four related and complementary studies, see Table 1. The four studies in this table together constitute the dissertation and are interrelated through their aim to further the managerial and academic understanding of institutional entrepreneurship. In addition the studies are complementary in that they approach the topic using several levels of analysis, various theoretical perspectives and different research designs. Table 1.1. Provides an overview of the studies in this dissertation.

Table 1.1. Overview of studies in this dissertation

Level of analysis	Study #	Topic	Methodology	Key references	Contribution
Macro	1.	Institutional perspectives on strategic renewal	Literature review	Lewin and Volberda (1999); Meyer and Rowan (1977); Maguire et al. (2004)	The paper compares and contrasts 4 institutional perspectives on strategic renewal
Macro	2.	Relation between regulatory fit and performance	Institutional fit analysis using survey scales for institutional fit	Drazin and Van de Ven, (1985); Heugens and Lander (2009); Volberda et al., (2012)	The study formulates a measurement scale for regulatory institutional mis-fit and investigates the two types of regulatory mis-fit
Micro	3.	Maintenance of cross-sector partnerships	Case study	Gray, Purdy and Ansari, 2015; Le Ber and Branzei (2010)	This study outlines the framing mechanisms used to maintain a cross-sector partnership and highlights the process of frame deletion
Macro	4.	Relationship between institutional work and innovative behavior	Survey based study where a scale is suggested of institutional entrepreneurship	Greenwood and Suddaby (2006); March (1991)	The study formulates a measurement scale for the different types of institutional work that can be carried out to achieve institutional entrepreneurship

Study 1: Institutional perspectives on strategic renewal

Abstract

This study contains a review of institutional theory, which results in a typology of different institutional views. The study aims to provide insight into the various institutional views of strategic renewal. Institutional theory shows how organizational behaviors are responses not solely to market pressures, but also to institutional pressures (Greenwood and Hinings, 1996). Institutional theory can be separated into at least four different perspectives. These perspectives differ in level of analysis and the amount of agency assumed. Strategic renewal is broadly defined as the strategic actions a firm undertakes to alter its path dependence (Volberda et al. 2001b: 160). This study investigates the different institutional views on strategic renewal. Old institutionalists view strategic renewal as a reactive process where a firm's structure and strategy follow from the demands of its environment. New institutional theorists direct attention towards isomorphism and non-rational aspects of strategic choices. Neo-institutionalists introduce the concept of deinstitutionalization and combines this with the idea that individual organizations interpret and react to industry pressures differently. Lastly, institutional entrepreneurs allow for variation in actors as well as institutionalized practices and with that explain how institutionalized phenomena are renewed over time. The four theories differ in their assumption of what drives strategic renewal and in their unit of analysis.

Key words

Strategic renewal, institutional theory, institutional entrepreneurship, agency

Contribution

This study aims to provide insight into the various institutional views of strategic renewal. Lewin and Volberda (1999) characterize key theoretical frameworks in sociology, economics, and strategy and organization theory and indicate the implications of each approach for firm strategy and adaptation. The authors

describe institutional theory as one of these frameworks and highlight its focus on isomorphism and embeddedness. However, this highlights only one of the at least four different streams of institutional theory. This study extends the research by Lewin and Volberda (1999) by adopting a more detailed level of analysis to study how institutional theories relate to adaption and selection. We separate the different streams of institutional theory and assess the perspective of each on the drivers of strategic renewal. In order to encourage scholars to articulate the specific institutional point of view used - and to avoid the ambiguity in understanding the theoretical basis of their research-, with this paper we provide scholars with an overview of the alternative points of view within institutional theory when it comes to strategic renewal,

Study 2: Being different for a reason: how over- and under-compliance are related to higher performance

Abstract

Considerable debate exists about the effect of conformity on a firm's performance. Most of the literature on institutional fit and performance uses outcome-based imitation to determine institutional fit. However, imitation is only one indicator of institutional fit. This study takes a broader approach to the concept and measures it not as imitation but as congruence of a firm's internal environment with its external environment. In addition, the research is based on the regulatory environment, which is a relatively unexploited area for researching institutional fit. We use the conformity between a firm's internal and external regulatory environment to determine fit and link this to firm performance. The U-shaped relationship between regulatory mis-fit and substantive performance that is hypothesized indicates the importance of institutional entrepreneurship. This conjectured relationship suggests that for firms that strive for success, deviation may well be a more attractive path than conformation.

Key words

Institutional fit, regulation, institutional entrepreneurship, performance

Contribution

Our study has several intended contributions. First, most of the literature on institutional fit and performance uses outcome-based imitation to determine institutional fit. This is measured as the imitation of organizational design features of firms that are considered to be legitimate (Haunchild and Miner, 1997). However, institutional fit is defined as ‘the degree of compliance by an organization with the organizational form of structures, routines, and systems prescribed by institutional norms’ (Kondra and Hining, 1998: p. 750). This definition solicits a broader interpretation than imitation only. Therefore, this study measures institutional fit not as imitation but as congruence of a firm’s internal regulatory environment with its external regulatory environment. The restrictiveness and importance of firms’ external regulatory environment is compared to its internal regulatory environment in order to determine its degree of regulatory (mis-)fit. Using this new measure for institutional fit allows for a more balanced view of isomorphism because the focus on imitation is reduced.

Second, the regulatory environment is a relatively unexploited area for researching institutional fit. Heugens and Lander (2009) offered an overview by performing a meta-analysis based on conformity and performance, the regulatory aspect of institutional fit has largely been disregarded in the literature.

Lastly, our model combines two levels of analysis. We investigate the relationship between a firm’s sector-specific regulatory environment and its internal environment. In doing so, we control for sector-specific variation and allow for insight into the relationship between a firm’s degree of over- or underregulation -its mis-fit with the regulatory environment- and its performance. We hypothesize that a larger degree of over- or underregulation will correspond with higher performance. The managerial implications of this include that firms that consciously choose a certain degree of regulation, which diverts from the standard, perform better than those that simply follow the herd (Volberda et al.,

2001a). The premise of this is that firms that act as institutional entrepreneurs must have an (economic) reason for this and will therefore perform better than firms that accept the institutional environment as given and adapt to it.

Study 3: Maintenance of Cross-Sector Partnerships: the Role of Frames in Sustained Collaboration

Abstract

In this study we examine the framing mechanisms used to maintain a cross-sector partnership (XSP). We study eight years of existence of an XSP that aims to create a market for recycled phosphorus, a nutrient that is critical to crop growth but whose natural reserves have significantly dwindled. Drawing on 27 interviews and over 3.000 internal documents, we study the evolution of different frames of diverse actors in an XSP. We demonstrate the role of framing in how actors avoid common XSP pitfalls such as debilitating conflict, and create sufficient common ground to sustain collaboration. As opposed to a commonly held assumption in the XSP literature, we find that collaboration in a partnership does not have to result in a unanimous agreement around a single or convergent frame regarding an issue. Rather, an alternative route to successful collaboration amid diversity is the maintenance of a productive tension between different frames through ‘optimal’ frame plurality – not excessive frame variety that may inhibit the emergence of agreements, but the retention of a select few frames and the deletion of others in achieving a narrowing frame bandwidth. One managerial implication is that resources need not be focused on reaching a complete or unanimous agreement among all partners on a single mega frame, but rather be used to enkindle unity in diversity, that allows sufficient common ground to emerge around an issue despite the diversity of actors and their positions.

Key words

Cross-sector partnership (XSP), framing, frame deletion

Contributions

We extend studies focusing on the formation of an XSP and its developmental stages (Koschmann et al., 2012; Manning and Roessler, 2014) by providing insights into the framing process through which collaboration may be sustained in an XSP after its formation.

Also, our notion of optimal frame plurality while related to Le Ber and Branzei's (2010, p. 164.) concept of 'frame fusion' also extends this work. Frame fusion – 'the construction of a new and evolving prognostic frame and that motivates and disciplines partner's cross sector interactions while preserving their distinct contributions to value creation', and the process of 'frame plasticity', where actors in organizations consciously select frames that fit with the partnership and the organizational and sector related values. We add further nuance to the notion of frame plurality (Gray et al., 2015) but showing that plurality may have 'finite' bounds as excessive variety may be counterproductive. We suggest that the deletion of certain frames, and the retention of a few – a progressively 'narrowing frame bandwidth' – may be necessary for sustaining collaboration in XSPs. This is line with the argument by Patvardhan, Gioia and Hamilton (2015) that in complex inter-organizational settings emerging (in this case an international consortium of "information schools"), it may be productive to seek and create 'coherence' concerning shared problem domains, mutual interests, and practices, rather than absolute consensus through deliberation.

Third, a rich body of work on hybrid logics and hybridism more broadly has addressed how actors manage institutional plurality and complexity amid conflicting stakeholder pressures. While this work has addressed both organizational and cross sectional settings, the focus is how actors manage plurality and collaboration on their own through bridging, segmenting, recombining and reconciling frames across divergent stakeholder groups. We add to this work by explaining how plurality is jointly generated and collaboration achieved by a collective acting together in a cross-sector partnership comprised of diverse constituents. It is thus not so much what actors can do on their own to

manage conflict, but rather what they can do together that may matter more in an XSP.

Study 4: Creating and disrupting to explore: how different types of institutional work by actors relate to different firm wide innovation outcomes

Abstract

For *Study 4*, we use the systematic approach of innovation scholars to measure the institutional entrepreneurial behavior of individuals in firms. We then relate this to different types of innovative outcomes (exploration or exploitation).

Our findings demonstrate that the existence of individual-level institutional entrepreneurship initiatives within firms is related to the type of firm-wide innovative behavior that is exhibited. We make the case that individual institutional work within firms that is more radical is related to exploratory innovation, while institutional work to transform institutions more gradually is related to exploitation-based innovation. We find that there is a positive relationship between individual-level institutional work carried out to *create* institutions individual-level institutional work carried out to *disrupt* institutions and exploratory innovation at firm level. Also, we find a significant positive relationship between institutional work aimed at *transforming* institutions and exploitation-based innovation. These findings signify that the institutional entrepreneurial behavior of individuals within the firm effects the innovative outcomes at firm level.

Key words

Institutional work, institutional entrepreneurship, innovation, exploration, exploitation

Contributions

With this study, we use the systematic approach of innovation scholars to measure the very root of innovative behavior. We measure the institutional entrepreneurial

behavior of individuals in firms and relate it to different types of innovative outcomes (exploration or exploitation).

This study creates a link between the separate literatures of institutional entrepreneurship and innovation studies. This benefits each of the literatures. Institutional work literature is known for explaining the delicate balance between economical explanations for behavior, and more socially controlled behaviors. This in-depth look at behavior is used in this study to explain through which process different types of innovation (exploration and exploitation) materialize at firm level. In turn, the innovation literature explaining the process and the outcome of innovation is extensive. As opposed to institutional research -which is sometimes criticized for being too descriptive in nature, and relying heavily on qualitative work – innovation research has used a wide variety of methods, from surveys to brain imaging, to define and measure the processes and outcomes of innovation.

Second, we use this study to solidify the understanding of the concept of institutional entrepreneurship. Though the concept has been well defined and studied in many different contexts, this study pioneers a quantitative measure of the different types of institutional entrepreneurship. Though the measures can always use enhancements or changes, we offer at least a start to making visible the small, individual initiatives that are connected to different types of firm-level innovation (exploration or exploitation).

Declaration of contribution

With this section, I declare my contribution to the different chapters of this dissertation and I also acknowledge the contribution of other parties where relevant.

Chapter 1. This chapter was written by the author of this dissertation, implementing feedback from the co-promotor and promotor.

Chapter 2. This chapter was researched and written largely by the author of this dissertation. Feedback of the promotor and co-promotor was integrated.

Chapter 3. The majority of work on this chapter was performed by the author of this dissertation. The research question, literature review, data analysis and writing of the manuscript were carried out by the author. The questionnaire items were also formulated by the author, implementing feedback from the promotor. The questionnaire items were part of the 2011 Innovation Monitor, carried out by INSCOPE. The author was part of a team that collected data for this large annual survey. Versions of this paper were presented at the PREBEM, EURAM, EGOS and AOM conferences. This paper has been under review, but was not accepted, at a P* journal. The author is the first author of this manuscript, and the promotor and co-promotor are co-authors.

Chapter 4. The majority of work on this chapter was performed by the author of this dissertation. The research question and the majority of the literature review were carried out by the author. The author also collected all qualitative data (interviews, (participant) observations, document retrieval) over a period of roughly one year and is the contact person with the case organization. The co-promotor contributed to the literature review and the writing of the manuscript. Throughout the research process for this paper, feedback from both the promotor and the co-promotor was implemented. A version of this paper was presented at the International Symposium on Cross Sector Social Interactions (2016). This paper is in its third round of reviews -where minor revisions have been requested- at a P journal. The author is the first author of this manuscript, and the co-promotor and promotor are co-authors.

Chapter 5. The majority of work on this chapter was performed by the author of this dissertation. The research question, literature review, data analysis and writing of the manuscript were carried out by the author. The questionnaire items were also formulated by the author, implementing feedback from the promotor. The questionnaire items were part of the 2014 Innovation Monitor, carried out by INSCOPE. The author was part of a team that collected data for this large annual survey. The author is the first author of this manuscript, and the promotor and co-promotor are co-authors.

References

- Barreto, I., & Baden-Fuller, C. 2006. To conform or to perform? mimetic behavior, legitimacy-based groups and performance consequences. *Journal of Management Studies*, 43(7): 1559-1581.
- Battilana, J., Leca, B., & Boxenbaum, E. (2009). 2 how actors change institutions: towards a theory of institutional entrepreneurship. *Academy of Management Annals*, 3(1), 65-107.
- Baum, J. A. C., & Oliver, C. 1991. Institutional linkages and organizational mortality. *Administrative Science Quarterly*, 36(2): pp. 187-218.
- Baum, J. A. C., & Oliver, C. 1992. Institutional embeddedness and the dynamics of organizational populations. *American Sociological Review*, 57(4): pp. 540-559.
- DiMaggio, P. J., & Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2): pp. 147-160.
- DiMaggio, Paul J., and Walter W. Powell, eds. 1991. *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.
- Dorado, S. 2005. Institutional entrepreneurship, partaking, and convening. *Organ.Stud.*, 26(3): 385-414.
- Gray, B., Purdy, J., and Ansari, S. (2015). From interactions to institutions: Microprocesses of framing and mechanisms for the structuring of institutional fields. *Academy of Management Review*, Vol. 40, No. 1, 115–143.
- Greenwood, R., & Hinings, C. R. 1996. Understanding radical organizational change: Bringing together the old and the new institutionalism. *The Academy of Management Review*, 21(4): pp. 1022-1054.
- Greenwood, R.; Suddaby, R., & Hinings, C. R. 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. *The Academy of Management Journal*, 45(1): 58-80.
- Greenwood, R., Oliver, C., Suddaby, R., & Sahlin-Andersson, K. 2008. *The SAGE handbook of organizational institutionalism*. Thousand Oaks: SAGE Publications.
- Greenwood, R., & Suddaby, R. 2006. Institutional entrepreneurship in mature fields: The big five accounting firms. *Academy of Management Journal*, 49(1): 27-48.
- Haunschild, P. R., & Miner, A. S. 1997. Modes of interorganizational imitation: The effects of outcome salience and uncertainty. *Administrative Science Quarterly*, 42(3): 472-500.
- Heugens, P. M. A. R., & Lander, M. W. 2009. Structure! agency! (and other quarrels): A meta-analysis of institutional theories of organization. *Acad Manage J*, 52(1): 61-85.

Klarner, P., & Raisch, S. 2013. Move to the beat--rhythms of change and firm performance. *Academy of Management Journal*, 56(1): 160-184.

Koschmann, M.A., Kuhn, T.R, and Pfarrer, M.D. (2012) "A communicative framework of value in cross-sector partnerships." *Academy of Management Review* 37.3: 332-354.

Leana, C. R., & Barry, B. 2000. Stability and change as simultaneous experiences in organizational life. *The Academy of Management Review*, 25(4): 753-759.

Le Ber, M. J., and Branzei, O. (2010). Value frame fusion in cross sector interactions. *Journal of Business Ethics*, 94(1), 163-195

Leca, B., & Naccache, P. 2006. A critical realist approach to institutional entrepreneurship. *Organization*, 13(5): 627-651.

Lewin, A. Y., & Volberda, H. W. (1999). Prolegomena on coevolution: A framework for research on strategy and new organizational forms. *Organization Science*, 10(5), 519-534.

Lounsbury, M. M., & Crumley, E. T. 2007. New practice creation: An institutional perspective on innovation. *Organization Studies*, 28(7): 993-1012.

Lounsbury, M. 2002. Institutional transformation and status mobility: The professionalization of the field of finance. *The Academy of Management Journal*, 45(1): pp. 255-266.

Maguire, S., Hardy, C., & Lawrence, T. B. 2004. Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada. *The Academy of Management Journal*, 47(5): pp. 657-679.

Manning, S., and Roessler, D. (2014). The formation of cross-sector development partnerships: how bridging agents shape project agendas and longer-term alliances. *Journal of business ethics*, 123(3), 527-547.

Meyer, J. W., & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2): pp. 340-363.

Oliver, C. 1991. Strategic responses to institutional processes. *The Academy of Management Review*, 16(1): pp. 145-179.

Oliver, C. 1992. The antecedents of deinstitutionalization. *Organization Studies (Walter de Gruyter GmbH & Co.KG.)*, 13(4): 563.

Patvardhan, S. D., Gioia, D. A., & Hamilton, A. L. (2015). Weathering a meta-level identity crisis: Forging a coherent collective identity for an emerging field. *Academy of Management Journal*, 58(2), 405-435.

Seo, M., & Creed, W. E. D. 2002. Institutional contradictions, praxis, and institutional change: A dialectical perspective. *The Academy of Management Review*, 27(2): 222-247.

Volberda, H. W., Baden-Fuller, C., & van den Bosch, F. A. J. 2001a. Mastering strategic renewal: Mobilizing renewal journeys in multi-unit firms. *Long range planning*, 34(2): 159-178.

Volberda, H. W., Van den Bosch, F. A. J., Flier, B., & Gedajlovic, E. R. 2001b. Following the herd OR NOT? Patterns of renewal in the Netherlands AND the UK!. *Long Range Planning*, 34(2): 209-229.

Volberda, H. W., Van der Weerdt, N., Verwaal, E., Stienstra, M., & Verdu, A. J. 2012. Contingency fit, institutional fit, and firm performance: A metafit approach to Organization–Environment relationships. *Organization Science*, 23(4): 1040-1054.

Chapter 2

Study 1. Institutional perspectives on strategic renewal

Introduction

One of the great debates in social sciences is whether the world should be viewed through a Kantian lens of objectivity, or opposingly that we should see actors as acting upon their individual subjective experience of reality (Suddaby, Foster and Mills, 2014). Institutional theory is recognized as providing an explanation for when organizational behavior is different than would be expected looking at market pressures. It “is an approach to understanding organizations and management practices as the product of social rather than economic pressures. Relative to resource dependence theory, institutional theory has tended to deemphasize both the ability of organizations to dominate or defy external demands and the usefulness of pursuing such strategies (Oliver, 1991, p. 150). Institutional theory has become a popular perspective within management theory because of its ability to explain organizational behaviors that defy economic rationality” (Suddaby, 2013, p. 379). This study aims to structure the terminology and the diverse definitions used in studies that apply (parts of) the broad spectrum of ‘institutional theory’ that exists. The purpose is to outline overlap and differences between the different sub-streams of institutional theory. We provide scholars with an overview of the alternative points of view in order to encourage them to articulate this point of view and avoid the ambiguity in understanding the theoretical basis of their research.

Institutional theory is concerned with how ‘organizational behaviors are responses not solely to market pressures, but also to institutional pressures’ (Greenwood and Hinings, 1996, p. 1025). Such institutional pressures occur in a firm’s environment. The definition of the institutional environment depends on the perspective but can broadly be defined as the positions, policies, programs, and

procedures around people and organizations which function as ‘highly rationalized myths’ (Meyer & Rowan 1977: p. 343). These myths define and enforce socially acceptable economic behavior (Oliver, 1997: p. 698).

Over time, scholars have adopted various institutional views. These views differ in their level of analysis and in the amount of agency assumed. Table 2.1 outlines the four perspectives that we distinguish within institutional theory and their main characteristics. Institutional theory is rooted in classical or old institutional theory (Clark, 1972; Selznick 1957). The early institutionalists looked at bureaucracy and institutionalization at firm level. New institutional theory then shifted the level of analysis to the industry in the 1970’s (Meyer and Rowan, 1977). Later still, in the 1990’s neo-institutionalists combined the two views by focusing on organizations within a category or a network (Greenwood and Hinings, 1996). In the new millennium the institutional entrepreneurship view developed. This perspective reintroduces agency, interests and power into institutional analyses of organizations (Garud et al., 2007). A little later still, the concept of institutional work originated (Lawrence et al., 2009). This perspective reintroduces agency and power into institutional analyses of organizations (Garud et al., 2007).

Table 2.1. Different perspectives in institutional theory

	Old Institutional Theory	New Institutional Theory	Neo- institutional Theory	Institutional Entrepreneur- ship
Period	1950	1970	1990	2000
Unit of Analysis	Firm	Industry	Firm and industry	Firm and industry
Key Concepts	Politics, power, coalitions, adaptation, inertia	Isomorphism, regulative, normative, and cognitive institutional forces	Institutional forces vs institutional change	Agency, interests, power, collaboration vs contestation
Key Authors	Selznick (1949; 1957)	Meyer and Rowan (1977), DiMaggio and Powell (1983)	Greenwood and Hinings (1996)	Maguire et al. (2004), Garud et al. (2007)
Outcomes	Institutionalization happens over time, it is a means of instilling value through individual actors who transmit what is socially defined as real	Isomorphic processes motivate conformity, which increases chances of acceptance and survival but often conflicts sharply with efficiency criteria	The interaction of organizational context and organizational action is responsible for organizational changes	Actors are knowledgeable agents with a capacity to reflect and act in ways other than those prescribed by institutionalized rules

Defining institutionalization

Depending on which institutional perspective the author applies, the description of the process of institutionalization changes. Old institutionalists look at institutionalization as a micro-level process that results in the emergence of orderly, stable, socially integrating patterns within organizations (Broom and Selznick, 1955). New institutionalists add to this that social processes, obligations, or actualities come to take on a rule-like status in social thought and action within organizational fields (Meyer and Rowan, 1977). Important is that they add the conception that bureaucratization and other forms of organizational change occur as the result of processes that make organizations more similar without necessarily making them more efficient (DiMaggio and Powell, 1983). Both neo-institutionalists and entrepreneurial institutionalists use the definition of institutionalization as proposed by earlier authors, although the latter emphasize the ongoing patterns of interaction between (groups of) organizations and institutions (Maguire et al., 2004).

Since the development of institutional theory, a portion of research has been directed towards the effects of institutionalization. Meyer and Rowan (1977) found that institutionalized rules often conflict with efficiency criteria and that organizations therefore loosely couple formal structures and actual procedures. Tolbert and Zucker (1983) add that organizations are often pressured into incorporating institutionalized elements into their formal structures. Baum and Oliver (1991, 1992) underline this statement with their finding that organizations that are embedded in their institutional environments have stronger survival chances than those that are not.

Institutional entrepreneurship

Institutional entrepreneurship theory studies ‘the activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones’ (Maguire et al, 2004: 657). This branch of institutional theory offers options for ‘the paradox of embedded agency’ (Clemens and Cook, 1999; Seo and Creed, 2002) by offering

circumstances under which actors may be able to envision and carry out institutional changes (Sewell, 1992; Seo and Creed, 2002). Combining the isomorphism notion of new institutionalism with the agency notion of institutional entrepreneurship could provide useful insights into the drivers of institutional change.

Institutional entrepreneurship literature has been criticized with reference to various issues. To begin with, it has been criticized for using an overly voluntaristic point of view (Battilana et al., 2009). Especially accounts at the organizational level of analysis often portray institutional entrepreneurs as a specific class of people (Garud et al. 2002; Greenwood et al. 2002; Lounsbury 2002; Maguire et al, 2004). The approach had been criticized for its rational and 'heroic' view of institutional entrepreneurs. It has been criticized as '*Deus Ex Machina*' (Delmestri, 2006: 1536-1537) where some actors are able to defy institutional forces despite being embedded themselves (Lawrence, Suddaby and Leca, 2009: 5). Battilana et al. (2009:88) offer an alternative option, in which institutional change 'might be occasioned by unintended actions of ordinary actors who break with institutionalized practices without being aware of doing so.' The authors conclude from this that 'future empirical research should pay more attention to the diversity of actors who coalesce around an institutional project.' In addition, Leca and Naccache (2006: 628) note that 'to remain coherent with institutional theory, a model of institutional entrepreneurship must provide a model of change in which actors can create and change institutions without disembedding from the social world.'

Next to the voluntaristic point of view, there has been criticism of the levels of analysis often used in institutional entrepreneurship studies. In a review of institutional entrepreneurship literature, Battilana et al. (2009: 90) conclude that the levels of analysis used by scholars in this field should be expanded. The authors urge future research to include individual and community levels next to organizational and organizational field-level research. Dorado (2013: 534) adds that 'a focus on macro-conditions (...) advances our understanding of institutional

entrepreneurship by explaining why individuals can become institutional entrepreneurs, not why they will'. Instead, she suggests that the group-level is most appropriate to analyze institutional entrepreneurship as it expands understanding of the conditions under which individuals assume the risks of institutional entrepreneurship (Dorado, 2013).

Lastly, there are concerns about the implied assumption that institutional entrepreneurship is a linearly progressing process. Zietsma and McKnight (2009: 143-144) for example argue that most of the well-known institutional entrepreneurship work 'has tended to focus retrospectively on the path of a single institutional innovation as it gained support in an emerging or existing field, often displacing an existing set of institutional arrangements (e.g. Greenwood, Suddaby & Hinings, 2002; Maguire, Hardy & Lawrence, 2004; Munir, 2005)'. In contrast, the authors reason that the deinstitutionalization of an existing arrangement and institutionalization of a new accepted system is not a simple replacement process. Instead, they argue that 'disruptive activities', decreasing legitimacy of existing institutional arrangements, can be initiated by some actors while an alternative is not (yet) offered (Zietsma and McKnight, 2009: p. 244). Zilber (2007: p. 150) refers to the process of institutional entrepreneurship as 'more polyphonic' than is often accounted for in the literature. He argues that actors may work on several initiatives simultaneously. They may work together and against each other and they may be maintaining the institutional order at the same time as trying to disrupt it. The process of institutional change may involve several groups engaging in parallel institutional work, and finding that they are competing against, and impacted by, other actors sponsoring different arrangements (Zietsma and McKnight, 2009: p. 244). An interesting question is whether we can refer to all of these groups as institutional entrepreneurs. Battilana et al. (2009: p. 88) support the point of view of distributed agency, considering institutional processes as 'political and non-deterministic' with outcomes that are uncertain because they are 'dependent on the actions and reactions of multiple actors'. Lounsbury and Crumley (2007: p. 1007) also refer to these uncertainties by pointing out that 'a

more complete account of institutional entrepreneurship (...) would attend not only to the variety of actors that contribute to a particular change to be explained, but also to their relation to wider meaning systems and theories embedded in cultural elements such as categories, conventions, and discourse’.

Institutional work

According to Lawrence, Suddaby and Leca (2009: p. 1), the study of institutional work connects and extends the work on institutional entrepreneurship, institutional change and innovation. The authors emphasize that one of the aims of institutional work scholars is to ‘establish a broader vision of agency in relationship to institutions’ (Lawrence et al., 2009:1) that does not under- or overemphasize the power of actors.

The argument here is that after establishing an institution, continuous work is required to keep it in place (Lawrence, Winn and Jennings, 2001). Authors who study and define institutional work investigate the ‘physical or mental effort aimed at affecting an institution or set of institutions’ (Lawrence, Suddaby and Leca, 2011, p. 53). This is often divided into three parts; the ‘work of actors to create, transform, or disrupt institutions’ (Lawrence, 2008, p. 171).

Institutional maintenance is defined as the “supporting, repairing, and recreating” of institutions (Lawrence & Suddaby, 2006: 230). Maintenance work often takes place in response to changes, such as the evolution of the environment and the entrance of new players (Lawrence & Suddaby, 2006: 234). Institutional work undertaken to maintain institutions involves both more comprehensible work such as policing and deterring and less comprehensible work like the creating of routines and myths (Lawrence and Suddaby, 2006, p. 234). This definition clearly includes work by actors who are ‘aware of its purpose and influence’ (Lawrence and Suddaby, 2006, p. 234). Yet Maguire and Hardy (2009) further delineate the boundaries of what constitutes ‘maintenance’ by distinguishing it from ‘defensive institutional work’, which is a more conscious and strategic response to disruptive work. Lefsrud and Meyer (2012) combine institutional theory with the framing

literature to provide insight into ‘defensive institutional work’ in the form of climate change resistance.

Strategic renewal

Companies face competing forces of change and stability. Firm strategy is ‘the direction and scope of an organization over the long run which achieves advantage for the organization through its configuration of resources within a changing environment to meet the needs of markets and to fulfill stakeholder expectations (Johnson and Scholes, 1997:10). Volberda et al., 2001b) describe how new technologies, new competition and globalization drive change while short-term competitive forces demand stability. On the one hand a company should avoid core capabilities becoming core rigidities (Leonard-Barton, 1992) but on the other hand it should also avoid the ‘renewal trap’ (Levitt & March, 1988; Levinthal & March, 1993) in which too much change leads to chaos, loss of cultural glue and organizational breakdown (Volberda, 1996).

Strategic renewal is used by firms to balance the forces of change and stability. It is broadly defined as the strategic actions a firm undertakes to alter its path dependence (Volberda et al. 2001b: 160) and align organizational competencies with the environment to in order to increase competitive advantage (Flier et al. 2003: 2168). More specifically, strategic renewal includes the process, content, and outcome of refreshment or replacement of attributes of an organization that have the potential to substantially affect its long-term prospects’ Agarwal and Helfat (2009: 282).

Three dimensions of strategic renewal can be distinguished (Volberda et al., 2001a); content, context and process. The content dimension distinguishes exploitation and exploration actions, where the former are aimed at increasing efficiency and the latter at entering new markets and innovation. The context dimension signifies the interaction between the environment and strategy, distinguishing between whether strategic actions are based on internal or external resources. Here, a distinction is made between internal- and external growth (Kwee et al., 2008; Capron and Mitchell, 2009; Flier et al., 2003). Internal growth

includes restructuring, internal corporate venturing, launching new products, and closing product lines or offices. On the other hand, external growth includes mergers, acquisitions, alliances and joint ventures (Kwee et al., 2008: 5). Thirdly, the process dimension of strategic renewal is concerned with the speed of the process.

Scholars from different streams of institutional theory have varying conceptualizations of the where strategic renewal is initiated and at which level it should be studied. Table 2.2. provides an overview of the attitude towards strategic renewal as well as the unit of analysis for each of the four institutional perspectives.

Table 2.2. Four institutional perspectives classified according to unit of analysis and view of potential for strategic renewal

Unit of analysis	Potential for strategic renewal	
	<i>Low</i>	<i>High</i>
Firm	Old Institutional Theory (Selznick, 1957)	Institutional entrepreneurship (Lounsbury and Crumley, 2007)
Industry	New Institutional Theory (DiMaggio and Powell, 1983) (Meyer and Rowan, 1977)	Neo-Institutional Theory (Greenwood and Hinings, 1996)

Old institutionalists maintain that a firm’s structure and strategy follow from the demands of its environment. Selznick (1957) argues that the organization reacts to the characteristics of participants as well as to influences and constraints from the external environment. This view allows for little agency and therefore supposes low firm potential for strategic renewal. This process is studied at firm level, where the organization and its members are analyzed (DiMaggio and Powell, 1991). New institutional theorists shift the level of analysis to the industry and direct attention towards isomorphism and non-rational aspects of strategic choices. DiMaggio and Powell (1983) argue that isomorphism causes managers to respond similarly to institutional processes. The use of the concept of isomorphism indicates the low level of agency assumed in new institutional theory. Neo-institutionalists introduce the concept of deinstitutionalization and combine this with the idea that individual organizations interpret and react to industry pressures differently. Greenwood and Hinings (1996: 1041) explain that neo-institutional theory attempts to explain how individual organizations ‘adopt and discard templates for organizing, given the institutionalized nature of organizational

fields'. This indicates space for agency. Lastly, institutional entrepreneurs differ from neo-institutionalists in that they specifically allow for individual variation in strategic behavior. Lounsbury and Crumley (2007: p. 996) explain the notion of 'performativity', which assumes that practices can be altered due to variations in the individual behavior displayed during enactment of the practice. Maguire et al (2004: p. 659) argue that 'uncertainty in the institutional order' provides the opportunity for institutional entrepreneurs to act. Table 2.2. indicates that the views on strategic renewal concerning both its origin as its level of analysis differ for each branch of institutional theory. This paper indicates that institutional theory has developed into a variety of perspectives with very different premises. Therefore, scholars taking an institutional viewpoint should take care to consider and identify which institutional perspective they use, as this determines the theoretical basis of their approach.

Discussion

This study aims to provide insight into the various institutional views of strategic renewal. Lewin and Volberda (1999) characterize key theoretical frameworks in sociology, economics, and strategy and organization theory and indicate the implications of each approach for firm strategy and adaptation. The authors describe institutional theory as one of these frameworks and highlight its focus on isomorphism and embeddedness. However, this highlights only one of the at least four different streams of institutional theory. This study extends the research by Lewin and Volberda (1999) by adopting a more detailed level of analysis to study how institutional theories relate to adaptation and selection. We separate the different streams of institutional theory and assess the perspective of each on the drivers of strategic renewal.

We provide scholars with an overview of the alternative points of view in order to encourage them to articulate the approach selected and avoid the ambiguity for the audience in understanding the theoretical basis of the research. We aim to provide insight into the variation between institutional views when it comes to the drivers and the potential for strategic renewal, in order to make

visible the underlying assumptions of the theoretical lens used by the authors. We find that institutional entrepreneurship theory, when compared to other institutional theories, allows considerable space for strategic renewal to take place within firms. Though reflecting major hallmarks of institutional theory such as the power of isomorphism and actors' drive for legitimacy, institutional entrepreneurship theory also emphasizes that –keeping in mind or even using these principles- the agency of embedded actors can be a driver of institutional change.

Chapter 3

Study 2. Being different for a reason: how over- and under-compliance are related to higher performance

Abstract

We aim to contribute to the institutional fit literature by investigating the relationship between the fit of a firm with its regulatory environment and firm performance. We offer a framework that allows for further analysis of what constitutes lack of (institutional) fit. We distinguish two categories of lack of regulatory fit and explain the difference between their occurrences. Firms can either deviate by keeping lower internal regulatory standards compared to what is externally enforced (under-compliance) or conversely by enforcing more stringent regulations than their industry prescribes (over-compliance). In order to create a continuous scale of regulatory fit, the latter is termed negative under-compliance. We hypothesize that there is a U-shaped relationship between the level of under-compliance and substantive performance such that firms that either over-comply or under-comply perform better than firms that operate at regulatory fit. Using survey data from 550 Dutch companies we indeed find that the two types of lack of regulatory fit are related to higher relative substantive performance than regulatory fit. Our results suggest that succumbing to regulatory institutional pressures may not be the best strategy to attain maximum performance. Firm regulatory structures may be most beneficial to a company when based on firm-specific requirements rather than on the industry standard.

Keywords:

Institutional theory, regulation, fit, performance

Introduction

Several internationally successful firms have demonstrated that a lack of compliance with institutionalized rules or even regulations can be very lucrative. California-based Uber is uprooting the taxi market on a global scale by using a smartphone app to connect passengers with luxury cars for hire, at rates that rival- and often undercut- conventional taxi companies. Operating in this manner, Uber is disrupting the archaic taxi system. Governments in several countries struggle with Uber's business model in connection to local regulations. In Germany the luxury car service was first issued an immediate cease and desist order (August 28, 2014) but within a month this preliminary injunction was revoked (September 16, 2014) by a higher court. Uber has an audacious approach, continuing to roll out its business model despite the bureaucratic opposition that it faces. In July 2015 the company was valued at 51 billion US dollars after raising close to 1 billion US dollars in a new round of funding (MacMillan and Demos, 2015). The company is not alone in its selective lack of compliance with regulations. Another example of a successful rule-breaker is Airbnb. This home-sharing website was valued at 25,5 billion US dollars in June 2015 (O'Brien, 2015), despite being challenged by legislators in cities such as New York and Amsterdam. Is bending the rules something to aspire to or something to avoid? This study suggests that for companies in institutionalized environments, simply playing by the rules may not result in the best possible firm performance.

The relationship between regulation and firm behavior has evolved over time, becoming more interactive rather than uni-directional. Both economic- and social regulation have gained in prominence since the twentieth century (Schneiberg and Bartley, 2008). Traditionally, regulation was top-down and carried out at a state or nation level. Research about social control tends to focus on negative reinforcement -such as policing- rather than positive reinforcement- such as stimulation measures- (Grabosky, 1995) yet researchers are noticing shifts in the way regulation is structured. Schneiberg and Bartley (2008) find that new forms of regulation, such as competition and standard setting, as well as

alternative actors are taking over the role of traditional state regulation. Van Gossem, Arts and Verheyen (2009) also find that the importance of ‘surrogate regulators’ is growing. Schneiberg and Bartley (2008) study the relation between organizations and regulation from the nineteenth to twenty-first century and condense that the institutional environment influences regulatory processes. The authors highlight ‘the power of controversy and legitimacy crises to disrupt power relations and render entrenched interests vulnerable to challenge’ (Schneiberg and Bartley, 2008, p. 35). We pose that non-complying companies such as Airbnb and Uber are not exceptions but rather examples of how consciously interacting with rules and regulations, rather than simply complying, can be lucrative. We use institutional theory and fit research to argue that lack of fit with the regulatory standard is related to higher firm performance.

The paradoxical relationship between institutionalized practices and firm performance is a long-standing theme of institutional theory. Meyer and Rowan (1977, p. 340) explained that although fit with institutional standards may increase the chances of a firm’s survival, it often ‘conflicts sharply with efficiency criteria’. The connection between institutional fit and firm performance has consistently received research attention (Baretto and Baden-Fuller, 2006; Heugens and Lander’s, 2009; Volberda et al., 2012). We aim to contribute to this branch of literature by broadening the understanding of regulatory fit, an underemphasized aspect of institutional fit. Regulatory fit is easily taken for granted. At first glance it appears self-evident that not complying with rules and regulations leads to legitimacy problems which in turn will lead to negative performance effects. We reason that this assumption deserves testing.

Institutional fit and isomorphism in many studies are used as synonyms, while the founders of institutional theory clearly distinguish three levels of institutional forces; coercive, normative, and mimetic (DiMaggio and Powell’s, 1983). Consistent with this, a distinction is made between regulatory, normative and cognitive pillars (Scott, 2001). Conformity to the normative and cognitive pillars of institutions (Scott, 2001) has consistently received more attention in the

debate about fit and firm performance than *compliance* to the regulatory pillar has. We investigate regulatory fit, a slightly taken-for-granted part of institutional fit.

The influence of regulatory forces is of interest in this study. The regulatory pillar concerns the establishment of rules and sanctions. Regulatory fit refers to correspondence of a firm's regulative (or legal) features to the institutional standard (Hoffman, 1999: 353). We look at the relationship between compliance to regulatory standards and firm performance. We pose that the implicit assumption that that the highest compliance to rules and regulations would result in the highest relative firm performance should be tested.

Studies that focus on the performance effect of adaptation to institutional guidelines have often used isomorphic behavior as independent variable. This means that actors are being compared to each other but not to an *external* standard. Heugens and Lander (2009, p. 68) use a meta-study to address several debates in institutional theory. The data used in their study demonstrates the lack of attention for the regulative aspect of fit. The authors use DiMaggio and Powell's (1983) distinction between coercive, normative, and mimetic forces. Although the meta-study finds a reasonable 101 usable effect sizes of coercive pressures (compared to 131 mimetic and 66 normative), only 24 of these concern the imposition of rules and procedures through government mandates. The others measure resource dependence. In order to strengthen the body of research on regulatory fit, we emphasize the performance effect of how organizations deal with external institutions that exert *regulatory* pressure.

It is remarkable that among the studies that have investigated the relationship between institutional fit and firm performance, consensus is lacking as to the effects of this on firm performance. We pose that some of the variation can be explained by further delineating the concept of lack of fit. In the existing literature, a distinction is only made between fit and lack of it. When looking at the regulatory aspect of institutional fit, we distinguish between two different types of *lack of regulatory fit*. We theorize that lack of fit is not necessarily synonymous with lack of compliance. We offer a framework that allows for further distinction

between different types of *lack of (institutional) fit*. We distinguish between two categories of lack of regulatory fit. The first occurs when a company enforces rules and regulations that are less strict than the industry standard, which could be characterized as a lack of compliance. On the other hand however, we argue that firms that use more stringent regulations than the industry standard also lack regulatory fit, even though they comply with the prescribed regulations. We pose that differentiating between the two allows for an explanation as to the costs and benefits of each type of lack of regulatory fit. In many studies only a degree of fit is measured, which inaccurately pairs together two very different strategic directions a firm can take with regard to compliance to regulations. Besides simply complying, a firm can either apply more stringent or less stringent regulations than what is externally enforced.

We are interested in the performance effects of a firm's degree of regulatory fit. The definition of performance varies depending on 'whose viewpoint is taken (e.g., customers or stockholders), the time period observed, criteria used, and so on.' (Snow and Hrebiniak, 1980, p. 319). However it is evident that, irrespective of the precise definition, an organization's behavior is largely directed at achieving satisfactory performance. We follow Heugens and Lander (2009, p. 64) by dividing performance into a symbolic and a substantive branch. Symbolic performance is defined as the extent to which an organization commands legitimacy, status and reputation. Substantive performance, on the other hand, refers to a company's ability to generate accounting-based profits or increase overall market value (Heugens and Lander, 2009, p. 64). We propose that both types of performance are affected by a firm's regulatory fit, yet the direction of this depends on the degree of regulatory fit.

Literature review

Institutional fit

Fit is a concept that is used across different areas of business research (Drazin and Van de Ven, 1985, Zajac et al., 2000, Volberda et al., 2012). Donaldson (2008) on one end of the spectrum distinguishes contingency theorists, who maintain that the

optimal organizational design is fit with contingencies, which maximizes internal effectiveness. On the other end he positions institutional theorists who assert that optimal (monetary) results are achieved when an organization fits with the institutional environment so that it maximizes legitimacy.

Drazin and Van de Ven (1985: p. 514) summarize the early conception of fit in contingency theories in management research, which assume that 'context and structure must somehow fit together if the organization is to perform well'. Zajac et al. (2000) still use contingency theory but move away from environment-structure fit and instead focus on environment-strategy fit. They find that organizations that deviate from the prediction of strategic fit experience negative performance consequences.

Institutional theory explains that that institutional requirements are often the reason that firm structure and strategy do not fit the contingencies (DiMaggio and Powell, 1983). Legitimacy enhances both stability and credibility of an organization, building on a common agreement that an organizations actions are 'desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions' (Suchman, 1995: p. 574). For an organization to be able to function effectively, its use of resources should be accepted by the larger social system (Parsons, 1960).

Kondra and Hinings (1998, p. 75) conceptualize *institutional fit* as an organization's degree of compliance with 'the organizational form of structures, routines and systems prescribed by institutional norms'. The authors offer a comprehensive model of different categories in which organizations can be placed when comparing performance to institutional fit and focus on how the institutional field responses to each type. They use a main assumption in institutional theory; that organizations with high institutional fit cannot perform outside institutional norms. Moreover they discriminate between Dogs -organizations with low institutional fit and performance lower than the institutionalized level-, Equifinalists – those that operate outside institutional constraints but perform within the institutionalized range- and Renegades –firms that operate outside

institutional norms and perform above the institutionalized level. In the Renegade category, the authors focus on firms that internally hold lower standards than their institutional environment enforces. They explain that the reaction of actors in the environment to such Renegades is often the use of coercive power to enforce compliance. However they indicate that an alternative reaction can be mimetic behavior by actors to incorporate the alternative routines used by Renegades to also achieve higher performance. Renegades in the latter categories gain legitimacy and may eventually dictate the new, changed institutional standard.

Kondra and Hinings (1998: p. 755) specifically allow for the possibility of deviation from legal and economic institutions. Institutions are the 'rules, norms, and beliefs that describe reality for the organization' (Hoffman, 1999: 351). Institutions do not remain constant over time. They change as a result of external processes of deinstitutionalization in industries combined with 'the internal dynamics of interpretation, adoption, and rejection by the individual organization.' (Greenwood and Hinings, 1996: 1041). Ansari, Fiss and Zajac (2010) further explore this change process by studying practice diffusion. Next to technical fit, and cultural fit they identify political fit as influencer of company adaptation. Political fit is characterized as the compatibility of a diffusing practice with the interests of potential adaptors. The authors offer 'enforcement pressures' –the policing of a practice- as an important mechanism for influencing adaptation. They argue that as a practice diffuses, scrutiny of enforcement pressures wanes and deviation or lack of compliance becomes easier. This suggests that later adaptors will be less forced to comply with a practice. This may be a good opportunity for firms not to comply in order to achieve performance benefits.

Of the three institutional pillars as described by Scott (2001), normative and cognitive fit may (in less extreme situations) be difficult to observe. Conversely, non-compliance to the third pillar, the regulatory standard, is hard to conceal. It is interesting to separate lack of fit with rules and regulations from lack of normative and mimetic fit, for which the institutional wiggle room is characterized by a less clear line. It is intuitive to assume that in order to achieve

legitimacy, firms may be disinclined to break with the rules. However, given that institutional change also happens in rules and regulations, it can be established that variation and non-compliance also occur at the regulatory level.

Regulatory fit

We offer the term *regulatory fit* to signify the aspect of institutional fit that concerns correspondence between the stringency of a firm's rules and regulations and that of its environment. The term regulatory fit is used in decision making theory to define the degree to which an individual's (assigned) activities are congruent with an individual's regulatory focus (Stam et al., 2010, Avnet & Higgins, 2006; Cesario, Grant, & Higgins, 2004). We extend the term to the firm level of analysis to signify correspondence of a firm's regulative (or legal) stringency to the institutional standard (Hoffman, 1999: p. 353).

Heugens and Lander's (2009) use an extensive meta-study to synthesize the work on conformity and performance. Their analysis demonstrates that the regulative aspect of institutional fit had not received a great deal of attention. Only 24 of a total of 298 effect sizes studied concern the imposition of rules and procedures through government mandates. The others refer to mimetic, normative pressures and resource dependence. Wade et al. (1998: p. 905) explain why a firm's regulatory environment is important to consider. First, it influences the other institutional pillars: norms and cultural values. In addition, regulations influence 'resource flows by creating opportunities and constraints for different kinds of organizations within an organizational population'. Regulations are characteristically created as a response to perceived market failure in terms of efficiency or equity (Reynolds, 1981). This means that regulatory forces are often codifications of shared principles in society (d'Aunno et al., 2000: p. 682). Firms face a trade-off in complying with regulations. On the one hand, society associates compliance to regulations with reliability and legitimacy of an organization. Conforming to existing institutional systems is a strategy for gaining legitimacy (Suchman, 1995). 'A legitimate firm obtains resources of higher quality and at

more favorable terms than does a firm whose legitimacy is challenged' (Deephouse, 1991: p. 152).

On the other hand, regulations can be seen as creating routines that lead to inertia (Hannan and Freeman, 1984). Inertia is defined as 'inadequate or slow adaptation to change or resistance to fundamental changes in conducting business' (Hendricks and Singhal, 2001: p. 271). This has been found to have slight positive substantive performance effects in the short run but competitive diversity in the long run diminishes this effect (Miller and Chen, 1994).

An organization that does not comply with regulations can be seen as a change from the institutional standard. A central assumption in institutional theory is that organizations tend towards stability rather than change (DiMaggio and Powell, 1983). However, Greenwood and Hinings (1996) propose that market- and institutional context as well as intraorganizational dynamics such as the degree of dissatisfaction and power dependencies influence whether organizational change can occur. Regulations are part of an organization's context. D'Aunno et al. (2000) find that anti-competitive regulation reduces firm motivation towards divergent organizational change. In addition, they find that legislation that provides use of alternative templates promotes organizations to initiate change.

We have explained how we define regulatory fit as an aspect of institutional fit and that organizations are capable of organizational change to move away from such fit. We will now link different degrees of regulatory fit to performance.

Regulatory fit occurs when a firm applies the same regulatory stringency as the industry average. A firm can exhibit a lack of regulatory fit in two ways; it can either employ more stringent regulations – over-compliance – or conversely it can apply less rigorous principles than the industry norm – under-compliance. Table 3.1 demonstrates the spectrum of regulatory fit on which firms can be positioned.

Over-compliance and substantive performance

We define the imposition of more stringent internal regulations than industry regulations as *over-compliance*. There is no value assessment incorporated in the term, it merely signifies that the regulatory structure goes beyond what is required by external regulations.

An example of company that exhibits over-compliance is Bentley Motors' achievement of becoming the first motor vehicle manufacturer in Europe to receive the International Organization of Standards (ISO) 50001 certification at its main plant in Pym's Lane, Crewe, United Kingdom in late 2011. ISO 50001 is a voluntary standard that specifies the requirements for implementing a safe and efficient energy management system. As a result of the improvements made, waste recovery and recycling efforts increased to 77% and water usage was reduced by half. In the end, Bentley lowered energy use by two-thirds for each car produced and by 14% overall for the entire plant, delivering savings of 230 GWh of energy – enough to power 11,500 houses for a year.

This example demonstrates that there are two advantages to over-compliance. To begin with, over-compliance can help a firm achieve consistency and standardization which can improve learning outcomes (Levinthal and March, 1993) and reduce costs. Additionally, a firm that over-complies is ahead of coercive forces such as national regulations but also customer requirements. Self-imposing standards such as ISO will differentiate a firm from its competitors. Customers who prefer a certain standard will choose to provide resources to the supplier that adheres to this standard. Also, a firm that over-complies is ahead of industry regulation. This means that when the latter are made more rigorous, the overregulating firm will not have to incur the extra costs of adapting to the changed standard. Given that it is expected to result in lower (adaptation) costs, we expect that firms that over-comply realize higher relative substantive performance;

H1a) At negative levels of under-compliance (i.e. over-compliance) we expect higher substantive performance than the industry average

Regulatory fit and substantive performance

Regulatory fit exists when the stringency of a firm's regulatory environment is equal to that of the average firm in the industry. New institutional theorists argue that although isomorphic forces push firms to become similar, this interferes with the demands of their individual work environments (Meyer and Rowan, 1977, p. 341). Several scholars have demonstrated the efficiency-reducing effects of firm adaptation to industry standards. Deephouse (1999) establishes that actions directed at similarity reduce firms' abilities to differentiate themselves from the competition. Westphal et al. (1997) investigate the consequences of this and find that conformity to Total Quality Management adoption is negatively associated with organizational efficiency benefits. Moreover, Barretto and Baden-Fuller (2006) demonstrate that adaptation makes firm managers take sub-optimal decisions on resource acquisition. They study how Portuguese banks choose where to build branches and demonstrate the occurrence of mimetic branching, which negatively affects financial performance. These studies show that fit is often realized for symbolic reasons, while it is negatively associated with substantive performance. We argue that regulatory fit, like other forms of conformity, is negatively associated with substantive performance because actors are likely to be motivated by 'normative rationality' rather than 'economic rationality' (Oliver, 1997).

H1b) At regulatory fit we expect lower substantive performance than the industry average

Under-compliance and substantive performance

We define the imposition of internal regulations that are less stringent than industry regulations as *under-compliance*. Beckert (1999: p. 783) argues that institutional theory should reserve a central space for interest-driven behavior of

actors. He proposes that ‘strategic action that violates existing institutional rules can be expected in situations characterized by high degrees of certainty within an institutional field’ because companies can then estimate the consequences of their actions. Under-compliance allows a firm to incur lower costs of adaptation to regulation. Like over-compliance, under-compliance may be the initiation of institutional change. An example of under-compliance as an act of institutional change involves the American investment bank Goldman Sachs. The bank has found a way to work around the Volcker rule, a part of the USA’s Dodd-Frank financial reform package. The Volcker rule is aimed at limiting what banks can invest in private equity funds, in order to avoid them taking too many risks with their own money. Although the rule has not yet been implemented, regulators were in the final stages of writing it at the end of 2013, and many banks are preparing for it by restructuring their activities. Goldman Sachs, on the other hand, is working around the regulation by raising client money, bank capital and partner money in separate accounts and investing as a syndicate. This method is different from using a traditional private equity fund and therefore falls outside the Volcker rule. Although private equity investments are risky, their returns can be very high. Goldman is exercising agency by using this under-compliance strategy. We expect that this strategy is related to higher relative substantive performance.

H1c) At positive levels of under-compliance we expect higher substantive performance than the industry average

Overall, we have argued that companies that either under- or over-comply are associated with higher relative substantive performance than companies that display regulatory fit. In order to create a continuous variable, we will express over-compliance as negative under-compliance and regulatory fit as zero under-compliance. Combining hypotheses 1a, b and c we expect a U-shaped relationship between under-compliance and substantive performance;

Hypothesis 1: There is a U-shaped relationship between the level of under-compliance and substantive performance such that:

- a) at negative levels of under-compliance (i.e. over-compliance) we expect higher substantive performance than the industry average*
- b) at regulatory fit we expect lower substantive performance than the industry average*
- c) at positive levels of under-compliance we expect higher substantive performance than the industry average*

Regulatory fit and symbolic performance

Creating a lack of regulatory fit – either by over-compliance or under-compliance – can distinguish a firm from its competition. However, institutional theorists would argue that the examples of lack of fit affect symbolic performance in opposite directions.

A common view among institutional theorists is that conformity to isomorphic templates is positively related to symbolic performance (Heugens and Lander, 2009, p. 64). Isomorphism is ‘a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions’ (DiMaggio and Powell, 1983, p. 146). Institutional theory scholars suggest that institutional embeddedness is associated with advantages such as ‘increased stability, social support, legitimacy, access to resources, and invulnerability to questioning’ (Baum and Oliver, 1991, p. 231). Suchman (1995, p. 574) explains that the motivation to be legitimate leads to organizations that are ‘almost self-replicating’ because resources are more likely to be provided to organizations that are deemed appropriate and with that trustworthy. Deephouse (1996) tests whether organizational isomorphism leads to legitimacy and finds support for this proposition. Legitimacy is defined here as ‘the acceptance of an organization by its external environment’ (Deephouse, 1996, p. 1024). Zimmerman

and Zeitz (2002, p. 419) investigate the impact of legitimacy on new venture growth and distinguish three types of legitimacy, based on Scott's (1995) institutional pillars. In terms of regulative legitimacy the authors argue that new ventures can gain legitimacy by 'visibly conforming to regulations, rules, standards, and expectations created by governments, credentialing associations, professional bodies, and even powerful organizations'.

The legitimacy literature suggests that firms are motivated to display isomorphic behavior in keeping up with industry standards in order to increase symbolic performance. In the case of regulation, this means that diverging from the standard is anticipated to result in lower symbolic performance than regulatory fit. Under-compliance is one possibility for such divergence.

Under-compliance involves a discrepancy with the industry standard. This suggests a lack of isomorphic behavior, which triggers concerns about legitimacy. Many examples of the symbolic performance effects of under-compliance can be found in the petrochemical industry. Royal Dutch Shell, for example, was fined in 2013 for violating the U.S. Environmental Protection Agency Clean Air Act permits it received for arctic oil and gas exploration drilling off the North Slope of Alaska. As a result of many such incidents, Shell does not always have the unequivocal support of all of its stakeholders, despite its profitability; some will have concerns about the legitimacy of the company's actions. Given that legitimacy is a component of symbolic performance, firm under-compliance is expected to have a negative effect on symbolic performance.

Though it is understandable that keeping up with industry regulatory standards has positive effects on symbolic performance, the effect of over-compliance is more controversial. Strictly applying the concept of isomorphism would lead to the prediction that over-compliance is a deviation from the industry standard and would therefore lead to lower symbolic performance. However, there is a strong argument to be made for the expectation that firms that over-comply by applying voluntary standards receive positive symbolic performance benefits (Buchanan, 1965; Potoski and Prakash, 2005). This argument is based on the

concept of ‘club goods’ (Buchanan, 1965), which provide exclusive benefits, especially in terms of reputation, to members of the club. A firm that chooses to over-comply is likely to do so using voluntary programs such as ISO standards. Although the firm incurs costs by conforming to stringent guidelines, it is rewarded in terms of symbolic performance. Visibly being a club member reduces transaction costs for external stakeholders in terms of distinguishing between members and non-members (Potoski and Prakash, 2005). For example, when a firm has an ISO 50001 certificate, customers can see at a glance that it employs efficient and safe energy management procedures. Over-compliance by means of voluntary standards thus allows a firm to demonstrate its environmental efforts, which results in more favorable evaluations by stakeholders such as customers and suppliers.

Consequently we expect that higher levels of firm regulation will correspond to higher symbolic performance. Considering that over-compliance can also be expressed as negative under-compliance, we expect a negative relationship between the degree of under-compliance and symbolic performance:

Hypothesis 2: There is a negative relationship between the level of under-compliance and symbolic performance

Methods

Research setting and data collection

In order to test the proposed relationships empirically, we used a random sample of 4,300 Dutch companies of different sizes. Requests to participate in the survey were sent to management team members. As our data concerns information about the regulatory standards in the organizational field, management team members were approached because they were expected to be in the best position to provide this knowledge. Survey data were collected in 2011.

A total of 4,300 invitations were sent to managers of Dutch companies by post; in addition digital databases and social media were used to reach a wider public. 550 respondents completed the questionnaire, a response rate of approximately 12%. Apart from the category “others” (39%), the most important sectors represented were business-to-business services (23%), construction industry (14%), other manufacturing industry and mining (8%), logistics (7%), high-performance materials and systems (5%) and agrifood (4%).

Construct measurement

A list of questionnaire items was generated based on the operationalization of the constructs as outlined in Table 3.2.

The questions about regulations were answered by respondents using a seven-point Likert scale to measure the strength of a participant’s agreement. External regulation was measured with a five-item measure ($\alpha = 0,786$), including one reverse-scored item. Internal regulation was also determined using a five-item measure ($\alpha = 0,852$). In addition to questions about internal and external regulation, questions about company performance were included. These were also answered using a Likert scale, where a score of 1 represented a strong decrease in performance and 7 represented a strong increase. In order to decrease the likelihood of multicollinearity of interaction terms, the independent variables were mean-centered before the interaction terms were constructed (Aiken and West, 1991).

Substantive performance is measured on annual change in profit. Symbolic performance is defined as the degree of positive evaluation of a company (Deephhouse and Suchman, 2008). Using this definition, we created a three-item measure consisting of the perceived market share, customer satisfaction and employee satisfaction ($\alpha = 0,809$). It should be noted that we assumed, in line with the institutional view (Heugens and Lander, 2009), that substantive and

symbolic performance are independent of each other and can therefore move in opposite directions.

Lack of regulatory fit is conceptualized as the degree of under-compliance, by taking the difference between the Likert-scale value that each respondent provided for the stringency of the external regulatory environment and the value assigned for the internal regulatory environment. This means that the more positive the value for this measure, the more under-compliance there is within a company, and the more negative the value, the more over-compliance a company maintains. We do not take an absolute value for the difference between firm regulation and industry regulation because we assume that over-compliance results in different market positions to those of under-compliance. A full list of questionnaire items can be found in Appendix 1.

We used several control variables in our model; these include firm size and industry effects. Organizational size, measured as the log of the number of organization members, has a widely recognized moderating influence on the relationship between strategy and performance (Smith et al., 1989; Carroll, 2003). In addition, because service-providing firms differ fundamentally from non-service firms, we included dummy variables for these two types of firms. Also, the degree of trust within an organization affects people's perceptions and was therefore included as a control variable. Furthermore, we controlled for environmental dynamism and complexity. Dess and Beard (1984) derived these concepts from Aldrich's (1979) six environmental dimensions that influence firms. We included them as two separate control variables.

Reliability and validity

A survey method allows for the collection of data from individuals about themselves or about the social units to which they belong (Rossi et al., 1983). This method has an advantage over archival data in explaining managerial behavior. However, the disadvantage is that the resulting data is perceptual. In order to assess the problem of potential bias, data collected for one of the dependent

variables, substantive performance, was triangulated using archival data. In addition, for 113 companies second respondent data is available, which allowed us to examine inter-rater reliability. For the substantive performance measure, the correlation between the first and second respondent was 0.978. This outcome allows for more confidence in the measure, as a value over 0.6 is necessary to justify the use of an aggregated perceptual measure (Glick, 1985).

In order to test for non-response bias, we examined differences between early and late respondents (those who started the questionnaire in the first three months versus those who started it in the final three months) for our main study variables. These comparisons did not reveal any significant differences ($p < 0.01$), indicating that non-response bias was not a problem in this study.

To reduce the risk of common method bias, during the administration of the survey we assured respondent confidentiality. This should reduce respondent tendency towards providing socially desirable answers. After receiving the data we performed several statistical analysis to assess common method bias. First, we performed Harman's single-factor test. All variables were loaded into an exploratory factor analysis to assess whether one general factor would account for the majority of the covariance among the measures (Podsakoff, MacKenzie, Lee and Podsakoff, 2003). This was not the case.

Results

This section first presents the findings of our univariate analysis. On average, respondents indicate lower pressure from internal regulation (3.83) than from external regulation (4.82). The standard deviation for under-compliance was 1.43. Sector-specific data for internal and external regulation can be found in Appendix 2.

Table 3.3 indicates the correlation matrix for the variables used in this study. The table indicates that internal and external regulation are strongly correlated. In addition, the variables dynamism, complexity and trust correlate

significantly with at least one of the dependent variables. This supports our decision to control the analysis for these effects.

We used regression analysis to investigate hypotheses 1 and 2. Models 1 and 2 are used to explain substantive performance and Models 3 and 4 are used to explain symbolic performance. The models are presented in Table 3.4.

Model 1 in Table 3.4 explains the combined effect of control variables on substantive performance. Model 2 explains the effect of under-compliance on substantive performance. Model 3 explains the combined effect of control variables on symbolic performance, and Model 4 outlines the effect of under-compliance on symbolic performance. The variance inflation factor (VIF) indicates whether a predictor has a strong linear relationship with the other predictor(s) (Field, 2000). All of the variables in the models have VIF scores below 2.5, which indicates that multicollinearity is not a problem in this analysis. The Durbin-Watson score of 1.929 indicates no autocorrelation.

We used the results from Model 2 to test hypothesis 1. First, we find a significant negative relationship between under-compliance and substantive performance. In addition, we find a significant positive relationship between the square of under-compliance and substantive performance. As under-compliance increases and moves towards institutional fit, substantive performance initially decreases. However, after a low point at a moderate amount of under-compliance, substantive performance begins to increase. This means that we do indeed find a U-shaped relationship between under-compliance and substantive performance. However, it should be noted that not all elements of hypothesis 1 are confirmed. Hypothesis 1a is confirmed; negative levels of under-compliance – that is, over-compliance – are related to higher substantive performance than the industry average. Hypothesis 1b is partly confirmed; relative substantive performance is low at regulatory fit but it is not the lowest point of the curve. For this reason hypothesis 1c cannot be confirmed completely. Substantive performance that is higher than the industry average is found at high levels of under-compliance; however, the lowest substantive performance is found at low levels of under-

compliance. Although the expected U-shaped relationship is found, the minimum of the curve is found at a different degree of under-compliance than expected. Figure 1 outlines the relationship that was found between the level of under-compliance and relative substantive performance.

Using Model 4, we find no support for hypothesis 2 as no significant relationship between under-compliance and symbolic performance is found.

Discussion

Theoretical implications

This study contributes to the discussion about the performance effects of institutional fit by focusing specifically on the regulatory environment. This allows for an assessment of the performance levels related to different degrees of (lack of) regulatory fit.

Regulatory fit and substantive performance

The U-shaped relationship found between under-compliance and substantive performance supports those scholars who argue that fit is negatively related to substantive performance (Meyer and Rowan, 1977; Deephouse, 1999; Baretto and Baden-Fuller, 2006).

An interesting finding is that the lowest point for substantive performance is not at zero under-compliance. A low level of under-compliance (0-1.5) results in lower substantive performance than both perfect fit and high levels of under-compliance. Our results suggest that slight under-compliance has more negative effects on profit than is evident with perfect institutional fit. This finding suggests that firms that are close but do not meet regulatory standards are related to the lowest substantive performance levels. This is in line with the ‘dogs’ category distinguished by Kondra and Hinings (1998, p.751), defined as organizations with low institutional fit and performance lower than the institutionalized level. The

authors explain this category includes organizations that have knowingly or unknowingly deviated from the norm and those that have failed to adapt to changing institutions. These are at risk of being selected out (Hannan and Freeman, 1977) and other organizations have no reason to mimic their behavior.

Higher levels of under-compliance are related to higher substantive performance. This could be interpreted as new practice creation by actors. These actors who differentiate themselves from the crowd by using a lower level of internal regulation than external regulation are apparently successful in this. This coincides with Kondra and Hinings's (1998, p. 753) category of Renegades which includes organizations that operate based on active agency rather than institutional rules. Oliver (1991) termed this category of response to institutional processes 'defiance'. She identifies three tactics of defiance; dismissing or ignoring institutional rules, challenging, or outright attacking them. According to the author the strategy of defiance when organizations believe they have little to lose or when they believe they can demonstrate the rationality of their behavior. Our results indicate that a portion of the companies that apply a defiance approach is correct in these beliefs and becomes successful. These companies, such as Uber and Airbnb, sidestep the costs of adapting to institutions and can therefore operate more efficiently (Meyer and Rowan, 1977).

On the other side of the spectrum higher levels of over-compliance are also related to higher substantive performance. Kollman and Prakash (2002, p. 48) state that voluntary environmental standards like ISO 14001 can be thought of as examples of club goods because 'it is impossible to price the discrete units of goodwill benefits that they generate'. The authors list several reasons for firms to become a member of such a club. First, they can voluntarily adopt a standard along with several other industry players in order to influence regulators and actively shape their institutional environment. In addition, joining a club may allow a company to decrease research costs and increase competitive advantage (Barney, 1991). Cost savings can be achieved due to the minimization of waste in the production process. Also, some stakeholders such as banks and insurance

companies may offer companies that comply with voluntary standards better rates than their competition (Kollman and Prakash, 2002, p. 48). Our results indicate that firms maintaining higher internal regulatory standards than the external industry standards are associated with higher substantive performance.

Regulatory fit and symbolic performance

Our second hypothesis – that under-compliance has a negative relationship with symbolic performance – is not supported by our results. The negative coefficient found is not significant. A potential explanation for this is that over-compliance involves non-isomorphic behavior, which may also be a cause for concerns over legitimacy (Deephouse, 1996). Heugens and Lander (2009) explain the difference between two types of isomorphism: competitive and institutional. The former concerns organizations becoming similar over time as market conditions select out inefficient structures and strategies (Scott, 2001). The latter involves firms actively selecting strategies in which they conform to the competition in order to gain legitimacy (Deephouse and Suchman, 2008). In our analysis, we have assumed active agency and therefore we have used the definition of institutional isomorphism, which is reinforced by the support for hypothesis 1. Using institutional isomorphism theory, the lack of increase in symbolic performance for over-compliance can be explained by the fact that it involves behavior that is different from the industry standard and therefore not directly considered legitimate.

Managerial implications

The results of this study underline the body of research that finds that closer institutional fit is related to lower performance (Meyer and Rowan, 1977; Deephouse, 1999; Baretto and Baden-Fuller, 2006). Managers who find reason to defy the industry regulatory standard can infer from our findings that this may be a way towards achieving better substantive performance. We show that a firm's lack of regulatory fit is correlated with higher substantive performance. The rationale of

institutional theory is that although fit with institutional standards may increase the likelihood of firm survival, it often clashes with efficiency criteria (Meyer and Rowan, 1977). Managers can infer from this that internal practice creation may lead to higher substantive performance if based on firm-specific requirements rather than on the industry standard.

Our findings show that higher substantive performance is achieved both by firms that over-comply (negative under-compliance) and by firms that under-comply beyond a certain point. Low levels of under-compliance are correlated with the lowest substantive performance compared to the industry average. This suggests that to achieve higher substantive performance, managers should follow a well-structured approach of under-compliance. Slight under-compliance, conceivably due to failing to comply with industry standards, is correlated to the lowest levels of substantive performance. An interesting finding is that a certain degree of over-compliance is correlated with higher substantive performance benefits than the same amount of under-compliance. This suggests that the managers who are proactive in imposing high standards on their firms are likely to see returns from this in terms of substantive performance.

On a policy level, a question that arises is whether the firms in an industry should be expected to respond to regulation in a one-way direction or whether more interaction between firm behavior and regulation should be made possible. Ayres and Braithwaite (1992) suggest that the behavior of firms in an industry should determine the degree and type of government involvement. They argue for a concept of 'responsive regulation' where regulators first evaluate the effectiveness of private regulation before imposing governmental regulation. Our findings suggest that situations exist where firms have an incentive to over-comply, or self-impose high safety- or environmental standards. Following Ayres and Braithwaite (1992) policy-makers practicing responsive regulation would in such situations let the market self-regulate, resulting in efficient but still effective industry regulation.

Limitations and directions for future research

Although our study provides important insights into the substantive performance effects of regulatory misfit, it also raises several suggestions for further research. To begin with, one finding of our study that would be interesting to investigate further is the fact that the sides of the U-shaped curve that is found between under-compliance and substantive performance reach to different heights. According to our results, each degree of over-compliance is correlated with higher substantive performance levels than is the case for the same degree of under-compliance. One potential explanation for the high performance found in over-complying firms is the concept of ‘club goods’ (Buchanan, 1965). This concept explains that firms may participate in voluntary regulation programs in order to benefit from advantages available only to club members. Future research could examine the different motivations for over- and under-compliance and study whether they differ in relationship to performance. Although we find positive performance effects for both types of lack of regulatory fit, future research can investigate other parameters of each type of lack of regulatory fit and further delineate what characterizes each.

Although our cross-sectional study provides a first step in measuring the relationship between regulatory fit and performance, it would be interesting to study this relationship over a longer period of time. This would enable us to determine how changes in regulatory fit affect performance. In addition, internal- and external regulatory stringency in this research are measured through managers’ perception. This could potentially have led to a bias, especially in the evaluation of external regulation, as the stringency of these may be perceived as higher than the actual value.

Conclusion

Institutional scholars emphasize that complying with industry standards is important for symbolic performance, although it may not be the route to achieving the highest substantive performance (Meyer and Rowan, 1977). We have argued

that defiance of the industry regulatory standards, either in the form of over- or under-compliance, is related to higher substantive performance than simple compliance to these norms. Our empirical results indeed show a U-shaped relationship between under-compliance and substantive performance. This study adds to the fit research by highlighting the features of regulatory fit specifically – an aspect that has been slightly underemphasized in the fit research. By dissecting the term institutional fit, we allow for a more comprehensive discussion of what it entails and its effects on performance. We propose a theory of active agency, where firms that see opportunities to profit from diverging from the industry standard will seize them, resulting in higher substantive performance than is likely to be achieved by firms that simply comply to the standards. We also find that that a certain degree of over-compliance is correlated with higher substantive performance benefits than the same amount of under-compliance. This suggests that substantive performance benefits are likely to be enjoyed by managers who are proactive in imposing high standards on their firms.

References

- Aiken, L. S. and West, S. G. 1991. *Multiple regression: Testing and interpreting interactions* Thousand Oaks, CA: Sage.
- Ayres, I., & Braithwaite, J. 1992. *Responsive regulation: Transcending the deregulation debate*. Oxford University Press.
- Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
- Baum, J. A. C. and Oliver, C. 1991. Institutional linkages and organizational mortality. *Administrative Science Quarterly*, 36: 187-218.
- Beckert, J. 1999. Agency, entrepreneurs, and institutional change. The role of strategic choice and institutionalized practices in organizations. *Organization Studies*, 20: 777-799.
- Buchanan, J. M. 1965. An economic theory of clubs. *Economica*, 32: 1-14.
- Carroll, G. R., Goodstein, J. and Gyenes, A. 1988. Organizations and the state: Effects of the institutional environment on agricultural cooperatives in Hungary. *Administrative Science Quarterly*, 33: 233-256.
- Dacin, M. T., Goodstein, J. and Scott, W. R. 2002. Institutional theory and institutional change: Introduction to the special research forum. *The Academy of Management Journal*, 45: 43-56.
- D'Aunno, T., Succi, M. and Alexander, J. A. 2000. The role of institutional and market forces in divergent organizational change. *Administrative Science Quarterly*, 45: 679-703.
- Deephouse, D. L. and Suchman, M. C. 2008. Legitimacy in organizational institutionalism' in Greenwood, R., Oliver, C., Sahlin, K. and Suddaby, R. (Eds), *The handbook of organizational institutionalism*. Thousand Oaks, CA: Sage.
- Deephouse, D. L. 1996. Does isomorphism legitimate?. *The Academy of Management Journal*, 39, 1024-1039.
- Deephouse, D. L. 1999. To be different, or to be the same? It's a question (and theory) of strategic balance. *Strategic management journal*, 20(2): 147-166.
- Dess, G. G. and Beard, D. W. 1984. Dimensions of organizational task environments. *Administrative Science Quarterly*, 29: 52-73.
- DiMaggio, P. J. and Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48: 147-160.
- Dobrev, S. D. and Carroll, G. R. 2003. Size (and competition) among organizations: Modeling scale-based selection among automobile producers in four major countries, 1885-1981. *Strategic Management Journal*, 24, 541-558.
- Drazin, R. and Van de Ven, A. H. 1985. Alternative forms of fit in contingency theory. *Administrative Science Quarterly*, 30: 514-539.

- Field, A. P. 2000. *Discovering statistics using SPSS for windows: Advanced techniques for the beginner*. London: Sage.
- Garud, R., Hardy, C. and Maguire, S. 2007. Institutional entrepreneurship as embedded agency: An introduction to the special issue. *Organization Studies*, 28: 957-969.
- Glick, W. H. 1985. Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research. *Academy of Management Review*, 10: 601-616.
- Gossum, P. Van, Arts, B., & Verheyen, K. (2012). "Smart regulation": Can policy instrument design solve forest policy aims of expansion and sustainability in Flanders and the Netherlands?. *Forest policy and economics*, 16, 23-34.
- Grabosky, P. N. (1995). Regulation by reward: on the use of incentives as regulatory instruments*. *Law & Policy*, 17(3), 257-282.
- Greenwood, R., Suddaby, R. and Hinings, C. R. 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. *The Academy of Management Journal*, 45: 58-80.
- Greenwood, R. and Hinings, C. R. 1996. Understanding radical organizational change: Bringing together the old and the new institutionalism. *The Academy of Management Review*, 21: 1022-1054.
- Greenwood, R. and Suddaby, R. 2006. Institutional entrepreneurship in mature fields: The big five accounting firms. *Academy of Management Journal*, 49: 27-48.
- Haunschild, P. R. and Miner, A. S. 1997. Modes of interorganizational imitation: The effects of outcome salience and uncertainty. *Administrative Science Quarterly*, 42: 472-500.
- Haveman, H. A. 1993. Follow the leader: Mimetic isomorphism and entry into new markets. *Administrative Science Quarterly*, 38: 593-627.
- Hendricks, K. B., & Singhal, V. R. 2001. Firm characteristics, total quality management, and financial performance. *Journal of Operations Management*, 19(3): 269-285.
- Heugens, P. M. A. R. and Lander, M. W. 2009. Structure! agency! (and other quarrels): A meta-analysis of institutional theories of organization. *Academy of Management Journal*, 52: 61-85.
- Hirsch, P. M. 1997. Sociology without social structure: Neoinstitutional theory meets brave new world. *American Journal of Sociology*, 102: 1702-1723.
- Hoffman, A. J. 1999. Institutional evolution and change: Environmentalism and the US chemical industry. *Academy of Management Journal*, 42, 351-371.
- Holm, P. 1995. The dynamics of institutionalization: Transformation processes in Norwegian fisheries. *Administrative Science Quarterly*, 40, 398-422.
- Kollman, K., & Prakash, A. 2002. EMS-based environmental regimes as club goods: examining variations in firm-level adoption of ISO 14001 and EMAS in UK, US and Germany. *Policy Sciences*, 35(1), 43-67.
- Kondra, A. Z. and Hinings, C. R. 1998. Organizational diversity and change in institutional theory. *Organization Studies*, 19, 743-767.

- Lawrence, T. B., Suddaby, R. and Leca, B. (Eds). 2009. *Institutional work: Actors and agency in institutional studies of organizations*. Cambridge, UK: Cambridge University Press.
- Levinthal, D. A., & March, J. G. 1993. The myopia of learning. *Strategic management journal*, 14(S2): 95-112.
- Lieberman, M. B. and Montgomery, D. B. 1988. First-mover advantages. *Strategic Management Journal*, 9, 41-58.
- Lounsbury, M. M. and Crumley, E. T. 2007. New practice creation: An institutional perspective on innovation. *Organization Studies*, 28: 993-1012.
- MacMillan, D., Demos, T. (July 31, 2015) Uber Valued at More Than \$50 Billion. The Wall Street Journal
- Maguire, S., Hardy, C. and Lawrence, T. B. 2004. Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada. *The Academy of Management Journal*, 47: 657-679.
- Mahon, J. F. and Murray, E. A., Jr. 1981. Strategic planning for regulated companies. *Strategic Management Journal*, 2: 251-262.
- Meyer, J. W., & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83: 340-363.
- Miller, D., & Chen, M. J. 1994. Sources and consequences of competitive inertia: A study of the US airline industry. *Administrative Science Quarterly*, 39(1): 1-23.
- O'Brien, S. (June 27, 2015) 'Crazy money' - Airbnb valued at over \$25 billion. CNN
- Oliver, C. 1991. Strategic responses to institutional processes. *The Academy of Management Review*, 16: 145-179.
- Oliver, C. 1997. Sustainable competitive advantage: Combining institutional and resource-based views. *Strategic management journal*, 18(9): 697-713.
- Parsons, T. 1960. *Structure and Process in Modern Society*. Glencoe, IL: Free Press
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), 879-903.
- Reynolds, L. 1981. Foundations of an institutional theory of regulation. *Journal of Economic Issues*, 641-656.
- Rossi, P. H., Wright, J. D. and Anderson, A. B. (Eds) 1983. *Handbook of survey research*. New York: Academic Press.
- Scott, W. R. 1987. The adolescence of institutional theory. *Administrative Science Quarterly*, 32: 493-511.
- Scott, W. R. 2001. *Institutions and organizations*. Thousand Oaks: Sage Publications.
- Schneiberg, M., & Bartley, T. (2008). Organizations, regulation, and economic behavior: Regulatory dynamics and forms from the nineteenth to twenty-first century. *Annual Review of Law and Social Science*, 4, 31-61.

- Seo, M. and Creed, W. E. D. 2002. Institutional contradictions, praxis, and institutional change: A dialectical perspective. *The Academy of Management Review*, 27: 222-247.
- Sewell, W. H. Jr. 1992. A theory of structure: Duality, agency, and transformation. *American Journal of Sociology*, 98: 1-29.
- Sharma, U., Lawrence, S., & Lowe, A. 2014. Accountants as institutional entrepreneurs: changing routines in a telecommunications company. *Qualitative Research in Accounting & Management*, 11(3): 190-214.
- Smith, K. G., Guthrie, J. P. and Chen, M. J. 1989. Strategy, size and performance. *Organization Studies*, 10, 63-81.
- Snow, C. C. and Hrebiniak, L. G. 1980. Strategy, distinctive competence, and organizational performance. *Administrative Science Quarterly*, 25: 317-336.
- Stam, D. A., van Knippenberg, D. and Wisse, B. 2010. The role of regulatory fit in visionary leadership. *Journal of Organizational Behavior*, 31: 499-518
- Suchman, M. C. 1995. Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20, 571-610.
- Tsamenyi, M., Cullen, J., & González, J. M. G. 2006. Changes in accounting and financial information system in a Spanish electricity company: a new institutional theory analysis. *Management Accounting Research*, 17(4): 409-432.
- Volberda, H. W., Van der Weerdt, N., Verwaal, E., Stienstra, M. and Verdu, A. J. 2012. Contingency fit, institutional fit, and firm performance: A metafit approach to Organization-Environment relationships. *Organization Science*, 23, 1040-1054.
- Wade, J. B., Swaminathan, A. and Saxon, M. S. 1998. Normative and resource flow consequences of local regulations in the American brewing industry, 1845-1918. *Administrative Science Quarterly*, 43, 905-935.
- Wholey, D. R. and Sanchez, S. M. 1991. The effects of regulatory tools on organizational populations. *Academy of Management Review*, 16: 743-767.
- Zajac, E. J., Kraatz, M. S., & Bresser, R. K. 2000. Modeling the dynamics of strategic fit: A normative approach to strategic change. *Strategic management journal*, 21(4): 429-453.
- Zimmerman, M. A. and Zeitz, G. J. 2002. Beyond survival: Achieving new venture growth by building legitimacy. *Academy of Management Review*, 27, 414-431.

Tables and diagrams

Table 3.1. Spectrum of regulatory fit

Type of regulatory fit	Definition
Over-compliance	Stringency firm external regulation > Industry average regulation stringency
Regulatory fit	Stringency firm external regulation = Industry average regulation stringency
Under-compliance	Stringency firm external regulation < Industry average regulation stringency

Table 3.2. Operationalization of constructs

Construct	Operationalization
Internal regulation	Perceived rigorousness of firms' internal regulatory environment
External regulation	Perceived rigorousness of firms' external regulatory environment.
Under-compliance	Calculated difference between perceived rigorousness external regulation and internal regulation
Symbolic performance	Average of perceived growth in market share, customer satisfaction and employee satisfaction for the company between 2010 and 2011
Substantive performance	Perceived profit growth for the company between 2010 and 2011

Table 3.3 Correlation matrix

Study Variable	Mean	s.d.	0	1	2	3	4	5	6	7	8
<i>Main study variables</i>											
00. Under-compliance	0.9601	1.43 373									
01. Internal regulation	3.8305	1.29 429	-0.6 5**	0.85 2							
02. External regulation	4.8182	1.14 312	0.52 7**	0.30 3**	0.78 6						
03. Substantive Performance	4.86	1.29	-0.9 3	0.11 3	0.00 8						
04. Symbolic performance	4.9643	0.99 833	-0.0 26	0.05 7	0.03	0.69 1**	0.80 9				
<i>Control Variables</i>											
05. Dynamism	4.3504	1.08 508	0.04 3	0.14 7*	0.21 8**	-0.0 23	0.14 2*	0.73 2			
06. Complexity	4.9946	1.15 924	0.13 *	0.14 7*	0.32 6**	0.00 2	0.18 0**	0.48 5**	0.8 76		
07. Trust	5.6490	0.90 817	0.02 4	0.00 2	0.08 2	0.31 0**	0.36 3**	0.13 3*	0.1 45*	0.91 2	
08. Amount of Employees	1.9745	0.93 642	0.21 2*	0.09 2	0.18 9**	-0.0 33	-0.1 06	0.04 4	0.1 05	0.20 3**	
09. Sector	0.3246	0.46 878	-0.0 02	0.06 9	0.07 3	-0.0 85	-0.0 84	0.08 8	0.0 54	-0.0 17	-0.0 43

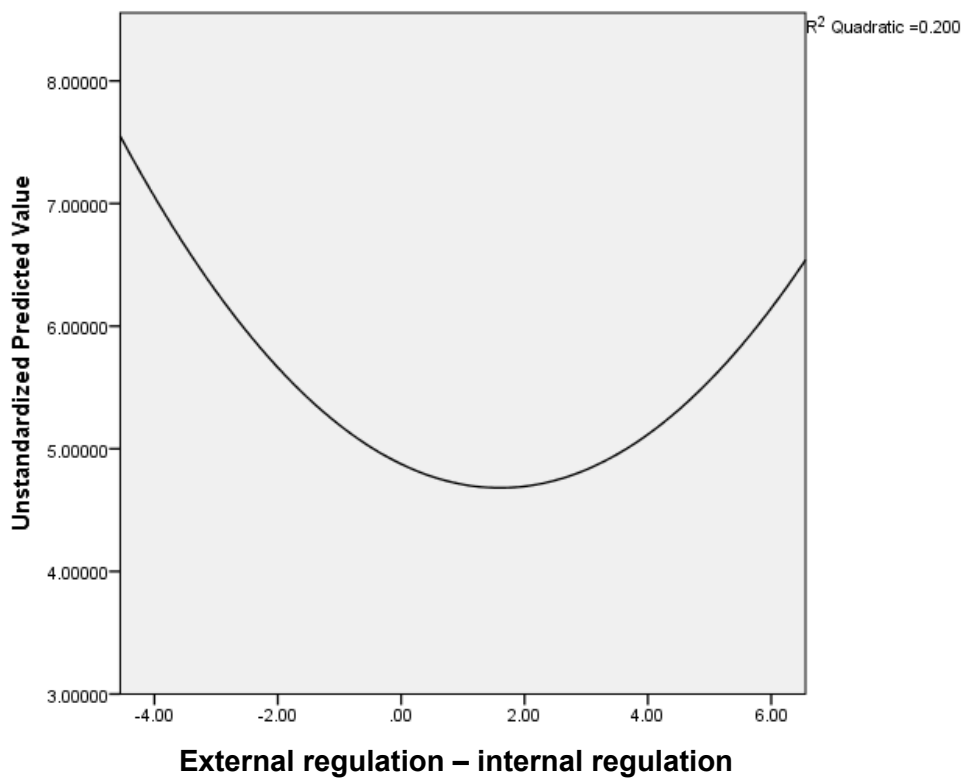
1-tailed test * $p < 0.05$ ** $p < 0.01$; Cronbach's alpha's on diagonal

Table 3.4. Linear regression results predicting substantive and symbolic performance

Variable	Substantive Performance		Symbolic Performance	
	Model 1	Model 2	Model 3	Model 4
Intercept	4.837	4.681	4.856	4.881
<i>Control variables</i>				
Dynamism	-0.07	-0.43	0.029	0.030
Complexity	-0.005	-0.04	0.109	0.112
Trust	0.477**	0.467**	0.357**	0.358**
Log amount of Employees	0.006	0.032	-0.061	-0.058
Sector				
<i>Independent variables</i>				
Under-compliance		-0.221**		-0.023
Under-compliance²		0.067*		
R ²	0.154	0.180	0.188	0.189
Adjusted R ²	0.09	0.114	0.129	0.127
Durbin Watson		1.828		1.677

* p < 0.05 ** p < 0.01

Figure 3.1. The U-shaped relationship between under-compliance and substantive performance



Appendices

Appendix 1. List of questionnaire items

Variable	Question
Internal regulation1	Employees in our organization always act according to formal rules
Internal regulation2	Managers are responsible for protocols in order to improve the efficiency of employees.
Internal regulation3	Rules and procedures are always followed within our organization
Internal regulation4	Rules, regulations and sanctions have a central place within our organization
Internal regulation5	Within our organization there are sanctions upon breaking the rules
External regulation1	The influence of rules and laws is evident within our market
External regulation2	Regulatory and legislative bodies play an important role
External regulation3	Many aspects of our work are influenced by legislation
External regulation4	Our market is characterized by numerous restrictions as a result of legislation
External regulation5	The degree of regulation is decreasing within our market
External regulation6	The performance of organizations in our market is being watched closely
Substantive Performance1	Growth in profit
Symbolic Performance 1	Market share
Symbolic Performance 2	Customer satisfaction
Symbolic Performance 2	Employee satisfaction

Appendix 2. Sector-specific descriptive data for internal and external regulation

Sector	Internal Regulation		External regulation	
	Mean	s.d	Mean	s.d
Agrifood	4.03	1.30	5.53	1.00
Horticulture	3.64	1.51	5.71	1.19
High tech	3.33	1.05	4.47	1.38
Energy	3.76	1.27	5.06	1.02
Logistics	4.50	1.31	4.91	1.04
Creative industry	2.37	0.63	2.83	0.59
Life sciences	4.1	0.55	5.83	0.68
Chemicals	4.8	1.78	3.92	0.12
Water	3.53	0.31	5.11	0.84
Construction	3.50	1.27	5.09	0.97
Other manufacturing & mining	4.26	1.12	4.44	0.86
Finance	3.60	0.63	5.33	1.13
Other services	3.78	1.49	4.91	1.20
Other	3.87	1.20	4.54	1.15

Chapter 4

Study 3. Maintenance of Cross-Sector Partnerships: the Role of Frames in Sustained Collaboration

Abstract

We examine the framing mechanisms used to maintain a cross-sector partnership (XSP) that was created to address a complex long-term social issue. We study the first eight years of existence of an XSP that aims to create a market for recycled phosphorus, a nutrient that is critical to crop growth but whose natural reserves have dwindled significantly. Drawing on 27 interviews and over 3,000 internal documents, we study the evolution of different frames used by diverse actors in an XSP. We demonstrate the role of framing in helping actors to avoid some of the common pitfalls for an XSP, such as debilitating conflict, and in creating sufficient common ground to sustain collaboration. As opposed to a commonly held assumption in the XSP literature, we find that collaboration in a partnership does not have to result in a unanimous agreement around a single or convergent frame regarding a contentious issue. Rather, successful collaboration between diverse partners can also be achieved by maintaining a productive tension between different frames through ‘optimal’ frame plurality – not excessive frame variety that may prevent agreements from emerging, but the retention of a select few frames and the deletion of others towards achieving a narrowing frame bandwidth. One managerial implication is that resources need not be focussed on reaching a unanimous agreement among all partners on a single mega-frame vis-à-vis a contentious issue, but can instead be used to kindle a sense of unity in diversity that allows sufficient common ground to emerge, despite the variety of actors and their positions.

Key words: Cross-Sector Partnership, frames, framing, mechanism, collaboration, maintenance

Introduction

“All the human and animal manure which the world wastes, if returned to the land, instead of being thrown into the sea, would suffice to nourish the world.” (Victor Hugo, *Les Misérables*)

Most of us are not aware that the world’s food supply is seriously threatened by an approaching shortage of phosphorus reserves. This nutrient is a key ingredient in crop fertilizer that fuels high-yielding crops needed to feed the growing world population. Although scientists have sounded alarm bells about the impending phosphorus shortage in major news outlets such as *Nature* (Gilbert, 2009; Kochian, 2012) and *The Times* (Lewis, 2008), this threat has not been given the attention it deserves. Several grassroots initiatives are, however, now trying to address this issue and raise awareness of it. In tandem, techniques are being developed to recycle phosphorus, rather than to mine it. Waste such as household trash and animal- or even human manure can be used as input for phosphorus recycling. The Dutch Nutrient Platform is one of the initiatives aiming to address the “phosphorus challenge”, and takes the form of a cross-sector partnership (XSP), sometimes referred to as a CSSP (cross-sector social partnership). Within this platform, more than thirty partners are working together to create a market for recycled phosphorus. Yet initiatives such as this one are impeded by several technical and regulatory difficulties, as well as by extreme diversity among stakeholders. Despite these challenging conditions, the Nutrient Platform has nevertheless been able to coordinate the involvement of its diverse constituents and achieve significant regulatory reform. The platform took three years to establish, but has now been in full operation for the past six years, demonstrating its “capacity to create value” (Koschman, Kuhn, Pfarrer, 2012). This is a long time compared to the duration of many other similar XSPs. Indeed, being temporary in nature (Manning and Roessler, 2014, p. 529), XSPs are vulnerable to derailment, failure or ineffectiveness (Le Ber and Branzei, 2010; Poncelet, 2001; Turcotte and Pasquero, 2001). The Nutrient Platform has avoided this fate and continues to address the phosphorus challenge.

As an XSP, the Nutrient Platform is a collaborative initiative involving entities from different societal sectors – NGOs, government and private business – and is aimed at resolving the complex global environmental threat of an increasing shortage of phosphorus. While no one party is responsible for addressing the phosphorus challenge, if it remains unresolved, food security in the future will be in jeopardy. Taking on a complex challenge of this scale and scope requires collaboration across multiple organizations (Selsky and Parker, 2005) and the development of “new organizational forms to accommodate the diversity of organizational activity taking place to address social problems” (Crane, 2010, p. 19). Cross-sector partnerships are one form in which such collaborations occur.

We aim to contribute to the literature on XSPs by examining the dynamics underlying sustained collaboration. It is widely recognized that there are different stages of XSP development (Gray, 1985; 1989): formation, implementation and outcomes (Selsky and Parker, 2005). While many studies focus on the formation of XSPs (Koschmann, Kuhn and Pfarrer, 2012; Manning and Roessler, 2014), and their outcomes (Clarke and Fuller, 2010; Clarke and MacDonald, 2016), few studies examine how collaboration is sustained to allow XSPs to continue (e.g., Le Ber and Branzei, 2010).

We examine how the various participants in the XSP both create an understanding of the issue in contention and negotiate conflicts between divergent interests. Responding to a call for more “longitudinal studies to investigate how XSPs evolve” (Selsky and Parker, 2005, p. 86), we study how the framing work carried out by actors changes as a cross-sector partnership moves through different stages of evolution – variation, selection, deletion and retention (Campbell, 1965; Lewin and Volberda, 2003).

We take a micro-level framing approach to examining sustained collaboration in an XSP because “it is only at the micro level that the effects of institutions can be ‘directly’ observed” (Dacin, Munir, Tracey, 2010, p. 1393). We draw on work on the micro-processes and mechanisms of framing, including the conceptual framework developed by Gray, Purdy and Ansari (2015), and identify specific

mechanisms and tools used by cross-sector partners to sustain an effective collaboration. Whereas existing models of framing in collaboration often focus on convergence towards a single frame – through frame alignment, for example – our analysis suggests that maintaining optimal “frame plurality” (Gray, Purdy and Ansari, 2015) may provide a valuable way of understanding how agreements emerge. Maintaining optimal frame plurality requires parties to manage or tolerate multiple overlapping, conflicting, interstitial, or even unrelated meanings drawn from different sectors in the interest of getting work done (Gray et al., 2015; Kraatz and Block, 2008). Our findings indicate that sustained collaboration can be achieved by creating a “productive tension” (Murray, 2010) between different frames and maintaining ‘optimal’ frame plurality – i.e., not using an excessive variety of frames but ret and recombining a few select frames and deletion others. We observed that frames evolve within a narrowing bandwidth as the collaboration progresses, and previous frames that have lost traction or no longer fit the discussion are discarded. This dramatically reduces the number of possible combinations, gets parties focused on the final aim, and allows agreements to emerge. Furthermore, our data suggests that this frame evolution “occurs in a politicized social context and is inherently bi-directional” (Gray et al., 2015, p. 115), where changes in power arrangements arising from shifts in the partnership composition (such as more businesses entering the XSP) shape which frames are selected, discarded, or retained.

By studying how collaboration may be sustained in an XSP, we contribute to the literature in three ways. First, studies have focused mostly on the formation of XSPs (Koschmann, Kuhn and Pfarrer, 2012; Manning and Roessler, 2014), their outcomes (Clarke and Fuller, 2010; Clarke and MacDonald, 2016), and different stages in their development (Gray, 1989; Selsky and Parker, 2005). We build on this work by shedding light on the process of XSP evolution, providing insights into some of the challenges that occur in XSPs after their formation, and explaining how collaboration may be continued by sustaining optimal frame

plurality amid the diversity of constituents and their differing positions regarding the issue at hand.

Second, our notion of optimal frame plurality extends related work that focuses on XSP dyads such as “frame fusion” (Le Ber and Branzei, 2010) by examining how this complicated process takes place among a vast array of diverse partners from different sectors in an XSP which changes in composition over time. Also, while the concept of frame plurality has been theorized in previous studies (Gray et al., 2015; c.f., Murray, 2010), our notion of optimal frame plurality suggests that plurality may have its limits and excessive variety may thwart sustained collaboration. We argue that the deletion of certain frames and the retention of a few may be necessary for generating optimal frame plurality and sustaining collaboration over time.

Third, while an impressive body of work on hybrid logics and hybridization has explained how plurality is managed in both organizational and inter-organizational settings by segmenting, bridging and recombining fragments of conflicting logics (e.g., Battilana and Dorado, 2010; Battilana and Lee, 2014; Pache and Santos, 2013; Smets, Jarzabkowski, Burke and Spree, 2015; York, O’Neil and Sarasvathy, 2016), we show how actors manage this process of dealing with conflicting pressures together with other parties as a collective endeavor.

Next, we present a literature review on cross-sector partnerships, introduce our research context and case data, and report our findings. We then derive a model for sustained collaboration and finally discuss some implications for future research.

Most of us are not aware that the world’s food supply is seriously threatened by an approaching shortage of phosphorous reserves. This nutrient is a key ingredient for crop fertilizer that fuels high-yielding crops necessary for feeding the growing world population. Although scientists have raised alarm bells about the impending phosphorous shortage in major news outlets such as *Nature* (Gilbert, 2009; Cochlin, 2012) and *The Times* (Lewis, 2008), the threat remains underemphasized. Several grassroots initiatives however have taken up the issue and are trying to raise awareness. In tandem, techniques are being developed to recycle

phosphorous, as an alternative to mining. Waste such as household trash but also animal or even human manure can be used as input for phosphorous recycling. The Dutch Nutrient Platform is one of the initiatives that aim to address the “phosphorus challenge”. In this cross-sector partnership (XSP) more than thirty partners work together to create a market for recycled phosphorous. Yet initiatives such as this one are impeded by several technical and regulatory difficulties, as well as extreme stakeholder diversity. Under these challenging conditions, the Nutrient Platform has been able to continually coordinate the involvement of its diverse constituents and achieve significant (regulatory) changes. The platform has been in operation and maintained its ‘capacity to create value’ (Coachman, Kuhn, Pfarrer, 2012) for six years, which is long compared to many other similar XSPs. Indeed, being temporary in nature (Manning and Roessler, 2014, p. 529), XSPs are vulnerable to derailment, failure or ineffectiveness (Le Ber and Branzei, 2010; Poncelet, 2001; Turcotte and Pasquero, 2001). The Nutrient Platform has avoided such a fate and continued to address the phosphorous challenge.

The Nutrient Platform as a cross-sector partnership (XSP) is a collaborative initiative between entities from different societal sectors; NGOs, government and private business that is aimed at resolving the complex global environmental threat of an increasing phosphorous shortage. While no one party is responsible for addressing the phosphorous challenge, if it remains unsolved, food safety in the future is in jeopardy. Taking on a complex challenge of this scale and scope requires collaboration across multiple organizations (Selsky and Parker, 2005) and the development of ‘new organizational forms to accommodate the diversity of organizational activity taking place to address social problems’ (Crane, 2010, p. 19). Cross-sector partnerships are one form in which such collaborations occur.

We aim to contribute to the literature on XSPs by examining the dynamics underlying sustained collaboration. The existence of different stages of XSP development is widely recognized (Gray, 1985; 1989); formation, implementation and outcomes (Selsky and Parker, 2005). While many studies focus on the formation of XSPs (Koschmann, Kuhn and Pfarrer, 2012; Manning and Roessler,

2014), and their outcomes (Clarke and Fuller, 2010; Clarke and MacDonald, 2016), few studies examine how collaboration is sustained to allow for XSPs to continue (e.g., Le Ber and Branzei, 2010).

We examine how multiple participants in the XSP both create an understanding of the issue in contention and negotiate conflicts between divergent interests. Responding to a call for ‘more longitudinal research to capture the evolution’ of XSPs (Selsky and Parker, 2005, p. 86), we study how framing work performed by actors, changes as a cross-sector partnership moves through different stages of evolution – variation, selection, deletion and retention (Campbell, 1965; Lewin and Volberda, 2003).

We take a micro-level framing approach to examining sustained collaboration in an XSP because ‘it is only at the micro level that the effects of institutions can be ‘directly’ observed’ (Dacin, Munir, Tracey, 2010, p. 1393). Our analysis suggests maintaining optimal ‘frame plurality’ (Gray, Purdy and Ansari, 2015) as an alternative to existing models about framing in collaborations, which indicate a trend of convergence toward a single frame such as through frame alignment (Snow et al., 1986) to explain how agreements emerge. This mechanism involves parties managing or tolerating multiple overlapping, conflicting, interstitial, or even unrelated meanings drawn from different sectors in the interest of getting work done (Gray et al., 2015; Kraatz and Block, 2008). Our findings indicate that sustained collaboration can be achieved by creating a ‘productive tension’ (Murray, 2010) among different logics and frames and maintaining ‘optimal’ frame plurality – not excessive frame variety but the retention and recombination of a few select frames and the deletion of others. We observed that frames evolve within a narrowing bandwidth as the collaboration progresses, and previous frames that lose traction or no longer fit are discarded. This dramatically reduces the number of possible combinations, gets parties focused on the final aim and allow for agreements to emerge. Furthermore, our data suggests that this frame evolution ‘occurs in a in a politicized social context and is inherently bi-directional’ Gray et al. (2015, p. 115), where changes in power arrangements

arising from shifting partnership composition (such as more businesses entering the XSP) shape which frames are selected, taken off the agenda or retained.

By studying how collaboration may be sustained in an XSP, we contribute in three ways. *First*, studies have mostly focused on the formation of XSPs (Koschmann, Kuhn and Pfarrer, 2012; Manning and Roessler, 2014), their outcomes (Clarke and Fuller, 2010; Clarke and MacDonald, 2016), and different stages of XSP development (Gray, 1989; Selsky and Parker, 2005). We build on this work by shedding light on the process of XSP evolution, providing insights into some of the challenges that occur in XSPs after their formation, and explaining how collaboration may continue through sustaining optimal frame plurality amid the diversity of constituents and their divergent positions with regards to the issue at hand.

Second, our notion of optimal frame plurality extends related work focusing on XSP dyads such as ‘frame fusion’ (Le Ber and Branzei, 2010) by examining how this complicated process takes place among a vast array of diverse partners from different sectors in a changing XSP composition over time. Also, while the concept of frame plurality has been theorized in previous studies (Gray et al, 2015; cf., Murray, 2010), our notion of ‘optimal’ frame plurality explains how the degree of plurality may have limits and how excessive variety may thwart sustained collaboration. We argue that the deletion of certain frames and the retention of a few may be necessary for sustaining optimal frame plurality and collaboration over time.

Third, while an impressive body of work on hybrid logics and hybridization has explained how plurality is managed in both organizational and inter-organizational settings, such as through segmenting, bridging and recombining fragments of conflicting logics (e.g., Battilana and Dorado, 2010; Battilana and Lee, 2014; Pache and Santos, 2013; Smets, Jarzabkowski, Burke and Spee, 2015; York, O’Neil and Sarasvathy, 2016), we show how actors manage this process of dealing with conflicting pressures not only on their own but together as a collective.

In the next sections, we begin with a literature review on cross-sector partnerships, introduce our research context and case data, and report our findings. We then derive a model for sustained collaboration and finally discuss some implications for future research.

Cross-Sector Partnerships and Collaborations

Society faces a range of complex social problems, or wicked problems (Rittel and Webber, 1973) “defined by their circular causality, persistence, absence of well-structured alternative solutions, relative lack of room for trial and error learning” (Dorado and Ventresca, 2013: p. 69; Reinecke and Ansari, 2016). “The wickedness of the problem reflects the diversity of those involved in the issue” (Lach, Rayner and Ingram, 2005: p. 7). Addressing wicked problems requires collaboration between multiple organizations across sectors (Selsky and Parker, 2005). Gray (1985, p. 912) defines collaboration as the pooling of resources, by two or more stakeholders, “to solve a set of problems which neither can solve individually”. This pooling occurs when problems are “complex, wide in scope, and beyond the scope of single organizations” (Westley and Vredenburg, 1991: p. 67).

Though a collaborative multi-party effort is often necessary to address complex issues, the cooperation required can be very difficult, given the plurality and diversity of the actors involved. Indeed, fostering agreement among diverse parties over a contentious issue is highly challenging and fraught with obstacles. The new collaborative arrangement may include “formal or informal institutional arrangements of overlapping sectoral segments and/or combinations of governance mechanisms” (Seibel, 2015, p. 697). While institutional pluralism has been recognized as a phenomenon at the field level, it can also occur at the organizational level (Kraatz and Block, 2008), and entails “the co-existence of alternative, legitimate and potentially competing strategies within a single organization” (Jarzabkowski, Matthiesen and Van de Ven, 2009, p. 285). Murray (2010, p. 379) examines pluralism at the level of individual exchanges among actors and explains “the productive tension at the institutional boundary and the

hybrids that emerge from it”. In her study of the patenting of a mouse engineered to study cancer, she explained how the differences between disparate parties do not necessarily dissolve for a collaborative arrangement to emerge, but rather may co-exist productively. Similarly, work on hybrid organizations as “embodiments or incarnations of multiple logics” (Kraatz and Block, 2008, p. 244) has provided rich insights into how organizations combine elements from different stakeholder domains and balance prescriptions from conflicting logics (e.g., Battilana and Lee, 2014). Managing such diversity may be critical to sustaining XSPs.

Types of cross-sector partnerships (XSPs)

While collaboration across sectors is of interest to research in both public management (Bryson, Crosby and Stone, 2015) and private management (Selsky and Parker, 2005), the terminology used can vary. Waddell and Brown (1997: p. 1) use the term “intersectoral partnerships” to refer to collaboration between “organizations based in three sectors: the state (government), the market (business), and civil society (NGOs, non-profits, etc.)”. Selsky and Parker (2005) discuss cross-sector social-oriented partnerships (CSSP) in which organizations from different sectors jointly address challenges. The main activities of XSPs include mutual problem-solving, information sharing and resource allocation.

In some ways, XSPs resemble alliances. Some scholars argue that the rationale for entering into a cross-sector collaboration is one of resource dependence (Selsky and Parker, 2015, p. 851), where partners combine resources and skills to attain mutual benefits (Pfeffer and Salancik, 1978). From this perspective, “partnerships present the opportunity to create a formidable, mutually reinforcing system which combines the unique capabilities and resources of each party to deliver outcomes beyond those of any one sector acting in isolation” (Googins and Rochlin, 2000: p. 128). Studies using this approach tend to derive ideas from the more general alliance literature (Manning and Roessler, 2013, p. 527). As in alliances, a common “interaction space” can ease communication and reduce uncertainty in XSPs (Ostanello and Tsoukas, 1993). XSPs are formed in situations where

“individual firms are one among many stakeholders whose activities are truly interdependent” (Gray, 1985, p. 915). Collaboration thus involves “a cooperative, interorganizational relationship that is negotiated in an ongoing communicative process, and which relies on neither market nor hierarchical mechanisms of control” (Hardy, Phillips and Lawrence, 2003, p. 323).

However, XSPs also differ from alliances in that cooperation to address wicked problems is often the key focus. As these problems are often deemed too large for a single organization or a sector to deal with, multi-party collaboration across sectors is often necessary (Westley and Vredenburg, 1991). Hence XSPs are distinguished from ‘regular’ alliances in that partner motivations are “a blend of self-interest and altruism” (Selsky and Parker, 2005, p. 863). While XSPs are often designed as temporary projects, their aim is, however, to bring about long-term change (Manning and Roessler, 2013, p. 528). While many studies of XSP formation assume that the mechanisms for general alliances also hold for XSPs, the boundary-spanning and project-based nature of XSPs distinguish them from alliances (Manning and Roessler, 2013). In addition, cross-sector partnerships face higher levels of complexity, due to the diversity of partners involved. Although some XSPs contain only two parties, these often come from different sectors and have conflicting core values (Nicholls and Huybrechts, 2014), and unlike most alliances many XSPs are composed of multi-sectoral partners. These factors make XSP collaborations very complex to manage. As XSPs are often held together merely by the conviction of dissimilar actors about the key issue at hand (Selsky and Parker, 2005, p. 863), they remain vulnerable to derailment or even dissolution.

XSP life cycle

Studies have looked at the life cycle of XSP evolution. Selsky and Parker (2005) distinguish between studies that focus on either XSP formation, implementation or outcomes. Waddell and Brown (1997) recognise five stages of XSP development; (1) identifying preconditions for XSPs, (2) convening actors and defining

problems, (3) establishing a shared sense of direction, (4) implementing joint action strategies, and (5) expanding and institutionalizing success. Research on XSPs often involves explaining one or more stages of the life cycle, particularly the formation stage. Le Ber and Branzei (2010, p. 184) take a framing approach to describe the formation of four XSPs. They conclude that collaborations move towards “frame fusion” and once this is achieved, the new frame can be leveraged to address new emergent conflicts and problems. Koschmann, Kuhn and Pfarrer (2012) use a communication perspective to address XSP formation and propose a framework for the development of an “authoritative text” designed to create maximum value. With respect to outcomes, at least three broad categories are discussed in the literature: plan, process and partner outcomes (Clarke and Fuller, 2010). In their study of how four Canadian community sustainability plans were implemented, Clarke and MacDonald (2016) draw on the resource-based view to situate XSP outcomes as collective resources that members gain from their involvement in these multi-stakeholder partnerships.

Despite the work that has been done on the formation and outcomes of XSPs, less attention has been given to the process by which they are sustained – even though maintaining collaboration between the various parties is a major challenge for partnerships of this kind. Once an XSP has been formed, it is of course hardly a given that it will attain its goals (Gray, 1989; Huxham, 1996), and many end in failure or become ineffective. Poncelet (2001) describes how in the EU Partnership for Environmental Cooperation (EUPEC), conflict between capitalist arguments and environmental concerns stifled progress and led to the maintenance of the status quo. The author concludes that a “nonconfrontation practice” can stop a collaboration from “turning a critical eye toward some of the deeper, structural sources of current environmental dilemmas” (Poncelet, 2001, p. 22) and prevent an XSP from bringing innovative solutions to complex social problems.

Turcotte and Pasquero (2001, p. 459) describe the case of waste management in Big City, where the diversity of partners meant that only objectives that were ambiguous could be agreed upon. The partnership thus “failed to produce what it

had been designed for – a specific blueprint for an ecological waste management plan at the regional level.” Le Ber and Branzei (2010, p. 172) studied four cross-sector partnerships that sought to create social value. Although three of these collaborations were successful, one case – a partnership for minimally invasive surgery – was marked by continual conflict. Although the partnership contract was fulfilled in the end, the for-profit partner regarded the collaboration as a failure because little if any social value was created. Indeed, it is often a challenge for actors involved in XSPs to sustain collaboration and remain relevant and effective after an XSP has been formed. As many XSPs turn into ‘paper tigers’ (e.g., Poncelet, 2001; Turcotte and Pasquero, 2001), it is important to examine what makes XSPs survive for longer periods of time and what will improve their chances of achieving their goals. Language and discourse, which have been identified as being important during the formation stage of XSPs (Westley and Vredenburg, 1991; Wesley and Vredenburg, 1997; Koschmann et al., 2012), may also matter for collaborative partners in terms of helping them to maintain a collaboration beyond the formation stage. A key role is that of frames and framing.

The role of framing in sustaining collaboration

The XSP literature suggests that it is hardly a given that members of an XSP will continue to collaborate and sustain the partnership after its formation. While several factors influence XSP continuity, including the power configurations among the actors involved (Gray et al., 2015), one key communicative aspect of sustaining collaboration is framing – how actors skilfully use a variety of frames and rhetorical strategies to argue for their viewpoints and interests, as well as frames that emerge from their interactions. We follow Koschmann et al. (2012: p. 333–334) in considering collaboration within an XSP to be the outcome of a “communication process (...) distinct from market or hierarchical mechanisms of control.” How issues are framed by different participants is central to this communication process.

Framing highlights certain aspects of a perceived reality in order to stimulate a particular understanding (Entman, 1993: p. 52). Frames are “schemata of interpretation” that enable individuals “to locate, perceive, identify, and label” what happens in the world around them (Goffman, 1974: p. 21). Frames define which actors are engaged, what kinds of problems are discussed, how these problems are defined, and what kinds of solutions are considered appropriate (Hoffman, 1999; Lefsrud and Meyer, 2012; Reinecke and Ansari, 2016). Social movement scholars have shown how activists use collective action frames to “mobilize potential adherents and constituents, to garner bystander support, and to demobilize antagonists” (Snow and Benford, 1988: p. 198). These collective action frames can involve “diagnostic framing” (problem identification and attributions), “prognostic framing” (possible solutions) and “motivational framing” (for collective action) (Snow and Benford, 1988).

Other studies focus on the continuous negotiation that takes place, through ongoing interactions, to “reaffirm or challenge the frame repertoires available” (Gray et al., 2015: 116) in pursuing institutional maintenance and change. While a cognitive framing approach considers frames to be representations stored in memory, an interactional approach regards framing as “the dynamic enactment and shaping of meaning in ongoing interactions (and frames are transient communication structures)” (Dewulf et al., 2009, p. 162; Gray et al., 2015). Human behavior is thought to result from people drawing both on their existing frame repertoires and on frames that emerge during their interactions with others, as they use language and other symbols to create meaning in interactions (Cornelissen and Werner, 2014).

While agreements may arise from the development of convergent positions among actors with different interpretations of the ‘truth’, they can also be reached by allowing a plurality of interpretations to coexist, and relying on “equifinal” meaning (Donnellon, Gray and Bougon, 1986). This refers to agreeing about what action to take (e.g., collaboration) on a complex issue, despite disagreement between the different parties over why they may be doing this. For example, Reay

and Hinings (2009) showed how different actors in healthcare teams used “pragmatic collaboration” to accomplish their work when faced with multiple and seemingly irreconcilable logics.

While frame plurality may explain the emergence of agreements in some cases, excessive variety in frames might arguably thwart these agreements and result in a failure to construct sufficient common ground to reach an agreement. At the same time, attempts to homogenize the frames of multiple and often disparate actors around a single convergent position may also breed conflict and lead to a failure to reach an agreement. Thus, both too much variety and too little variety may be unhelpful in achieving sustained collaboration. It is thus worthwhile to examine the evolutionary process through which certain frames are discarded or fall into disuse in an XSP, while others evolve, recombine and persist over time. To use evolutionary language (Campbell, 1965; Lewin and Volberda, 2003; Nelson and Winter, 1982), it would be productive to examine the continuous cycle of variation, selection, retention and deletion of different frames over time in a multi-party partnership which spans sectors with differing organizational forms (businesses, government agencies and NGOs) and which seeks to address a complex global issue. This provides the main motivation for our research question: How do different frames used by multiple actors evolve over time and how might this sustain collaboration in a cross-sector partnership to address a complex global issue?

Research context, design and methods

To address the research question, we investigate how members of a Dutch XSP (Nutrient Platform) deployed framing to maintain the collaboration after the formation phase.

Research context

Phosphorus (P) is a chemical element, typically used as a main component of fertilizer. It is used to produce high-yielding crops deemed necessary to feed the

growing world population (Kochian, 2012). It is a non-renewable, non-substitutable resource (Lewis, 2008) that organisms need as a component of DNA. In both humans and animals, phosphate is excreted through the digestive tract. It is thus present in human and animal manure, which can be used as a natural fertilizer. However, to create artificial fertilizers phosphorus is predominantly mined from mineral resources. These resources are finite and may not be sufficient for the world's long-term needs (De Ridder et al., 2012). For the few countries where phosphate rock is found, it is fast becoming a strategic resource (Lewis, 2008). Used phosphorus flows mainly into surface waters and poses a major threat to the environment. Phosphorus recycling is seen as the most promising way of addressing these issues (Gilbert, 2009).

The Nutrient Platform (NP) is a Dutch multi-stakeholder group whose members “share a common concern for the global impact of phosphorus depletion and the way society is dealing with nutrients in general” (Nutrient Platform, 2014). The Netherlands is one of very few countries with a phosphorus surplus. The reason for this is the large livestock sector. On 1 April 2008, the initial five members of the XSP had their first exploratory meeting. The aim was to create a market for recycled phosphorus. In 2009 and 2010, several key documents were published that catalyzed the growth in partnership membership. After more members had joined and an authoritative text had been drawn up’ (Koschmann et al., 2012), an official covenant was signed by 21 cross-sector partners and the Nutrient Platform was officially launched in 2011. In the covenant, each member noted their ambitions for the platform and pledged their (monetary or in kind) contribution to this shared purpose for an initial period of two years. After two years, this agreement was evaluated. The members then decided to continue the partnership to work towards further achievement of the goals set out in the initial agreement (see Figure 1).

On 1, January 2015, the collaborative efforts resulted in a change in Dutch law, which allowed the previously prohibited trade of recycled phosphorus. By that time, the platform consisted of 35 diverse organizations, ranging from NGOs to

engineering firms, government agencies, producers of (artificial) fertilizer, and semi-public organizations. Though this significant achievement has taken the collaboration a step closer to its main goal, even in 2017 the partners are continuing to collaborate because their joint effort is still necessary to realize the ambitions that were outlined in the original covenant. The collective aim of the Nutrient Platform is to “close” the phosphorus cycle by recovering rather than discarding it after use. Nevertheless, individual organizational motivations for this goal range from social to financial. Some member organizations aim to achieve environmental sustainability, while others seek to make profits from recycling surplus phosphorus (from waste) into a valuable product that can be traded on the global market.

Methods

We draw on this case to understand a more general phenomenon, namely the use of framing to maintain collaboration in XSPs (Stake, 1995). The case of the Nutrient Platform provides a fertile opportunity to study the maintenance of XSPs. With the signing of the 2011 covenant, the collaboration has successfully completed the formation stage in terms of agreeing on an authoritative text (Koschmann et al., 2012). Even though the initial covenant was for a period of two years, the partners still value the collaboration that has continued as new members join. The platform represents an example of a complicated cross-sector partnership with a relatively large number of partners, from all three sectors. The consensus in the XSP literature is that when the partners are more numerous, and less homogeneous in their organizational characteristics, it will likely be more difficult for “values to converge” across actors and organizations than when the stakeholders are fewer and more homogeneous (Selsky and Parker, 2005, p. 864). This, in turn, may require more maintenance work to sustain the XSP.

In their work on strategy formulation and implementation in cross-sector partnerships, Clarke and Fuller (2010, p. 99) argue that more research should be conducted to investigate exactly how the number of partners changes the complexity of interactions within an XSP, and how this collaboration is

implemented at the organizational level. We chose this particular platform because it enabled us to collect and analyze rich data and gave us access to the largely uncategorized archives relating to the collaboration. These provided a useful and relatively unbiased source of information, as the material they contained was in the main not geared to promoting the platform.

Data collection

This paper is based on data collected from the Nutrient Platform. Primarily, it draws on 27 interviews with members of the platform. This data is triangulated with over 3,000 internal documents created within the platform during the period 2008–2015. These documents range from meeting agendas to strategic documents and marketing materials. Most of the documents are internally focused, though some – such as marketing materials and official communication materials – are aimed specifically at external audiences. The internal documents are especially insightful for examining conflicting views, while the externally aimed documents provide insights into some of the outcomes of these conflicts. We have reconstructed in detail the collaboration’s timeline from its inception in 2008 through to 2015. This data is supplemented by publicly available information about specific platform-related developments as well as broader socio-economic developments that have affected the collaboration during the period from 2015 to 2017.

To define the platform and determine who the key actors were, two preliminary interviews were conducted with the current secretary [coordinator] of the Nutrient Platform as well as with the previous postholder. These two key informants were asked to describe which individuals and entities were either currently or previously involved in developing the platform. The interviews included all the actors who were characterized as ‘significant’ or ‘long-term’ players by the key informants and other interviewees. These included all the initial member organizations of the platform, including those who had since left, as well as their successors. The vast majority of representatives of organizations that continued to remain members for

several years were also interviewed. Given their level of involvement, these significant players were expected to have the best recollection of past events. Nevertheless, all of their accounts were also cross-checked against each other and against the available internal documents. To avoid elite bias, in addition some individuals who were described by other interviewees as ‘new’, ‘former’ or ‘inactive’ members were also interviewed. ‘New’ members were typically those who joined after 2011, when the initial agreement had already been signed. Former members were those who terminated their membership after 2011. ‘Inactive’ members were official members of the platform who had no active involvement in the platform’s activities, other than attending (some) meetings. Only two people did not agree to be interviewed. One was a new member of the platform, and an interview was conducted instead with another new member. Another was a university researcher whose predecessor was interviewed instead.

To ensure comparability, the interviews were semi-structured. This allowed us to “obtain both retrospective and real-time accounts by those people experiencing the phenomenon of theoretical interest” (Gioia, Corley and Hamilton, 2012, p. 19). The questions focused on whether the interviewees agreed that there was a “phosphorus problem”, why they thought the platform existed, and whether the platform should be considered a success. A non-exhaustive list of questions asked during the interviews can be found in Table 1. The average length of the interviews was 45 minutes, with some lasting 1.5 hours and others 20 minutes. All interviews were audio-recorded and transcribed verbatim.

Archival data are used to complement the interview data and gain insights into the planning and execution of XSP activities. These data included internal documents from the Nutrient Platform – meeting agendas, minutes, strategic plans, memos, presentations, agreement signed when the platform was founded and evaluations of agreed upon targets. In addition, we observed member meetings of the Nutrient Platform and of the Steering Committee. Finally, for a period of three months, during which data collection took place, there was bi-weekly information

exchange with the platform's secretariat. Table 2 summarizes the different types of data collected. The table includes the number of interviewees per sector.

Data analysis

We first coded our data into incidents and categorized these into several event tracks (Van de Ven and Poole, 1990). Figure 4. 1 provides a summary of main events.

We derived coding categories based partly on theoretical concepts such as framing mechanisms (Gray et al., 2015). We also coded for different frames used by platform actors. Using NVivo10 software, these codes were further refined and detailed as we engaged with the data. The data points assigned to the theoretical coding categories were also coded as per the organization and individual where they originated to distinguish between frames and framing mechanisms used by actors from different sectors. Table 4.3 presents our resulting coding categories and verbatim examples of selected frames.

In addition, the frames identified were coded according to when they occurred in order to account for the possibility that frames would differ over time. Throughout our analysis, we identified three distinct phases of the XSP's development. As per the existing literature we demarcated a formation phase (Selsky and Parker, 2005), during which the goals and organizing principles were being negotiated among the partners. This phase ended when an "authoritative text" was agreed upon (Koschmann et al., 2012). A two-year period of mandated maintenance followed, during which an agreement of cooperation was signed by all parties involved in the XSP. We categorize as open maintenance a third phase that occurred after the agreed period had ended but when partners continued to cooperate. Although partners still referred to the original agreement, they were no longer bound by it in this phase. By cross-referencing the different frames that were employed by actors involved in the Nutrient Platform over time, we assessed frame evolution. Our analysis suggested an evolutionary process of variation, selection, retention and

deletion when it comes to frames in active use. We then identified various mechanisms that enable this process.

Findings

A key finding of our study of the Nutrient Platform is that multiple frames were used in all life-cycle stages of the XSP. We also found that in our three different stages of the platform life cycle (formation, mandated maintenance and open maintenance), different frames were used. Some frames were introduced after the collaboration had been in operation for several years, while one frame was selected out in the later stages (see Figure 4.2.)

When we examined this process, we identified factors that influence frame evolution. We found a wide variety of frames at the beginning but only a limited number of frames (and their recombinations) survived over time (see Figure 2.)

Multiple frame sources and frame variation

The frames used by those within the XSP vary because they originate from different sources. The difference is based on whether a frame was already present among members of the XSP, or whether it was later internalized. In the first category are frames that reflect the existing aims of XSP members. For example, the frame that views phosphorus availability as an economic opportunity for Dutch business (frame 6) has become a frame of the Nutrient Platform but was already in use in some of its member organizations:

“I always said that transporting it [manure] from point A to point B within the Netherlands does not solve the problem of oversupply. We need to have less, Germany needs more, and Belgium needs more. There are other countries facing shortages.” (VP for business development at a fertilizer company)

The alternative to frames that originate from internal members are frames that emerged based on the publication of information external to individual members. For example, one XSP member who is introducing a recycling alternative to mined

phosphorus uses scientific information to support his argument that the current method of mining phosphorus is unsustainable:

“The impurity of phosphorus is very important. It contains uranium and cadmium. So, the phosphorus that is mined is strongly contaminated. This means that more radioactivity is brought on to the land when you use artificial fertilizer” (CEO of a sludge-processing company)

This suggests that the environmental impact of mining (frame 2) is being used to underline that arguments for switching to phosphorus recycling are broader than simply a business case.

Frame selection

We found that of a very large number of frames resulting from frame variation, only a limited number were selected for active and repeated use by members of the platform. As a manager from industry noted: “Organization A through Z contributed arguments numbered one through infinity, and only some of these have succeeded.” We identified seven diagnostic frames in the data, and also three mechanisms which correlate with the micro-processes of framing (Gray et al., (2015): frame merging, importing a master frame, and maintaining frame plurality. We now describe each of the frames found in the case of the Nutrient Platform, and also track how these frames were used throughout the three phases of the XSP’s development.

Frame 1: Environmental impact of phosphorus use

This frame highlights the negative environmental impact of the current mode of using phosphorus and the damage that the nutrients in fertilizer cause to the environment.

“Phosphorus goes in at one end and comes out at the other. And that will be a place where actually you don’t want to have it. It causes all kinds of problems. Eutrophication and waste, so that you will have to deal with that next.” (Senior manager of a research institute)

Eutrophication is an issue highlighted in this frame. It refers to the extreme growth of plants and algae, especially in surface waters, that reduces water quality and biodiversity because other plants are crowded out: “The fertilizer ends up in the soil and then flushes out to the surface water. This causes an oversupply of nutrients, which in turn causes biodiversity to decrease. This means it is an environmental issue” (Second Secretary [coordinator] of Nutrient Platform). When frame 1 is used, merging is often used by platform members. Merging frames is defined as the construction of “a new frame from existing ones, yielding a wider, more-encompassing frame that supplants the original ones” (Gray et al., 2015, p. 129). Combining frame 1 with frame 2 highlights the negative environmental impact of acquiring phosphorus. This aids the “amplification” of the frame – that is, frames generated at the micro level move to the meso and macro levels and become more diffused (Gray et al., 2015, p. 120).

Frame 2: Environmental impact of phosphorus mining

This frame refers to the harmful environmental effects of mining phosphorus to create artificial fertilizer: “Currently contaminated phosphorus is coming to the Netherlands, even in the products” (Agricultural business manager). Uranium and cadmium are the source of this contamination. “More radioactivity is brought to the soil if you scatter with artificial fertilizer on it” (CEO, waste-processing sector). In a joint platform communication, frame 2 is often merged with frame 1 to create a framing category of environmental concerns about how phosphorus is extracted and used: “Pollution should be decreased (contamination of phosphorous rock) and sustainability is important” (Source: Internal agenda).

Frame 3: Scarcity

The focus in this frame is on the impending shortage of phosphorus as a natural resource. This argument has two parts. On the one hand, the use of phosphorus is increasing: “The entire world market will only grow due to an increasing population and changing diets. So, more and more phosphorus is necessary for raising agricultural productivity” (Senior government manager). On the other hand, the reserves of phosphate rock are declining:

“Phosphate deposits however are finite with limited duration. Cordell (2008) mentions between 50-100 years. Steen (1998) estimated that at the time economically exploitable reserves could be depleted within 60-130 years” (NWP, 2010).

This frame is often maintained together with other frames – i.e., there is frame plurality. Frame plurality “involves interactants managing or tolerating multiple meanings drawn from overlapping, conflicting, interstitial, or otherwise unrelated field spaces in the interest of getting work done” (Gray et al., 2015, p. 130). This occurs, for example, when in documents created by the platform the scarcity frame is combined with frame 4 (Lack of security of supply): “With the growing world population and ensuing demand for food there is a growing need for phosphorus to produce artificial fertilizer. Phosphorus reserves however are only found in a few places, mostly in Morocco/the Western Sahara and China” (Nutrient Platform, 2012). Maintaining frame plurality creates a certain ambiguity that “allows adherents of each frame to retain their preferred approach in the presence of the other” (Gray et al., 2015, p. 130).

Frame 4: Lack of security of supply

The lack of security of supply of phosphorus is emphasized in this frame:

“Raw phosphorus is found in natural reserves in only a few countries (Morocco, US, China, Russia, etc.). The EU imports large quantities of raw phosphorus materials and has (almost) no reserves. The US has used up nearly all its reserves and has stopped exporting phosphate rock, while China has effectively stopped export by introducing a 200% export tax. As a result, Europe is to a large extent dependent on phosphorus from Morocco.” (Source: Internal report on European Conference)

Within this frame, a parallel is sometimes drawn with the fossil fuel situation:

“Comparable to fossil fuel also for phosphorus control of the resources is in the hands of a limited number of countries. Most of the known reserves are in Morocco, the VS and China. China however has put an export tariff on phosphate recently.” (Netherlands Water Partnership, 2010).

Here, a master frame is *imported*. This occurs when actors strive to achieve legitimacy by linking their frames to those of successful social movements. By

likening the lack of security over access to phosphorus to that of fossil fuel scarcity, actors aim to emphasize the dangers of lacking control over a crucial resource for everyday life. Platform members recognize that people may be more familiar with fossil fuel reserves than with phosphorus reserves, and so import this master frame to increase the legitimacy of frame 4.

Frame 5: Sanitation in developing countries

The sanitation frame focuses on the advantages of reusing human excreta directly in agriculture, especially in areas where the soil is low in phosphorus: “Especially for developing countries it is interesting to create self-sustaining areas in terms of energy and food security. For example, by connecting cities (human excreta) to arable land for P-recycling” (Source: Internal minutes). When extended, this frame also suggests that recycling in the form of “reuse of P in human excreta would decrease more and more if the current sanitation technology of the western world were to be adopted by developing countries” (Smit et al., 2009). In the formation stage of the XSP this frame was strongly emphasized by XSP partners: “At this moment the phosphate issue has no real relevance here in the Netherlands, but in the developing world it certainly does and needs to be put high on the agenda” (Internal memo). Within this frame, we later observed frame *merging*, as it connects to frame 1: “More households connected to a sewer system will lead to increased losses towards the oceans sediments” (Smit et al., 2009). The sanitation frame also *merged* with frame 6: “Recovering (and selling) of nutrients will turn sanitation into a financially sustainable business” (Source: Internal minutes). The mechanism of *importing* a master frame was also used as actors related this frame to the popular trend of ecological thinking: “Ecological sanitation has to do with ecology and thinking in cycles and recovering waste” (manager of an NGO). The aim is to achieve legitimacy for the sanitation frame by relating it to a more general, popular frame.

Frame 6: Availability of Dutch phosphorus (P)

In this frame, the opportunities for Dutch companies related to recycling phosphorus are highlighted: “The NP seeks to create policies and market

conditions that stimulate sustainable nutrient use. It will build on the special position of the Netherlands, having nutrient surpluses at their disposal in a (future) world of shortage” (source: internal strategic plan). The argument here is that the Dutch surplus in phosphorus can be traded:

“Since we have realized that a large shortage of phosphorus is developing in the world, opportunities have sprung up for companies and the government: to turn an expensive waste problem (food waste, manure, sewage water) into a profitable export product and to that end to connect different waste streams and return phosphorus to the cycle.” (Source: Internal memo)

This frame is often *merged* with frame 7 to create a more general frame of opportunity:

“The economic value added is not yet completely clear, but the expectation is that over the entire cycle partners can reduce costs by valorizing waste streams. In addition, this can create new jobs and increase exports (not only in terms of nutrients, but also in terms of knowledge, technology, etc.)” (Source: Internal memo)

Frame 7: Dutch strengths in governance and innovation

Like frame 6, this frame highlights the opportunities for Dutch actors that arise from phosphorus shortage, but it focusses more on applying current strengths. These include research skills in the water sector: “Knowledge institutes really want to give the Netherlands an important position as a country of knowledge. So, they want to pursue fundamental knowledge development” (CEO of a sludge-processing company). The opportunity to apply governance strengths is also highlighted: “Sustainability and a cycle approach are central in the Dutch governance and strategic developments. In national and regional governments, companies and NGO’s as well as knowledge institutes” (Source: Internal memo). As mentioned earlier, this frame is often merged with frame 6.

Other frame selection mechanisms

In addition, the *merging* of frames takes place on a more aggregated level when frames 1–5 are grouped together as “crisis frames” and frames 6 (Dutch P

Availability) and 7 (Dutch governance/innovative strengths) as “opportunity frames”. Actors in the platform appear to be consciously aware of the effects of framing. For example, several respondents emphasize that the opportunities presented by recycling phosphorus will be more fruitful than focussing on crisis: “[We as a society] should look at it [the need for phosphorus recycling] more as an opportunity (from the viewpoint of society, participation, economic environment) than as a threat” (Source: internal agenda). “The slogan ‘No P, No Life’ is too negative. (...)The project should be more focussed on the opportunities and the trade possibilities. Currently the approach is too much based on the threats” (Source: Internal minutes).

What is noticeable is that the seven different frames and their recombinations used by actors involved in the Nutrient Platform are maintained in juxtaposition. However, some evolution can be seen in the use of different frames over time. For example, frame 5 (sanitation) is emphasized more in the initial stages: “The platform’s first secretary [coordinator] was part of the NWP, of the sanitation cluster. Aqua for All and WASTE [member NGOs] are also closely related to the Netherlands Water Partnership, they are also part of the ‘sanitation corner’.” (Senior manager at a research institute). However, at a certain point some partners became disgruntled with this frame:

“One of the problems then was the waste sanitation story. That was approached from a very impertinent pedantic point of view that went ‘It is dirty in other countries and people should be washing their hands, people should do this, people should do that’. It did not go any further than that you invested money. If you invested a million, a million came out but it would never be more than that. Then came the start of recycling nutrients and energy that we considered to be a very interesting trajectory that we could help shape.” (Senior government advisor)

It appears that, in the long run, the sanitation frame (frame 5) clashed with other frames so that maintaining frame plurality became problematic. This frame was later dropped from the set of active frames. However, it appears that frames that do not overtly clash are maintained:

“By working well together, sharing knowledge and investing together in a smart way, the Netherlands can be the first country in the world to create a

sustainable market for recycled phosphorus. With that, Dutch businesses – with the perspective of growing P scarcity in the world – as first-movers will be able to achieve a competitive advantage in the international phosphorus trade [frame 6]. In addition, government [frame 7], and businesses will be able to cut costs substantially by valorizing waste/manure into a useful and valuable resource [frame 3]. For society, this means that this economic opportunity solves, or at least decreases, a large environmental problem [frame 1 and 2].” (Source: Internal memo).

Thus, a more limited number of frames were selected.

Frame retention

We consider frames to have reached the *retention* stage when there is continued exchange of frames inside as well as outside the Nutrient Platform. First, frames are formulated collectively by the XSP as the members of the platform interact in meetings and in small focus groups based on a common interest or project. In later stages of the XSP life cycle, the (planned) activities of the Nutrient Platform shift to reflect the elimination of the sanitation frame (frame 5). Plans for international sanitation activity feature prominently on meeting agendas in the early stages of the XSP life cycle but are appear less frequently over time. In the mandated maintenance stage of the life cycle, the activities outlined by the platform were mainly national in scope – emphasizing frames 6 and 7–, and were no longer aimed at changing international practices, which frame 5 would have implied. This highlights that there was a clear clash between frame 5 and other frames in use, and could be a reason why this frame was eventually removed from the set of active frames.

Frame retention also occurs as the opinions of external stakeholders of the platform appear to be incorporated in the frames used in communication by the platform. For example, in the formation stage of the XSP life-cycle, intense cooperation with several government departments was important for members of the Nutrient Platform as they were trying to influence national regulation. At this stage, the innovative strengths of Dutch government and business (frame 7) are also emphasized in platform communication. For example, in a project description

from the formation stage of the Nutrient Platform written in 2008, there is an emphasis not only on the scarcity of phosphorus but also on the fact that the Netherlands occupies a particularly privileged position regarding this. An internal memo outlines four reasons why this is so: “1) Nutrient collection: The Netherlands can help by simply collecting nutrients; 2) Nutrient recycling: The Netherlands has an exceptional amount of knowledge when it comes to recycling nutrients from waste streams, both technologically and in terms of policy; 3) Water use: The Netherlands historically is a frontrunner when it comes to water management, including our policy constructions in relation to agriculture and 4) Food production: The Netherlands belongs to the global top when it comes to intensive farming, including lawmaking and regulations when it comes to environmental impact.” This demonstrates opportunistic framing by actors, where frame plurality allows them to pick and choose the most pertinent frame for each interaction.

Lastly, frame retention also occurs when the opinions of individual members can be seen to be directly reflected in platform frames. Members of the steering group also emphasize that the platform aims to incorporate the diverse opinions found among members:

“There is a significance for everyone because everyone is dependent on phosphorus, but there is also a difference between them. For us it is an environmental issue and an economic opportunity, for others it is about security of supply. As a result, we frame it differently for each stakeholder.” (Second secretary of the Nutrient Platform)

Thus, in different phases of the platform life cycle (formation, mandated maintenance and open maintenance), different frames were used; some were selected, others were deleted, and some evolved, recombined and persisted over time.

Discussion

We have assessed which challenges occur during the different life-cycle phases of an XSP and how both strategic and interactional frames contribute to maintaining collaboration in an XSP. We have analyzed data over the first eight years of

existence of an XSP to identify how different frames come to exist in parallel and have explained the frame selection, deletion and retention mechanisms in use to achieve ongoing collaboration in an XSP. Our findings on the framing strategies for XSP maintenance correspond to the Variation–Selection–Retention model found in evolutionary theory (Aldrich, 1999). Having multiple sources of frames causes variation, then selection, deletion and retention take place, resulting in a dynamic set of frames being in use at different times. The process is outlined schematically in Figure 4.3.

Frame selection

Parties held different frames regarding how they viewed phosphorus. However, not all frames produced in interactions between platform members were selected for continued use. One example is the desire to extend scientific knowledge about the use of phosphorus, as mentioned by researcher from a knowledge institute. Many other frames could be traced to a few individual actors but never found their way into joint XSP communication. What the unselected frames had in common was that they were either very specific to a single party in the XSP, or they clashed directly with frames that were selected. An example is the desire to develop more international collaboration to incorporate expertise from other countries. This international collaboration frame clashed with frame 7, Dutch strengths in governance and innovation, and in the end, was not selected. As it turned out, an international phosphorus platform (the European Sustainable Phosphorus Platform) was launched some years later and became a rival of the Dutch Nutrient Platform in the competition for membership and funding. These examples suggest that the selection of frames delineates the direction and scope of an XSP and that selection occurs based on a desire for overall congruence around the key issue.

In their model of how cross-sector interactions move from contrast to fusion, Le Ber and Branzei (2010, p. 181) include the concept of *frame plasticity*, a process which involves the “effortful cycling back-and-forth between sector-specific, partnership-specific, and organization-specific frames that allows the

newly acquired understanding to fall into place for each of the partners.” Our results help to further clarify this process. We find that rather than moving towards a convergent frame, multiple frames continue to co-exist, based on the notion of equifinality. Organizational members may have different reasons for undertaking action and different interpretations of the action’s potential outcomes, but they nonetheless act collectively to achieve the larger goal (Donnellon et al., 1986). In our case, members continued to adhere to their specific frames while agreeing on the final aim to recycle phosphorus.

From our coding two factors emerged that affect frame selection; a motivation to achieve congruence between internal characteristics, which we refer to as *internal alignment*, and a motivation for congruence between internal and external characteristics, which we label as *external alignment*. Each of these can be further divided into two parts. We will specify these below.

Selection through internal alignment

A drive to achieve *internal alignment* determines whether particular frames are selected. One aspect of internal alignment concerns the congruence between frames and XSP activities. Actors select frames that legitimate the platform’s activities. The platform was part-funded by the Dutch Ministry for Innovation and Environment, for example. As an active member of the XSP, the ministry promoted the initiation of real multi-party “business cases”, and thus the frame of Dutch strengths in governance and innovation (frame 7) was selected. Conversely, we found that frame deletion occurs when day-to-day activities within the collaboration are not in accordance with a frame. In this case, it appears that practical difficulties of carrying out sanitation activities on another continent overshadowed the initial idea championed by NGOs. This resulted in the frame becoming redundant, and eventually being discarded:

“International Media Project: Not much progress. From now on we should put more effort in. The idea is to work out a broad media approach with different types of communication. A Terms of Reference document is ready, a partner should be found for co-financing.” (Internal progress report, June 2012)

Our findings suggest that, at times, pragmatic considerations shape discussion topics and the frames that are selected. However, the chronology of internal documents also suggests that a frame can be deleted by a process of persistent ignoring and disuse, rather than because of overt conflict.

In addition to internal alignment based on XSP activities, frame selection is also influenced by *majority member frames* – i.e., the standpoint of most members. In the XSP's initial years, frames relating to the scarcity and security of supply (frames 3 and 4) were emphasized:

“As you know the Nutrient Platform is a network that aims to create possibilities for sustainable use of nutrients (...). Mainly driven by the impending shortage of phosphorous we aim to increase the speed of the transition towards sustainable nutrient use” (Letter to invite new members to the platform, February 2011).

As the Nutrient Platform expanded over time, more members joined, most of whom were *private sector* (business) partners, though there were also some research institutes (see Figures 4.4 and 4.5).

This meant that, as the platform's member base changed, so did the frames agreed upon by most members. Simultaneously, in the later stages of the XSP's existence, the two opportunity-related frames (frames 6 and 7) become more pronounced in platform members' strategic choices and communication:

“On January 21st the Nutrient Platform, together with the Dutch Embassy in Berlin, the Flemish Nutrient Platform and the German Phosphorus Platform, organized a successful symposium about the opportunities for phosphorus recycling in urban environments.” (Nutrient Platform newsletter, February 2014).

This illustrates that the frames selected by the XSP were an apparent reaction to changing majority member frames or dominant frames.

On the other hand, the changing composition of the collaboration also meant that there was a drop in the number of NGO “focal interactants” (Gray et al., 2015), who largely supported a sanitation objective, (see Figure 2), while the

number of focal interactants with a more economic objective increased. This second group agreed that the sanitation frame (frame 5) was not a high priority:

“In the beginning [other partners] also asked us to become involved in urine recycling in the south of Africa. Then we said, Listen, let’s first formulate a common goal. It is already an accomplishment if we become a club in the Netherlands, which reaches out to each other from the foundation of the problem to marketing and the solution. Let’s not start making it global, with lots of travel and writing of big documents, then nothing will happen. Then we become a talking club and there are already enough of those.” (CEO of a fertilizer company)

The sanitation frame originated from NGO members of the platform. In the early stages of the platform NGOs were in the majority, with around a quarter of the total membership. However, by 2014 they represented less than ten percent of the membership (see Figure 2), and the sanitation frame was purposefully deleted by most business and knowledge institute members, for whom other frames took precedence.

“Our task has shifted since the first initiatives. There used to be quite a strong focus on sanitation, through the NGOs of course and... Well, I think there was a plan to do this in Africa but for now that has moved to the background.” (Senior policy advisor for government)

The Nutrient Platform is a clear example of how politics and power differences “authorize certain actors and perspectives and neglect or exclude others” (Gray et al., 2015, p. 135, citing Meyer and Höllerer, 2010). Overall, the process of aligning internally to the frames of the majority members within the platform establishes patterns of frame selection and deletion. We find that deletion can be a direct result of two things: persistent ignoring of certain frames plus pressure from a majority of partnership members.

Selection through external alignment

External factors also influence frame selection. There are two aspects to the motivation for external alignment. First, the *position of external stakeholders* appears to affect framing decisions. As mentioned earlier, the Nutrient Platform started with international and national aims, but in 2013 a spin-off – the European Sustainable Phosphorus Platform – was launched following a successful European

Sustainable Phosphorus Conference. This organization became a partner but also something of a competitor as it was also seeking members:

“I notice that I am moving more towards the European platform, because it is more useful for me than the Dutch Platform. Here I know most people now and I no longer need the platform to find them.” (Senior manager from a research institute).

Since the emergence of this new stakeholder, the (Dutch) Nutrient Platform started placing more emphasis on the opportunity frames (frames 6 and 7) as these emphasize the advantages of the national platform over the pan-European version.

Second, we observed how *trends in public opinion* are used in frame selection to achieve external congruence and legitimacy. Members of the platform have since its foundation been very aware of public opinion and used the resulting momentum:

“One of the things we thought of was that we should write an article to tell the public [...] which we sent to the newspaper. [...]A journalist then phoned me to plan a visit to interview me. [...]Then for six or seven weeks I didn’t hear anything but one morning – I am subscribed to the same newspaper – I opened the paper and found that they made a front-page article out of it, titled “Food crisis due to phosphorus shortage”. [...]He had used my original article but also interviewed other people. [...]From that moment on people started approaching me and we formed the Nutrient Flow Task Group.” (Senior university researcher).

The scarcity frame (frame 3) became very pronounced in the media covering the issue. As a result, this frame was prominent during the Nutrient Platform’s early years of existence:

“Next to the security of supply argument and the environmental argument there is also a scarcity aspect. This is used often in communication, as in ‘the supply of phosphorus is limited and when the mines are empty you will have a problem.’” (Second secretary [coordinator] of the Nutrient Platform)

Members of the platform aim to influence certain sectors of the public but the platform is also dependent on wider public opinion. Trends in public opinion may thus be leveraged by members in selecting frames that they believe will resonate best with an external audience.

Frame retention

After frames have been selected, actors seek to anchor them in the XSP using retention mechanisms. Burgelman (1991, p. 240) explains retention as “a form of organizational-level learning and distinctive competence, embodied in various ways – organizational goal definition, domain delineation, and shared views of organizational character.” In the Nutrient Platform, we identified several means by which the selected frames are retained.

Within the platform, the nature of activities carried out and tasks agreed upon in meetings changed over time, and the retention of frames appears to follow this pattern. For example, initially internal strategic documents and meetings were structured using three categories: international activities, European activities and national activities. Plans for each category were laid out and progress was discussed in meetings. In the European category, plans for a conference were quickly expanded, and in the national category, discussions about legislation gathered momentum. However, in the international category initiatives were not advanced and deadlines were postponed multiple times. Gradually, progress in the international section, which included work on sanitation projects in developing countries initiated by NGOs, stagnated, and less space and time were allotted to discussing this area of work. Coding from both internal documents and interviewees shows that the sanitation frame (frame 5) became less prominent as the concrete plans to improve sanitation in developing countries were pushed further down the agenda. Eventually the sanitation frame was abandoned. This suggests that the retention of active frames is related to the portfolio of XSP activities.

We identified two retention mechanisms. Frames are retained by promoting communication among the platform’s members, whereby selected frames are discussed and agreement on specific frames is emphasized. For example, notes from a members’ meeting (13, December 2013) included the signing of a Memorandum of Understanding with the Flemish and German Nutrient Platforms. The notes state: “the signing of this document underlines the ambition of the

Nutrient Platform to work with diverse actors in the value chain to create the right conditions for economically viable business cases around nutrient recycling.” This is an example of the retention of frame 6, in which the potential economic benefits of recycling phosphorus are emphasized.

Also, frames are retained by being enshrined in official documents that are shared with external stakeholders. Internally these documents are referred to and archived as “important final documents.” This facilitates retention by emphasizing the selected frames – as happened, for example, in the Phosphorus Chain Agreement, where members agreed to make a concerted effort to recycle phosphorus. Other examples include official letters sent to the Dutch government stating the aims and the progress of the Nutrient Platform. For example, in the official note sent in 2012 by the Nutrient Platform to the Dutch Lower Chamber, the scarcity frame (frame 3) is emphasized, as are the frames relating to the Dutch phosphorus surplus (frame 6) and the lack of supply security (frame 4). This also exemplifies how frames are retained in combinations and how the selection and retention of one frame does not exclude the possibility of another frame also being retained. In other words, it signifies ongoing frame plurality.

A Model for Frame Plurality in XSP's

Drawing on the variation, selection, deletion and retention mechanisms described above, we develop a model for frame evolution leading to optimal frame plurality. See Figure 4.6.

Frame variation in XSPs is caused by differing member standpoints, or by information from external sources. The resulting frames are selected based on a legitimacy-driven desire for internal and external congruence as perceived by platform members. The selected frames are then retained through both internal interaction and external communication.

We find that, in the process of selection and retention, frame plurality is maintained. Frames that are at odds with each other can be maintained side by side, because there is agreement about the collaboration's ultimate aim. Thus, valuable time and resources may be saved by avoiding the need for complete

unanimity. However, frame plurality is not completely without bounds. Frames that are not (or are no longer) aligned with the majority point of view are deleted from the portfolio of active frames. We observed that as the sectoral composition of the XSP changed drastically, shifting the power equation, the sanitation frame was deleted. This suggests that, while maintaining frame plurality avoids the need for extensive discussion to enable XSP members to reach consensus over a single frame, the frames selected and retained in use are influenced by the power of the majority constituent.

By investigating the framing process throughout the different life-cycle stages of an XSP, we bring a fresh perspective to the maintenance of collaboration in XSPs. Previous studies have suggested that collaboration efforts should be aimed at achieving an overall agreement through a convergence of the multiple frames used by different partners in a collaboration. Our case demonstrates that an alternative route to successful collaboration is to maintain a productive tension between the different frames. The result is that both internal and external stakeholders consider the collaboration to be acceptable, albeit for different motivations. Our analysis shows that sustaining collaboration in an XSP involves adapting frames in line with the changing institutional environment. Our model suggests that the constellation of frames that are actively used evolves over time, based on changing standpoints of members, changing demands of external stakeholders and changing collaborative activities.

In the variation stage in an XSP's evolution, different frames produce variations in the meaning of the issue at stake. As more actors enter the platform, the number of frames increases. The process of selecting and discarding frames is not just a competitive process but also involves learning as people adapt to each other's frames and identify commonalities and complementarities without necessarily giving up their own espoused frames. Over time, participants may tend to favor certain frames and avoid or ignore others. The move from variation to selection requires a frame to be less partisan, so that it can then appeal to a broader audience. While actors may push for their own positions, some frames become

more comprehensible and acceptable over time, both inside and outside an organization (Strang and Meyer, 1993). Thus, frames may not be selected ‘blindly’ but through a more deliberate process based on learning and theorizing in ongoing interactions.

The selection of a few frames does not mean that these frames will become widely legitimated or institutionalized and thus retained (Gray et al., 2015). Plurality may involve some frames becoming dominant, enabling other non-dominant frames to continue if they have some evident link to these dominant frames. However, if a frame runs counter to the dominant frames or does not fit well to them (as was the case with the sanitation frame that was neither profitable nor seen to be in the national interest), it will then disappear. This process may be recursive in that the loss of a frame may in turn cause members who espouse that frame to look for alternatives and leave the XSP (e.g., the member who advocated internationalization became increasingly interested in the pan-European rather than the Dutch network). Thus, frames have a dynamic effect on the composition and recruitment of XSP members.

Only a few frames pass the selection hurdle, and even fewer are retained when they develop a collective meaning that goes beyond the platform and become ‘exteriorized’ by both internal and external stakeholders. These frames may be developed internally within the XSP – majority member frames (e.g., national interest and business frames) – or linked with master frames imported from outside (e.g., the fossil fuel frame and the environmental frame). These retained frames may generate sufficient common ground among the platform’s participants to sustain collaboration and maintain the XSP even beyond its mandated maintenance stage, as in our case.

Our data suggest that once retention mechanisms are firmly in place, an XSP may remain relatively stable for a longer period of time. When all the parties involved can work with the plurality of frames in use, it appears that the typical pitfalls of an XSP (conflict and failure to create common ground) are mitigated. Parties may subscribe to only one or a few of the retained frames but still believe

that their overall cause is being served and that the bigger issue at hand is still being addressed. On the other hand, the absence of any directly conflicting frames may help avert outright clashes between members.

In sum, maintaining optimal frame plurality can lead to and sustain collaboration among diverse participants because it allows multiple identities and interests to be accommodated simultaneously and does not force participants to converge around a single position. However, the plurality of frames needs to be manageable around an optimal number of retained frames. Excessive plurality may cause conflict between partners; this may potentially inhibit the emergence and sustenance of collaboration between diverse members and contribute to a failure to maintain the XSP. We find that frames are maintained in plurality when they are in congruence with XSP activities, majority member frames, the position of external stakeholders, and the prevailing public opinion. Frames that do not meet these criteria may be deleted to avoid conflict and a reduction in the XSP's overall effectiveness'. Striking a balance between too much and too little plurality may be key to sustaining collaborations such as XSPs.

Contributions

First, while earlier studies have found that XSPs go through different developmental stages (Gray, 1985; 1989), we examine the process of evolution in an XSP and track changes in the frames used over time by the actors involved, looking also at the external and internal factors that coincide with these changes. By doing so, we add to studies that focus on the formation of an XSP and its developmental stages (Koschmann et al., 2012; Manning and Roessler, 2014) or on XSP outcomes (Clarke and MacDonald, 2016) by providing insights into the framing process through which collaboration may be sustained in an XSP after its formation.

Second, our notion of optimal frame plurality, while related to Le Ber and Branzei's (2010, p. 164.) concept of frame fusion, also extends this work. Frame fusion – “the construction of a new and evolving prognostic frame and that

motivates and disciplines partner's cross sector interactions while preserving their distinct contributions to value creation”, and the process of frame plasticity, where actors in organizations consciously select frames that fit with the partnership and the organizational and sector-related values. However, while Le Ber and Branzei (2010) focus on XSP dyads, we explain how optimal frame plurality is achieved among a vast array of diverse partners from different sectors in an XSP that changes in composition over time. In addition, we add further nuance to the notion of frame plurality (Gray et al., 2015) but show that plurality may have ‘finite’ bounds as excessive variety may be counterproductive. We suggest that the deletion of certain frames, and the retention of a few – a progressively ‘narrowing frame bandwidth’ – may be necessary for sustaining collaboration in XSPs. This is line with the argument by Patvardhan, Gioia and Hamilton (2015) that in complex inter-organizational settings (in this case an international consortium of “information schools”), it may be productive to seek to create “coherence” regarding shared problem domains, mutual interests, and practices, rather trying to reach absolute consensus through deliberation.

While we cannot support this argument with a counterfactual, our findings suggest that progress on agreements is thwarted by too many frames (excessive variety) and that the deletion of certain frames, and the retention of relatively fewer frames may be necessary for sustaining collaboration. We would be reluctant to put any definitive numbers on what is truly optimal in terms of frames as this is likely to considerably vary from one XSP to another, depending on the type of issue being addressed, the number and diversity of the parties involved, and the external contextual influences. Thus, what is optimal may be situational and context-dependent. By optimal frame plurality, we refer to a level of variety in which diversity is neither smothered nor allowed to get out of hand, and which therefore allows a sufficient degree of agreement to emerge among the diverse constituents. Optimal frame plurality is thus not a definitive outcome but a continual balancing act that XSPs can consider aiming for in their efforts to reach

a greater degree of consensus about how to address very complex social challenges.

Also, while not explicitly addressed in our study, our analysis suggests that framing happens in a politicized social context, and it matters *both who does the framing and what level of power and authority they have* – as was seen, for example, in how the changing composition of the XSP influenced the types of frame that became influential. Framing is thus inherently a “bidirectional” process (i.e., both top-down and bottom-up) (Gray et al., 2015), and the parties and the mechanisms available to them are both enabled and constrained by existing norms and power relations in any given setting.

Third, a rich body of work on hybrid logics and on hybridism more broadly has addressed how actors manage institutional plurality and complexity amid conflicting pressures from stakeholders. Such coping has been explained in terms of collective identity (Battilana and Dorado, 2010; Patvardhan et al., 2015), identity aspirations (Kodeih and Greenwood, 2014), selective decoupling (Pache and Santos, 2013), selective synthesizing (Binder, 2007; Chen and O’Mahony, 2006) and temporal reflexivity (Reinecke and Ansari, 2015). Studies have considered healthcare (Reay and Hinings, 2005), social enterprises (Battilana and Dorado, 2010), public-service partnerships (Jay, 2013), biotechnology firms (Powell and Sandholtz, 2012), universities (Murray, 2010) and financial institutions (Smets et al., 2015). While this work has addressed both organizational and cross-sectional settings, the focus is on how actors manage plurality and collaboration on an individual basis by bridging, segmenting, recombining and reconciling frames across divergent stakeholder groups. We add to this work by explaining how plurality is managed jointly and how collaboration achieved by a collective in a cross-sector partnership comprised of diverse constituents. It is thus not so much what actors can do individually to manage conflict, but rather what they can do together that may matter more in an XSP.

Limitations and Future Research Avenues

Although our study covers an eight-year period, our interview data was collected at the end of this period. We thus rely partly on retrospective accounts from interviewees. Fortunately, we could triangulate this information with rich archival data from earlier years. This proved to be especially helpful when studying the process of frame deletion. As this transpired to be a question of inaction rather than action, it would have been hard to uncover from interview data alone. Our access to data such as minutes and agendas has allowed us to study this process in detail. Future framing research could shed light on the hidden process of frame deletion by triangulating the ‘paper trail’ of internal documents with interview data.

Another question is whether our findings are confined to collaborations in sectors that are heavily dependent on natural resources such as water, or whether they have wider implications. Given that this collaboration comprised a diverse mix of partners from engineering firms to government partners, we would argue that our findings are not strictly sector-specific. What is optimal, however, is likely to vary between different XSPs, depending on its characteristics, such as the type of issue, the number and diversity of parties involved, and the external contextual influences. Future research could investigate these dynamics in different contexts to shed more light on the claims we make. One could also ask whether our findings will hold true for collaborations with fewer or less diverse partners. Comparative research designs could examine the wider applicability of our findings.

Conclusion

Based on our analysis of attempts to resolve a complex and at times controversial long-term social problem – namely dealing with the phosphorus challenge and achieving changes in both public perception and the regulatory environment – we offer a model of how actors in XSPs achieve ongoing collaboration by maintaining an optimal level of frame plurality. Continual adaptation to internal and external

factors results in the evolution of the set of frames used – through variation, selection, deletion and retention. We also find that concerted and sustained collaboration – a major challenge for most XSPs – does not have to result in a unanimous agreement around a single or convergent mega frame; it can also emerge through generating productive tension between diverse positions and achieving optimal frame plurality and managed differentiation. In this way the integrity of the differing positions held by the various parties can be respected but sufficient common ground can still be found to allow collaboration on the complex issue at hand to be sustained. Optimal frame plurality is not a definitive outcome but rather an ongoing balancing act that XSPs can consider in their effort to foster greater convergence among diverse parties around highly complex social challenges.

References

- Aldrich H. (1999). *Organizations evolving*. Thousand Oaks, CA: SAGE.
- Battilana, J., and Dorado, S. (2010). Building sustainable hybrid organizations: The case of commercial microfinance organizations. *Academy of Management Journal*, 53(6), 1419–1440.
- Battilana, J., and Lee, M. (2014). Advancing research on hybrid organizing – Insights from the study of social enterprises. *The Academy of Management Annals*, 8(1), 397–441.
- Baxter, P., and Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, 13(4), 544–559.
- Benford, R. D., and Snow, D. A. (2000). Framing processes and social movements: An overview and assessment. *Annual Review of Sociology*, 611–639.
- Berger, P., and Luckmann, T. (1966). *The social construction of knowledge: A treatise in the sociology of knowledge*. Garden City, NY: Doubleday.
- Brown, L. D., Khagram, S., Moore, M. H., and Frumkin, P. (2000). Globalization, NGOs, and multisectoral relations. In J. S. Nye Jr. and J. D. Donahue (Eds.), *Governance in a globalizing world*: 271–298. Washington, DC: Brookings.
- Binder, A. (2007). For love and money: Organizations' creative responses to multiple environmental logics. *Theory and Society*, 36(6), 547–571.
- Brown, L. D. (1991). "Bridging organizations and sustainable development." *Human Relations*, 44(8), 807–831.
- Bryson, J. M., Crosby, B. C., and Stone, M. M. (2015). Designing and Implementing Cross-Sector Collaborations: Needed and Challenging. *Public Administration Review*, 75(5), 647–663.
- Burgelman, R. A. (1991). Intraorganizational ecology of strategy making and organizational adaptation: Theory and field research. *Organization Science*, 2(3), 239–262.
- Callon, Michel. (1998). Introduction: the embeddedness of economic markets in economics. *The Sociological Review*, 46 (1), 1–57.
- Campbell, D. T. (1965). 'Variation and selective retention in social-cultural evolution'. In Barringer, H. R., Blanksten, G. I. and Mack, R. W. (Eds.), *Social Change in Developing Areas: A Reinterpretation of Evolutionary Theory*. Cambridge, MA: Schenkman, 19–48.
- Chen, K. K., and O'Mahony, S. (2006). 'The selective synthesis of competing logics'. *Academy of Management Proceedings*.

Clarke, A., and Fuller, M. (2010). Collaborative strategic management: Strategy formulation and implementation by multi-organizational cross-sector social partnerships. *Journal of Business Ethics*, 94(Suppl. 1), 85-101. doi:10.1007/s10551-011-0781-5.

Clarke, A. and MacDonald, A. 2016. Outcomes to Partners in Multi-Stakeholder Cross-Sector Partnerships: A Resource-Based View. *Business and Society*, 1–35. DOI: 10.1177/0007650316660534.

Crane, A. (2010). From governance to Governance: On Blurring Boundaries. *Journal of Business Ethics*, 94, 17–19.

Dacin, M. T., Munir, K., and Tracey, P. (2010). Formal dining at Cambridge colleges: Linking ritual performance and institutional maintenance. *Academy of Management Journal*, 53(6), 1393–1418.

Dewulf, A., Gray, B., Putnam, L., Lewicki, R., Aarts, N., Bouwen, R., and Van Woerkum, C. (2009). Disentangling approaches to framing in conflict and negotiation research: A meta-paradigmatic perspective. *Human Relations*, 62(2), 155–193.

Donnellon, A., Gray, B., and Bougon, M. 1986. Communication, meaning and organized action. *Administrative Science Quarterly*, 31, 3–55.

Dorado, S., and Ventresca, M. J. (2013). Crescive entrepreneurship in complex social problems: Institutional conditions for entrepreneurial engagement. *Journal of Business Venturing*, 28(1), 69-82.

Gilbert, N. (2009). The disappearing nutrient. *Nature*. October 7. 461, 716-718.

Gioia, D. A., Corley, K. G., and Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15-31.

Googins, B.K., and Rochlin, S.A. (2000) Creating the partnership society: understanding the rhetoric and reality of cross-sectoral partnerships. *Business and Society Review*, 105 (1), 127-144.

Gray, B. (1985). Conditions facilitating interorganizational collaboration. *Human relations*, 38(10), 911-936.

Gray, B. (1989). Collaborating: Finding Common Ground for Multiparty Problems, San Francisco, CA: Jossey-Bass.

Gray, B. (2000). Assessing inter-organizational collaboration: Multiple conceptions and multiple methods. In Cooperative strategy: *Economic, business, and organizational issues*, ed. D. Faulkner and M. de Rond, 243–60. New York: Oxford Univ. Press.

- Gray, B., Purdy, J., and Ansari, S. (2015). From interactions to institutions: Microprocesses of framing and mechanisms for the structuring of institutional fields. *Academy of Management Review*, 40(1), 115–143.
- Hardy, C., Lawrence, T.B., and Grant, D. (2005). Discourse and collaboration: The role of conversations and collective identity. *Academy of Management Review*, 30 (1), 58–77.
- Hardy, C., Phillips, N., and Lawrence, T.B., (2003). "Resources, knowledge and influence: The organizational effects of interorganizational collaboration*." *Journal of Management Studies*, 40(2), 321–347.
- Huxham, C. (Ed.). (1996). *Creating collaborative advantage*. London: Sage.
- Jaffe, A.B., Newell, R.G., and Stavins, R.N. (2005). A tale of two market failures: Technology and environmental policy. *Ecological Economics*, 54(2), 164–174.
- Jarzabkowski, P., Matthiesen, J., and Van de Ven, A. H. (2009). 1 1 Doing which work? A practice approach to institutional pluralism. *Institutional work: Actors and agency in institutional studies of organizations*, 284–316.
- Jay, J. (2013). Navigating paradox as a mechanism of change and innovation in hybrid organizations. *Academy of Management Journal*, 56(1), 137–159.
- Kochian, L.V. (2012). Plant nutrition: Rooting for more phosphorus. *Nature*, 488(7412), 466–467. August 23.
- Kodeih, F., and Greenwood, R. (2014). Responding to institutional complexity: The role of identity. *Organization Studies*, 35(1), 7–39.
- Koschmann, M.A., Kuhn, T.R, and Pfarrer, M.D. (2012) A communicative framework of value in cross-sector partnerships. *Academy of Management Review* 37.3: 332–354.
- Kraatz, M. S., and Block, E. S. (2008). Organizational implications of institutional pluralism. In R. Greenwood, C. Oliver, R. Suddaby, & K. Sahlin-Andersson (eds.), *The Sage handbook of organizational institutionalism*. 243–275. Thousand Oaks, CA: Sage.
- Lach, D., Rayner, S., and Ingram, H. (2005). Taming the waters: strategies to domesticate the wicked problems of water resource management. *International Journal of Water*, 3(1), 1–17.
- Lawrence, T. B., and Suddaby, R. (2006) Institutions and institutional work. In S. R. Clegg, C. Hardy, T. B. Lawrence, and W. R. Nord (eds.), *Handbook of Organization Studies* (2nd edition). 215–254. London: Sage.
- Le Ber, M. J., and Branzei, O. (2010). Value frame fusion in cross sector interactions. *Journal of Business Ethics*, 94(1), 163–195
- Lefsrud, L. M., and Meyer, R. E. (2012). Science or science fiction? Professionals' discursive construction of climate change. *Organization Studies*, 33(11), 1477–1506.

Lewis, L. (2008). Scientists warn of lack of vital phosphorus as biofuels raise demand. *Times Online*, June 23.

Maguire, S., and Hardy, C. (2009). Discourse and deinstitutionalization: The decline of DDT. *Academy of Management Journal*, 52(1), 148–178.

Manning, S., and Roessler, D. (2014). The formation of cross-sector development partnerships: how bridging agents shape project agendas and longer-term alliances. *Journal of Business Ethics*, 123(3), 527–547.

Meyer, R. E., and Höllerer, M. A. (2010) Meaning structures in a contested issue field: A topographic map of shareholder value in Austria. *Academy of Management Journal* 53(6), 1241–1262.

Murray, F. (2010). The oncomouse that roared: hybrid exchange strategies as a source of distinction at the boundary of overlapping institutions¹. *American Journal of sociology*, 116(2), 341–388.

Nelson, R. R., and Winter, S. G. (1982). The Schumpeterian tradeoff revisited. *The American Economic Review*, 114–132.

Netherlands Water Partnership (NWP), WASTE, Wageningen-UR. (2010) DPRN Phase II report.

Nicholls, A., and Huybrechts, B. Sustaining Inter-organizational Relationships Across Institutional Logics and Power Asymmetries: The Case of Fair Trade. *Journal of Business Ethics*, 1–16.

Nutrient Platform. (2012). Position paper – note for Dutch parliament on a phosphorus chain agreement.

Ostanello, A., and Tsoukias, A. (1993). An explicative model of ‘public’ interorganizational interactions. *European Journal of Operational Research*, 70(1), 67–82.

Pache, A. C., and Santos, F. (2013). Inside the hybrid organization: Selective coupling as a response to competing institutional logics. *Academy of Management Journal*, 56(4), 972–1001.

Patvardhan, S., Gioia, D., and Hamilton, A. (2015). Weathering a metalevel identity crisis: Forging a coherent collective identity for an emerging field. *Academy of Management Journal*, 58 (2), 405–435.

Pfeffer, J., and Salancik, G. R. (1978). The external control of organizations: A resource dependence perspective. New York: Harper and Row.

Poncelet, E. C. (2001). “A kiss here and a kiss there”: conflict and collaboration in environmental partnerships. *Environmental Management*, 27(1), 13–25.

Powell, W. W., and Sandholtz, K. W. (2012). Amphibious entrepreneurs and the emergence of organizational forms. *Strategic Entrepreneurship Journal*, 6(2), 94–115.

Reay, T., and Hinings, C. R. (2005). The recomposition of an organizational field: Health care in Alberta. *Organization Studies*, 26(3), 351–384.

Reay, T., and Hinings, C. R. (2009). Managing the rivalry of competing institutional logics. *Organization Studies*, 30(6), 629–652.

Reinecke, J. and Ansari, S. (2016). Taming wicked problems: the role of framing in the construction of corporate social responsibility. *Journal of Management Studies*, 53(3), 299–329.

Ridder, M. De, Jong, S. De, Polchar, and J., Lingeman, S. (2012). Risks and Opportunities in the Global Phosphate Rock Market. The Hague Centre for Strategic Studies (HCSS) ISBN/EAN: 978-94-91040-69-6.

Seibel, W. (2015). Studying Hybrids: Sectors and Mechanisms. *Organization Studies*, 36 (6), 697–712.

Selsky, John W., and Barbara Parker. (2005). Cross-sector partnerships to address social issues: Challenges to theory and practice. *Journal of Management* 31(6), 849–873.

Smets, M., Jarzabkowski, P., Burke, G. T., and Spee, P. (2015). Reinsurance trading in Lloyd's of London: Balancing conflicting-yet-complementary logics in practice. *Academy of Management Journal*, 58(3), 932–970.

Snow, D. A., and Benford, R. D. (1988). Ideology, frame resonance, and participant mobilization. *International social movement research*, 1(1), 197–217.

Snow, D. A., Rochford Jr, E. B., Worden, S. K., and Benford, R. D. (1986). Frame alignment processes, micromobilization, and movement participation. *American Sociological Review*, 51, 464–481.

Smit, A.L., Bindraban, P.S., Schroder, J.J., Cnijn, J.G., Van der Meer, H.G. (2009). Phosphorus in agriculture: global resources, trends and development. Report to the Steering Committee Technology Assessment of the Ministry of Agriculture, Nature and Food Quality, The Netherlands *Plant Research International B.V., Wageningen*, report 282

Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.

Turcotte, M. F., and Pasquero, J. (2001). The paradox of multi-stakeholder collaborative roundtables. *The Journal of Applied Behavioral Science*, 37(4), 447–464.

Van de Ven, A. H., and Poole, M. S. (1990). Methods for studying innovation development in the Minnesota Innovation Research Program. *Organization Science*, 1(3), 313–335.

Waddell, Steve, and L. David Brown. (1997). Fostering intersectoral partnering: A guide to promoting cooperation among government, business, and civil society actors. Vol. 13. Institute for development research (IDR)

Westley, F., and Vredenburg, H. (1991). Strategic bridging: The collaboration between environmentalists and business in the marketing of green products. *The Journal of Applied Behavioral Science*, 27(1), 65–90.

Westley, F., & Vredenburg, H. (1997). Interorganizational collaboration and the preservation of global biodiversity. *Organization Science*, 8(4), 381–403.

York, J. G., O'Neil, I., and Sarasvathy, S. D. (2016). Exploring environmental entrepreneurship: identity coupling, venture goals, and stakeholder incentives. *Journal of Management Studies*, 53(5), 695–737.

Zald, M. N., and Ash, R. (1966). Social movement organizations: Growth, decay and change. *Social forces*, 44(3), 327–341.

Zilber, T. B. (2009). Institutional Maintenance as Narrative Acts. In T. B. Lawrence, R. Suddaby, & B. Leca (eds.), *Institutional Work: Actors and Agency in Institutional Studies of Organizations*: 205–235. Cambridge: Cambridge University Press.

Tables and Figures

Table 4.1. Overview of interview questions

Semi-Structured interview questions
Why did you join the Nutrient Platform?
What are your activities for the platform?
What according to you is the reason that the platform exists?
Is the platform a success?
What are some successes of NP?
What are some hurdles the NP has overcome or still should overcome?
Where is NP in 5 years?
Would you characterize the platform as a social movement?

Table 4.2. Overview of data

Type of data	NP internal	NGO	Business	Know-ledge institutes	Government
Interviews	Three interviews with current and past secretariat members	Three interviews	Twelve interviews, three of which were industry associations	Three interviews	Six interviews, one of which is with a member of the House of Representatives
Archival data	Full access was provided to all internal documents in the Nutrient Platform database, including meeting agendas, minutes, strategic plans, memos, presentations as well as the agreement signed to found the platform and several evaluations of the targets stated in that agreement				
Obser-vations	One member meeting of the Nutrient Platform was observed as well as one meeting of the Nutrient Platform Steering Committee				

Table 4.3. Summary of main themes and verbatim examples

Diagnostic framing	Theme	Sub-theme	Example
	Crisis	1. Environmental impact- use	<i>'The inappropriate use of phosphorus can (...) encourage the erosion and pollution of waterways, cause coastal dead zones and impact fisheries'(internal document, 2009)</i>
		2. Environmental impact- mining	<i>As P supplies run down, we will need to use dirtier sources, leading to cadmium pollution of soil, and potentially even radiation pollution (internal document, 2011)</i>
		3. Scarcity	<i>The phosphorous problem is based on the idea that we have mines from where we get our phosphorous, so like oil and gas phosphorous is limited. If it is used up we will have a big problem. (interview with Second Secretary Nutrient Platform).)</i>
		4. Lack of security of supply	<i>Just five countries together control 90% of the world's reserves of rock phosphate. China, the largest producer, has already begun to safeguard its supplies by imposing, in mid-2008, a 135% tariff on exports (news article, 2009)</i>
	Crisis + opportunity	5. Sanitation in developing countries	<i>Especially for developing countries it is interesting to create self-sustaining areas in terms of food security (for example by connecting cities (human excreta) to arable land for P-recycling) and energy (biogas). (internal document, 2010)</i>
	Opportunity	6. Dutch P availability	<i>As the only phosphorus surplus country in Europe, the Netherlands is in a unique position and faces special challenges. The present cost of manure processing is more than 100 million euros. Better defined and more effective composting and a wider range of recycling products can create alternatives for chemical fertilizer production and industry. (internal document, 2009)</i>
		7. Dutch Governance/ Innovation strengths	<i>With the Phosphorous Chain Agreement the Netherlands has become a frontrunner in Europe, based on our knowledge and expertise in the agro- and food business. (public document produced by the Nutrient Platform, 2013)</i>

Figure 4.1. Timeline of main events in Nutrient Platform

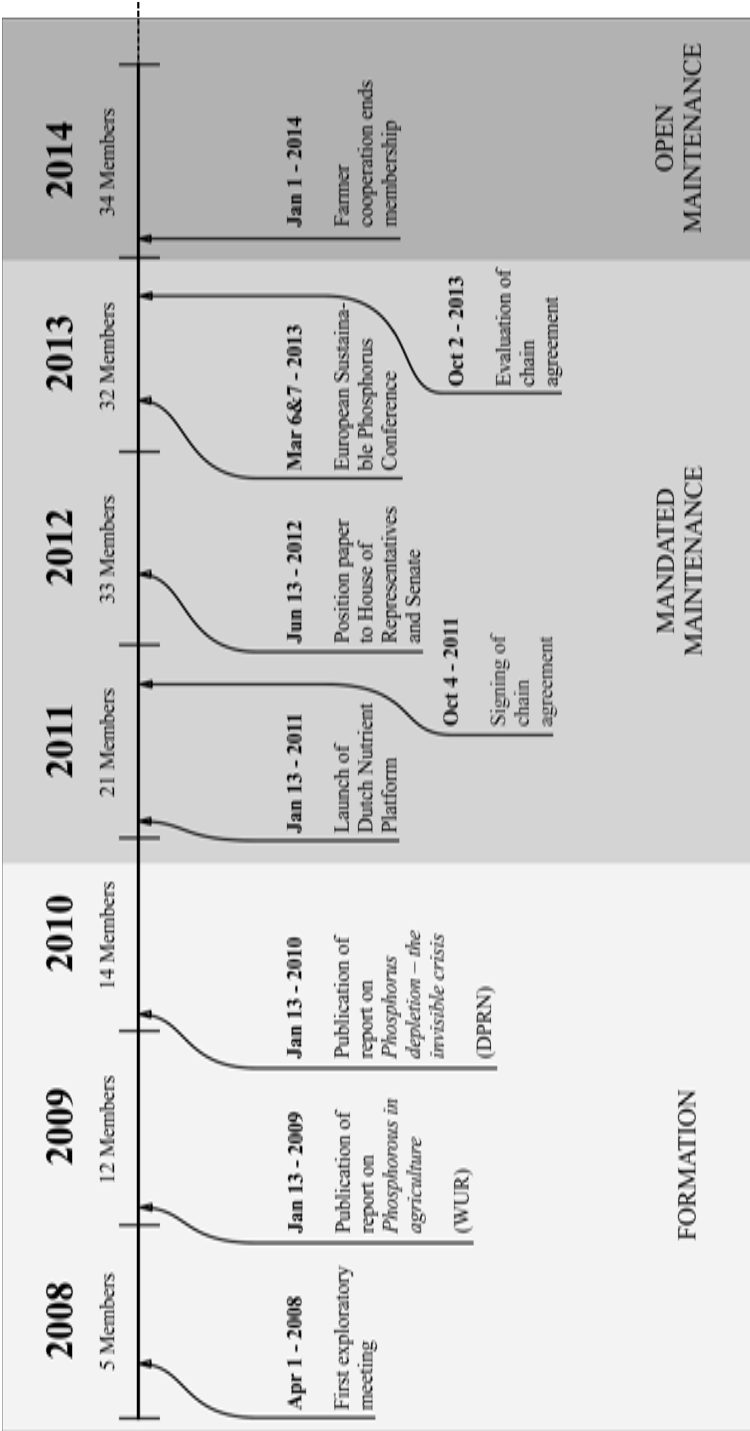


Figure 4.2. Active frames in different phases of the Nutrient Platform

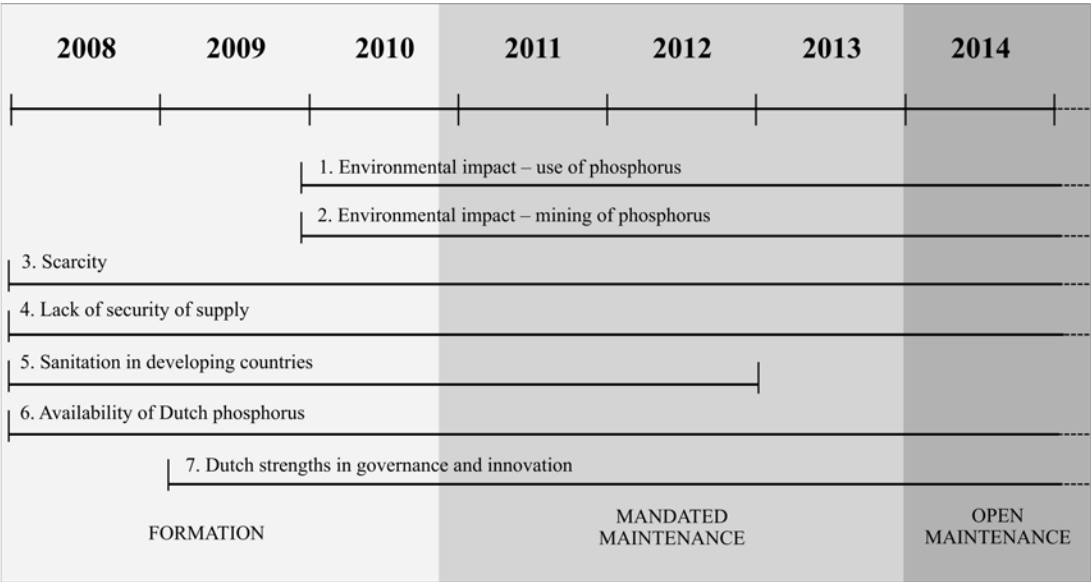
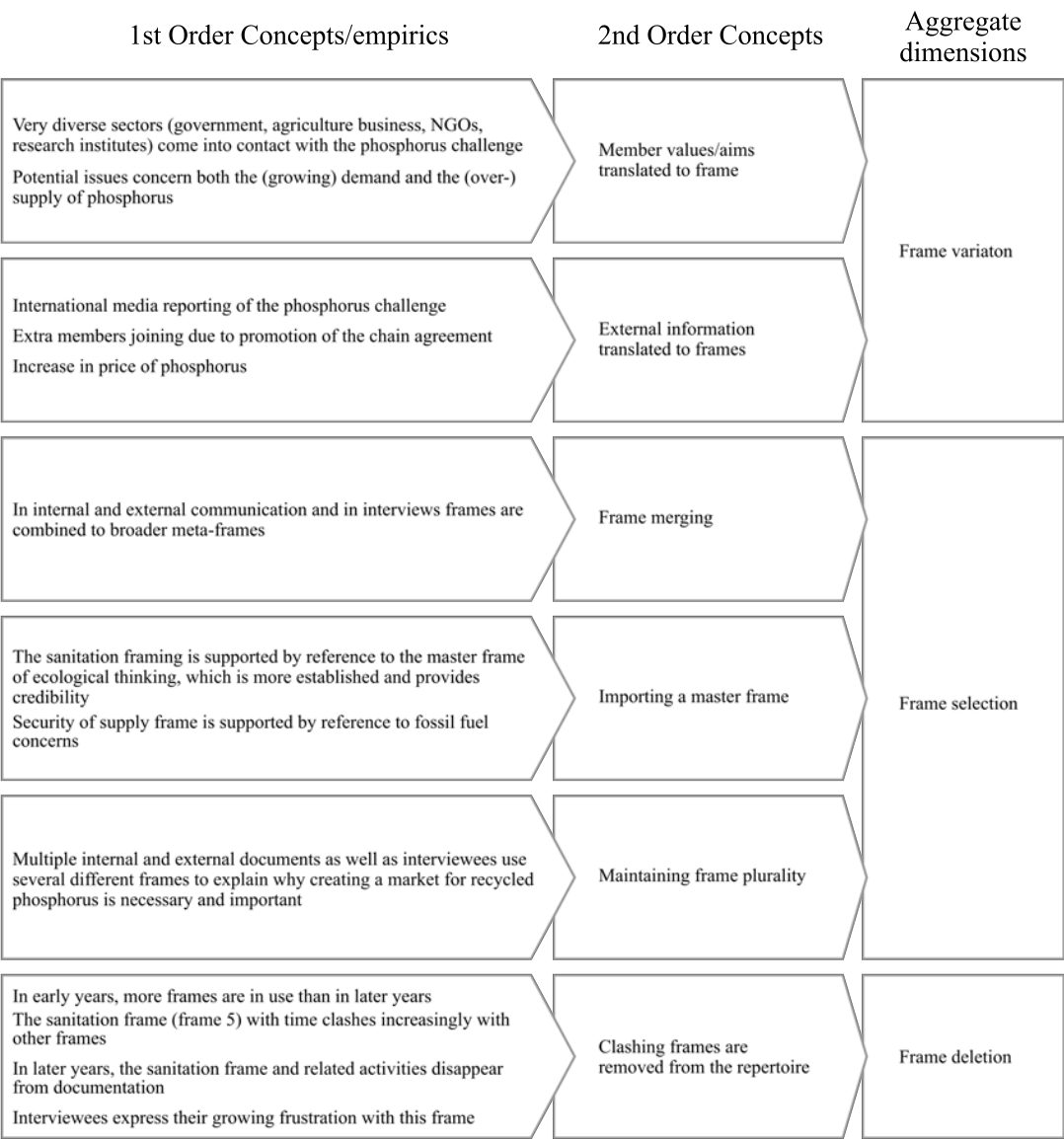


Figure 4.3. Data structure



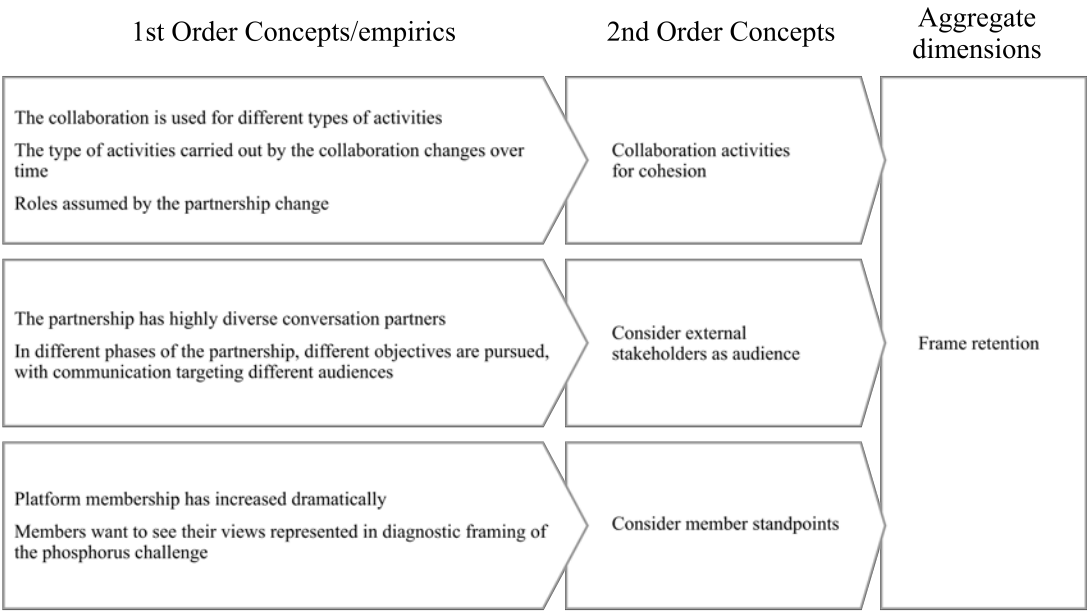
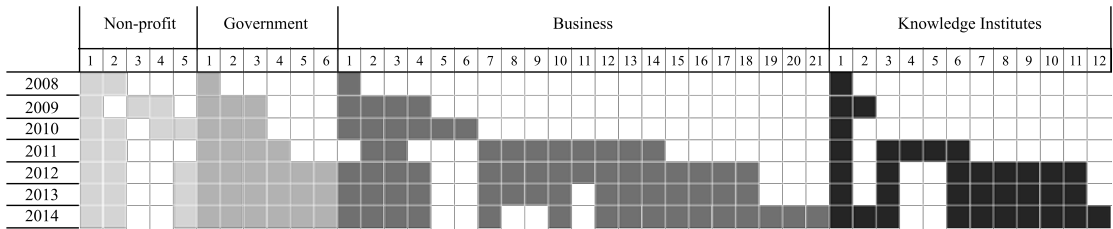


Figure 4.4. Nutrient Platform membership development



*one bar for each organization (a white square means no membership in a given year)

Figure 4.5. Nutrient Platform membership share per sector

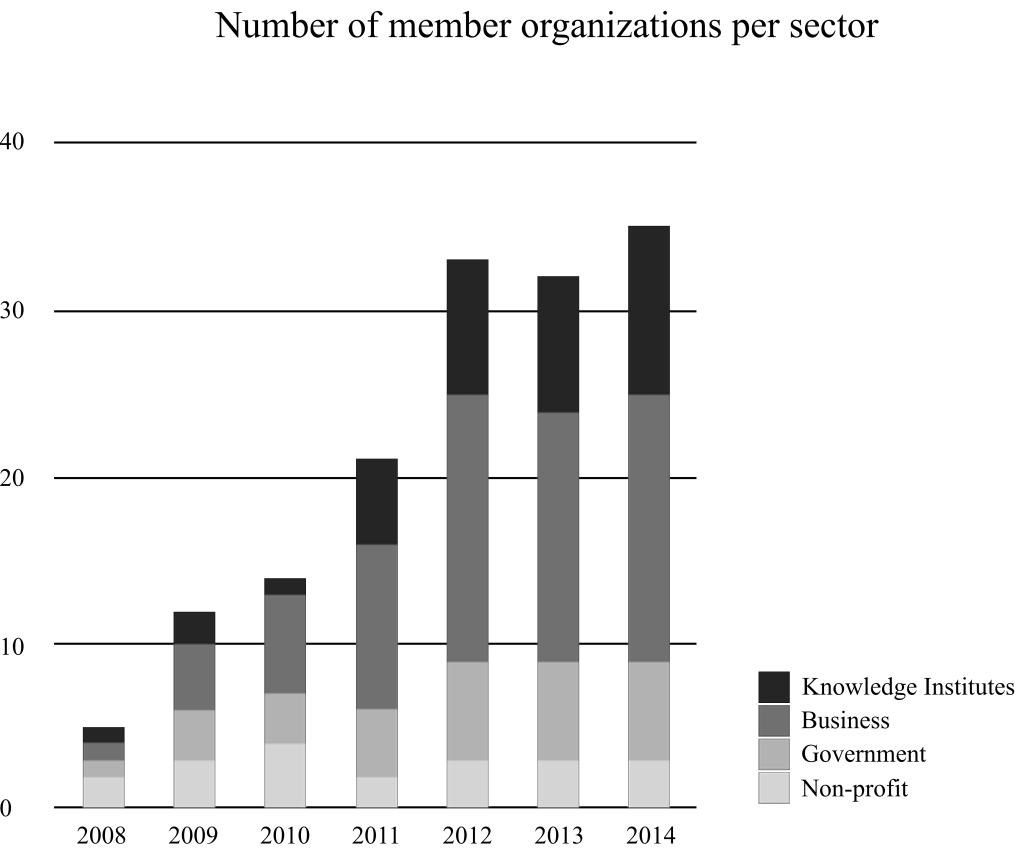
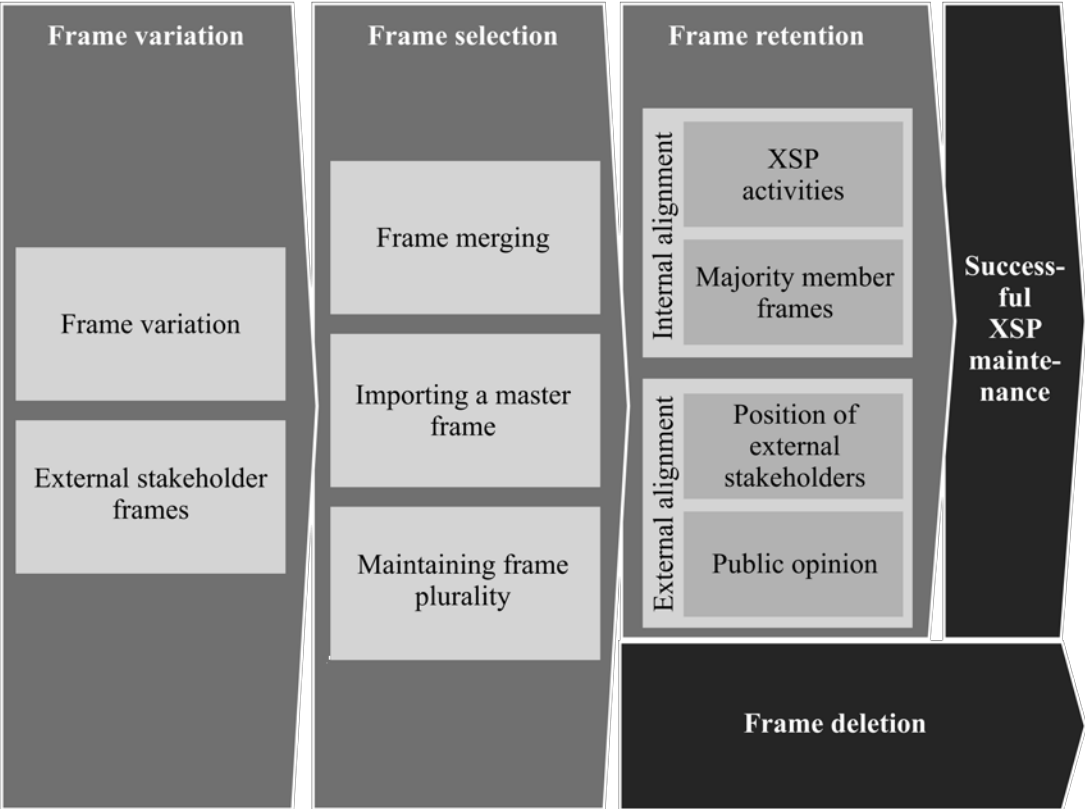


Figure 4.6. Model of frame variation-selection-retention and deletion for maintaining frame plurality



Chapter 5

Study 4. Creating and disrupting to explore: how different types of institutional work by actors relate to different firm wide innovation outcomes

Abstract

For this study, we use the systematic approach of innovation scholars to measure the very root of innovative behavior. We measure the institutional entrepreneurial behavior of individuals in firms and relate it to different types of innovative outcomes (exploration or exploitation).

We make the case that individual institutional work within firms that is more radical is related to exploratory innovation, while institutional work to transform institutions more gradually is related to exploitation-based innovation. Empirical testing was performed using a random sample of 346 Dutch companies of different sizes, of which management team members participated in a survey. The most important sectors represented were business-to-business services construction industry and other manufacturing industries. We find that there is a positive relationship between individual-level institutional work carried out to *create* institutions individual-level institutional work carried out to *disrupt* institutions and exploratory innovation at firm level. Also, we find a significant positive relationship between institutional work aimed at *transforming* institutions and exploitation-based innovation. With this study, we tie together the institutional entrepreneurship- and the innovation literature the shed light of the process that leads up to different types of innovation behavior.

Introduction

They would not disagree over the notion that organizations change. Yet beyond that point, innovation scholars and researchers of neo-institutional theory have not been able to find much common ground. Innovation studies are commonly quantitative and include antecedents such as organizational specialization, professionalism, centralization and slack resources (Damanpour, 1991). Alternatively, scholars of institutional change dive into the workings of change often at a field rather than an organization level (Dacin et al., 2002) and pay attention to the process rather than the outcome of change (for example Seo and Creed, 2002).

The literatures on innovation and institutional change have developed in parallel while they each attempt to explain the changes that take place within and around organizations. Aoki (2005, p. 15), as a rare exception bringing the two theories together, uses innovation language to describe institutional change as involving ‘qualitatively new (innovative), experimental choices initiated by some (or all) agents, and their subsequent stabilization, accompanied by strategic adaptations by other agents to them.’ The study of the work of these agents in neo-institutional theory is fragmented in two main sub-fields; institutional entrepreneurship (a.o. Maguire et al., 2004., Greenwood and Suddaby, 2006., Garud et al., 2007), and institutional work (a.o. Lawrence et al, 2009., Battilana and D’Aunno, 2009., Zietsma and Lawrence, 2010). These two sub-fields supplement each other. Lawrence, Suddaby and Leca (2009, p.1.) explain that the theory of institutional work, which developed slightly later, is aimed at ‘connecting, bridging, and extending work on institutional entrepreneurship, institutional change and innovation’. However, although institutional entrepreneurship can be said to have received a prominent place in the institutional work literature, concepts from innovation research have not made it into the core of the theory.

With this paper we aim to re-assess the use of several concepts from innovation research for application in the field of institutional work. The

quantitative nature of this work may help strengthen the state of institutional work, which has received negative criticism regarding its largely qualitative nature.

In doing so, we operationalize some concepts that are seminal to institutional entrepreneurship- and institutional work theory, and investigate their ties to the seminal concepts from the innovation literature. We pioneer a scale for the different types of institutional work (creating, transforming and disrupting) and we fortify it by subsequently relating these to existing and accepted measures (Jansen, Van den Bosch and Volberda, 2006) for exploration and exploitation respectively, recognized as the two different forms of innovation (March, 1991). The creation of a scale to measure the different types of institutional work was motivated by two factors. First, it has been mentioned that the body of institutional entrepreneurship literature is too light on quantitative studies. Pacheco et al. (2010, p. 993) explain that empirical research in neo-institutional theory-based institutional entrepreneurship tends to ‘focus more on the qualitative, historical interpretation of cases than on the quantitative analysis’

The authors of this paper’s work on the creation of a scale for institutional entrepreneurship is a case of institutional work in action. Porter (1995) demonstrated that the definition and acceptance of standard quantitative measures, facilitates actors in sharing common meanings. The intention of this paper is to contribute to the sharing of concepts and meanings between innovation scholars and neo-institutional theorists-more specifically, the body of research focusing on institutional work. The former have produced a wide range of (quantitative) measures for innovation, yet innovation research has in a systematic review been evaluated as ‘fragmented, poorly grounded theoretically, and not fully tested in all areas’ (Crossan & Apaydin, 2010, p. 1174).

Smets and Jarzabkowski (2013, p.1282) state that ‘there have been ‘repeated calls to refine theories of intentionality and effort (Lawrence et al., 2009, 2011) and explore how institutional work is underpinned by different dimensions of agency (Battilana and D’Aunno, 2009)’. The authors draw on practice theory to

demonstrate that institutional work is not always intentional and can be carried out by actors in their ordinary activities.

With this paper, we will demonstrate the complementarity of the methodological approach of innovation theory and the theoretical lens of institutional work theory. With that, we hope to lay a foundation for further joint development of both theory and measures.

Institutional work and Innovation

Institutional work

Neo-institutionalism has strong empirical and theoretical foundations reaching back several decades since the publication of Selznick's seminal paper conceptualizing what is retrospectively referred to as 'old' institutional theory (1949). This fundamental theory revolved around the concept that organizations respond to pressures in their social and symbolic environment rather than simple economic pressures (Meyer and Rowan, 1977). There has been criticism that neo-institutional theory has disregarded organizational diversity (Deephouse, 1999) as well as managerial agency and strategic choice (Donaldson, 1995). The theory of institutional entrepreneurship (DiMaggio, 1988), based on agency as well as isomorphism and diffusion is an answer to this. Yet institutional theory has become so widespread that it is 'creaking under the weight of its own theoretical apparatus' (Lawrence, Suddaby and Leca, 2011, p. 52). Lawrence et al. (2011, p. 55) themselves struggle with this as they are forced to clearly to distinguish institutional work from the seemingly similar – and slightly earlier developed – concept of institutional entrepreneurship.

Garud, Hardy and Maguire (2007) in the introduction to a special issue about institutional entrepreneurship identify a shift in the focus of institutional researchers from explaining stability towards explaining institutional change, and the institutional work that is the stimulus of this change. They state that 'To qualify as institutional entrepreneurs, individuals must break with existing rules and practices associated with the dominant institutional logic(s) and

institutionalize the alternative rules, practices or logics they are championing' (Garud et al, 2007, p. 962).

Since the publication of that special issue the conceptualization of institutional entrepreneurship has become more nuanced. A contribution to this has been the rise of interest in the theory of institutional work. Meyer (2008, p. 791) warns for the overemphasis on 'realist institutionalism', which 'retains very strong assumptions about the capacities of actors, and very limited pictures of the institutional environment'. He points out that such realisms are unable to explain 'unlikely social structures' (Meyer, 2008, p. 805) such as the human rights movement and environmental policies, creating many research opportunities for phenomenological institutional theory to develop. Lawrence, Suddaby and Leca (2009, p. 5) in their book on institutional work advise caution to avoid overemphasis of the 'rational and "heroic" dimension of institutional entrepreneurship. The authors draw the attention to the fact that actors, even entrepreneurs, are embedded in an institutionally defined concept, which affects their behavior just as they affect it. The notion of an institutional entrepreneur as an actor with definable features has long been upended.

Most recently, institutional work has developed into a mature perspective which focuses on 'understanding how, why and when actors work to shape sets of institutions, the factors that affect their ability to do so, and the experience of these efforts for those involved' (Hampel, Lawrence and Tracey, 2017, p. 558)

Types of institutional work

Work on *maintaining* institutions is necessary to keep them 'relevant and effective' (Lawrence et al., 2009, p. 8). Contrary to the conception that institutions are self-maintaining (Scott, 2001), even strong institutions require active work to remain solid (Zilber, 2009; Dacin, Munir and Tracey, 2010; Micelotta and Washington, 2013).

The counterforce of maintaining institutions is actively working to change them. We distinguish between three categories of work to change institutions.

First, institutional work to *create* institutions builds on the concept of institutional entrepreneurship (Lawrence et al, 2009, p.8). Studies that focus on work to create institutions are abundant (Garud, Jain and Kumaraswamy, 2002; Maguire et al, 2004,). The consensus is that to be able to successfully create institutions, the traditionally recognized forces of institutional theory have to be actively managed by actors who want to change the status quo. Tracey, Phillips and Jarvis (2011) introduce the concept of bridging institutional entrepreneurship, which is used by actors to tie established, accepted institutional logics, to new logics at multiple levels in order to achieve legitimacy.

Second, there is a separate category of institutional work research that focuses on *disrupting* institutions. Oliver (1992) first paid attention to the process of deinstitutionalization, concluding that political, functional and/or social pressures can give rise to deinstitutionalization. Seo and Creed (2002) later provide a framework to explain how incompatible institutional arrangements interact with agency to create institutional change. Lawrence and Suddaby (2006, p. 235) argue that disruptive institutional work can have three aims: "undermining assumptions and beliefs" about practices; "disassociating moral foundations" from practices; and "disconnecting sanctions" from practices through changes in legal or professional regulations.

Recently, more attention is paid to the question of how work to change institutions is carried out. Maguire and Hardy (2009, p. 168) illustrate the discursive aspect of changing institutions by showing how institutional work is carried out by actors 'through the authoring of texts that problematize existing practices in three specific ways designed to undermine each of the institutional pillar'. This work signals the existence of a third category of institutional change, which we call *transforming* institutions. We define it as the more gradual work carried out to change institutions, as opposed to both *creating* entirely new institutions and the more abrupt *disruption* of institutions.

Martí and Mair (2009, 13) argue that in the institutional work literature, too much attention is given to powerful actors, neglecting more marginal players.

In response, they investigate ‘how social entrepreneurs attempt to enhance and broaden the scope of existing institutional arrangements’ and urge future research to consider the role of ‘provisional institutions’, which are created by actors to serve their interest for a certain period of time. Pache and Santos (2013) compare four cases of social enterprises to investigate ‘hybridization’, where actors combine competing institutional logics. The authors find that rather than decoupling and compromising, actors in hybrid organizations use a strategy of selectively coupling specific elements of the two separate logics that are present in the hybrid. These two studies exemplify that often institutional work to transform an institution is carried out without resorting to extremes such as creation and disruption. This new category of *transformational* institutional work appears to be less invasive than work on creating or disrupting institutions. The implications of this are to be analyzed further. Innovation theory may shed some light on this.

Innovation theory

Crossan and Apaydin (2010, p. 1155) define innovation as ‘both a process and an outcome’. The authors state that innovation includes ‘production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres’. The terms "exploration" and "exploitation" have progressively led organizational analyses of innovation since the publication of March's (1991) pioneering article. The opposing terms are defined as follows:

“Exploration includes things captured by terms such as search, variation, risk taking, experimentation, play, flexibility, discovery, innovation. Exploitation includes such things as refinement, choice, production, efficiency, selection, implementation, execution” (March, 1991, p. 71)

Adapting to complex environments that are changing at an ever-increasing pace requires managers to be ambidextrous -to exploit existing knowledge while

simultaneously exploring novel avenues for knowledge development (March, 1991, Levinthal and March, 1993, He and Wong, 2010).

Laureiro-Martinez, Brusoni, Canessa and Zollo (2015) use fMRI images to demonstrate that exploration and exploitation are separate behaviors involving different cognitive processes. They find that exploitation relies on brain regions associated mainly with anticipation of rewards - which implies anticipation of the safe, predictable reward-, while exploration depends on regions associated mainly with attentional control. The authors also find that superior decision-making performance is derived from 'the ability to sequence exploitation and exploration appropriately and to recognize when to switch to exploration' (Laureiro-Martinez et al, 2015, p. 332). For future research, the authors suggest to further investigate the roots of how executives formulate and implement strategic visions.

Institutional work on innovation

Institutional work may be able to shed light on the process that underlies the outcome of different innovative behaviors (exploration and exploitation). One of the key elements of the institutional work literature is highlighting the 'awareness, skill and reflexivity of individual and collective actors' (Lawrence et al., 2009, p. 7.). We hypothesize that the three different types of institutional work are related to different innovative outcomes.

First, we tie more radical forms of work to change institutions to more radical forms of institutions. We theorize that innovative behavior by a firm as a whole, is an outcome of more micro-level institutional work. As such, we hypothesize that institutional work to create institutions is tied to exploratory innovation:

H1a: There is a positive relationship between individual-level institutional work carried out to create institutions and exploratory innovation at firm level

Similarly, we theorize that the radical nature of disruptive institutional work will result in radical innovative behavior. Consequently, we tie institutional work to disrupt institutions to firm-level exploratory innovative behavior:

H1b: There is a positive relationship between individual-level institutional work carried out to disrupt institutions and exploratory innovation at firm level

On the other hand, we argue that the more gradual transformative institutional work performed at the individual level, is related to exploitation-based innovative behavior at firm level:

H2: There is a positive relationship between individual-level institutional work carried out to transform institutions and exploitation-based innovation at firm level

Methods

Research setting and data collection

In order to test the proposed relationships empirically, we used a random sample of Dutch companies of different sizes. Requests to participate in the survey were sent to management team members. As our data concerns information about the regulatory standards in the organizational field, management team members were approached because they were expected to be in the best position to provide this knowledge. Survey data were collected in 2014.

A total of 4.000 invitations were sent to managers of Dutch companies by post; in addition digital databases and social media were used to reach a wider public. 346 respondents completed the questionnaire, a response rate of approximately 9%. Apart from the category “others” (20,5%), the most important sectors represented were business-to-business services (27,2%), construction

industry (7,6%), other manufacturing industry (17,2%), logistics (5,2%), trade (10,2%) and financial services (6,3%).

Construct measurement

We used a seven-point Likert scale to measure the strength of a participant's agreement to statements about the constructs used in this study. An overview of these can be found in Table. 5.1.

Exploratory innovation. To measure exploratory innovation we adapted a measure used by Alexiev, Jansen, Van den Bosch and Volberda (2010), which was based on a more extensive measure developed by Jansen et al. (2006). It captures whether organizations depart from existing knowledge and pursue radical innovations for emerging customers or markets. The respondents were asked about the extent to which the organization: (1) offers new products and services the organization; (2) accepts demands that go beyond existing products and services; ; (3) they utilize new opportunities in new markets and (4) uses new channels of distribution ($\alpha = 0.77$).

Exploitative innovation. We adapted the measure for exploitative innovation from Jansen et al (2006). The respondents were asked to rate the extent to which their organization: (1) works to increase the efficiency of production processes and services; (2) increases scale advantages by increasing the share in existing markets; (3) Deepens existing customer relations and (4) makes small adaptations to products and services ($\alpha = 0.76$).

The three types of institutional work were each measured using a three-item measure. Since there was no existing measurement scale for these variables, we derived them from the general definition of what constitutes an institution. We adopt the interpretation of institutions as the 'rules, norms, and beliefs that describe reality for the organization, explaining what is and is not, what can be acted upon and what cannot' (Hoffman, 1999: 351). Next, realizing that rules, norms and beliefs each constitute a separate category of institution, we formulated a question. So for each type of institutional work (creative, transformative and

disruptive) we formulated a question about rules, a question about norms and a question about beliefs. This completed the creation of a three-item measurement scale for *creative institutional work* ($\alpha = 0,830$), one for *transformative institutional work* ($\alpha = 0,847$), and one for *disruptive institutional work* ($\alpha = 0,911$).

We use firm size as a control variable in our model. Organizational size, measured as the log of the number of organization members, has a widely recognized moderating influence on the relationship between strategy and performance (Smith et al., 1989; Carroll, 2003). In addition, we control for the age of the organization.

A list of questionnaire items was generated based on the operationalization of the constructs as outlined in Appendix 5.1.

Reliability and validity

A survey method allows for the collection of data from individuals about themselves or about the social units to which they belong (Rossi et al., 1983). This method has an advantage over archival data in explaining managerial behavior. However, the disadvantage is that the resulting data is perceptual. In order to test for non-response bias, we examined differences between early and late respondents (those who started the questionnaire in the first three months versus those who started it in the final three months) for our main study variables. These comparisons did not reveal any significant differences ($p < 0.01$), indicating that non-response bias was not a problem in this study.

To reduce the risk of common method bias, during the administration of the survey we assured respondent confidentiality. This should reduce respondent tendency towards providing socially desirable answers.

Findings

This section first presents the findings of our univariate analysis. We find that respondents on average indicate a greater presence of more exploitation-based innovation behavior (4.92) than explorative innovation (4.16). Table 5.2 indicates the correlation matrix for the variables used in this study. The table indicates that internal- and external regulation are strongly correlated. In addition, the variables organization age and size correlate significantly with at least one of the dependent variables. This supports our decision to control the analysis for these effects.

We used regression analyses to test our hypotheses. Table 5.3 outlines the results of the regression analysis. Model 1 and 2 in the table are used to test hypotheses 1a and 1b, concerning the relationship between individual-level institutional work carried out to respectively create institutions (hypothesis 1a) or to disrupt institutions (hypothesis 1b) and exploratory innovation. Model 1 in Table 5.3 explains the combined effect of the control variables on exploratory innovation as dependent variable. Model 2 explains the relationship between each of the three types of institutional work (to create, disrupt or transform) and exploratory innovation. The Durbin-Watson score of 1.980 indicates no evidence of autocorrelation.

First, we use Model 2 in Table 5.3 to test hypothesis 1a. We find a significant positive relationship between individual-level institutional work carried out to *create* institutions and exploratory innovation. This means that hypothesis 1a is confirmed. Second, we used Model 2 to test hypothesis 1b. We find also a significant positive relationship between individual-level institutional work carried out to *disrupt* institutions and exploratory innovation. This means that hypothesis 1b is also confirmed. Model 2 also indicates that no significant relationship exists between individual-level institutional work carried out to *transform* institutions.

Model 3 and 4 are used to test hypothesis 2, concerning the relationship between individual-level institutional work carried out to transform institutions and exploitation-based innovation. Model 3 in Table 5.3 explains the combined effect of the control variables on exploitation-based innovation as dependent

variable. Model 4 explains the relationship between each of the three types of institutional work (to create, disrupt or transform) and exploitation-based innovation. The Durbin-Watson score of 1.921 indicates no evidence of autocorrelation.

We use model 4 to test hypothesis 2. We find a significant positive relationship between individual-level institutional work carried out to *disrupt* institutions and exploitation-based innovation. This confirms hypothesis 2. Model 4 also indicates that no significant relationship exists between individual-level institutional work carried out to *create* or institutional work to *disrupt* institutions and exploitation-based innovation.

Discussion

Theoretical implications

This study creates a link between the separate literatures of institutional entrepreneurship and innovation studies. This benefits each of the literatures. Institutional work literature is known for explaining the delicate balance between economical explanations for behavior, and more socially controlled behaviors. This in-depth look at behavior is used in this study to explain through which process different types of innovation (exploration and exploitation) materialize at firm level.

In turn, the innovation literature explaining the process and the outcome of innovation is extensive. As opposed to institutional research -which is sometimes criticized for being too descriptive in nature, and relying heavily on qualitative work – innovation research has used a wide variety of methods, from surveys to brain imaging, to define and measure the processes and outcomes of innovation.

With this study, we use the systematic approach of innovation scholars to measure the very root of innovative behavior. We measure the institutional entrepreneurial behavior of individuals in firms and relate it to different types of innovative outcomes (exploration or exploitation). In innovation research the

contingent factor of innovation trajectories is emphasized in studies taking a performative approach. Our findings are in line with the argument of Garud, Gehman and Tharchen (2017, p.5) that ‘strategic, entrepreneurial, and innovative initiatives can be considered as performative efforts during ongoing journeys’. The authors argue that the initiatives for changes as proposed by actors can be understood as ‘performatives’. The plans and pitches that are used by actors to this end can be viewed as an attempt to gain support from stakeholders. The results of our study support this view that individual grassroots initiatives by institutional entrepreneurs can indeed be the beginning of the firm wide innovation profile.

Methodological implications

We also use this study to solidify the understanding of the concept of institutional entrepreneurship. Though the concept has been well-defined and studied in many different contexts, this study pioneers a quantitative measure of the different types of institutional entrepreneurship. Though the measures can always use enhancements or changes, we offer at least a start for making visible the small, individual initiatives that are connected to different types of firm-level innovation (exploration or exploitation).

Managerial implications

Our findings demonstrate that the existence of individual-level institutional entrepreneurship initiatives within firms is related to the type of firm-wide innovative behavior that is exhibited. We find that when more radical work on the creation and disruption of institutions is carried out by people within a certain firm, this firm is also more likely to display exploration-based innovative behavior. Alternatively, our findings show that when more gradual institutional work to transform institutions is carried out by individuals within firms, these firms

Conclusion

For this study we used the systematic methodology of innovation scholars to measure the institutional entrepreneurial behavior of individuals in firms. We then relate this to different types of innovative outcomes (exploration or exploitation). We introduce a measure for each of the categories of institutional work and we find that that individual institutional work within firms that is more radical (creating or disrupting institutional work) is related to higher firm levels exploratory innovation, while institutional work to transform institutions more gradually is related to firm-level exploitation-based innovation. Managers can infer from this that their institutional entrepreneurial behavior at individual level are related to the innovative profile of their organization at firm level.

References

- Alexiev, A. S., Jansen, J. J., Van den Bosch, F. A., & Volberda, H. W. (2010). Top management team advice seeking and exploratory innovation: The moderating role of TMT heterogeneity. *Journal of Management Studies*, 47(7), 1343-1364.
- Aoki, Masahiko. "Schumpeterian Innovation of Institution." *Unpublished paper, Research Institute of Economy, Trade and Industry, Tokyo* (2005).
- Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of Management Studies*, 47(6), 1154-1191.
- Dacin, M. T., Munir, K., & Tracey, P. (2010). Formal dining at Cambridge colleges: Linking ritual performance and institutional maintenance. *Academy of Management Journal*, 53(6), 1393-1418.
- Damanpour, Fariborz. "Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators." *The Academy of Management Journal*, vol. 34, no. 3, 1991, pp. 555-590.
- Déjean, Frédérique, Jean-Pascal Gond, and Bernard Leca. "Measuring the unmeasured: An institutional entrepreneur strategy in an emerging industry." *Human Relations* 57.6 (2004): 741-764.
- DiMaggio, P. J. (1988) "Interest and Agency in Institutional Theory," in L. Zucker (ed.) *Institutional Patterns and Organizations*, pp. 3-22. Cambridge, MA: Ballinger
- Donaldson, L. (1995). *American anti-management theories of organization: A critique of paradigm proliferation* (Vol. 25). Cambridge University Press.
- Garud, Raghu, Cynthia Hardy, and Steve Maguire. "Institutional entrepreneurship as embedded agency: An introduction to the special issue." (2007): 957-969.
- Garud, R., Jain, S., & Kumaraswamy, A. (2002). Institutional entrepreneurship in the sponsorship of common technological standards: The case of Sun Microsystems and Java. *Academy of Management Journal*, 45(1), 196-214.
- Greenwood, R., Oliver, C., Lawrence, T. B., & Meyer, R. E. (Eds.). (2017). *The SAGE handbook of organizational institutionalism*. SAGE.
- Greenwood, Royston, and Roy Suddaby. "Institutional entrepreneurship in mature fields: The big five accounting firms." *Academy of Management Journal* 49.1 (2006): 27-48.

Hampel, C., Lawrence, T. B., & Tracey, P. (2015). Institutional work: Taking stock and making it matter. In Greenwood, R., Oliver, C., Lawrence, T. B., & Meyer, R. E. (Eds.). (2017). *The SAGE handbook of organizational institutionalism*. SAGE. (pp. 558–590).

He, Z. L., & Wong, P. K. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization science*, 15(4), 481-494.

Jansen, Justin JP, Frans AJ Van Den Bosch, and Henk W. Volberda. (2006) "Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators." *Management Science* 52(11): 1661-1674.

Laureiro-Martínez, D., Brusoni, S., Canessa, N., & Zollo, M. (2015). Understanding the exploration–exploitation dilemma: An fMRI study of attention control and decision-making performance. *Strategic Management Journal*, 36(3), 319-338.

Lawrence, T. B., Leca, B., & Zilber, T. B. (2013). Institutional work: Current research, new directions and overlooked issues. *Organization Studies*, 34(8), 1023-1033.

Lawrence, T. B., Suddaby, R., & Leca, B. (2009). Introduction: Theorizing and studying institutional work. In T. B. Lawrence, R. Suddaby, & B. Leca (Eds.) *Institutional work: Actors and agency in institutional studies of organizations* (pp. 1-27). Cambridge, UK: Cambridge University Press.

Lawrence, T., Suddaby, R., & Leca, B. (2011). Institutional work: Refocusing institutional studies of organization. *Journal of Management Inquiry*, 20(1), 52-58.

Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14(S2), 95-112.

Maguire, Steve, Cynthia Hardy, and Thomas B. Lawrence. (2004): "Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada." *Academy of management journal* 47.5 657-679.

Maguire, S., & Hardy, C. (2009). Discourse and deinstitutionalization: The decline of DDT. *Academy of Management Journal*, 52(1), 148-178.

March, James G. "Exploration and exploitation in organizational learning." *Organization science* 2.1 (1991): 71-87.

Martí, I., & Mair, J. (2009). Bringing change into the lives of the poor: Entrepreneurship outside traditional boundaries. *Institutional work: Actors and agency in institutional studies of organizations*, 92-119.

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American journal of sociology*, 83(2), 340-363.

Meyer, J. W. (2008) "Reflections on Institutional Theories of Organizations," in R. Greenwood, C. Oliver, K. Sahlin and R. Suddaby (eds) *The SAGE Handbook of Organizational Institutionalism*, pp. 790–812. London: Sage.

Micelotta, E. R., & Washington, M. (2013). Institutions and maintenance: The repair work of Italian professions. *Organization Studies*, 34(8), 1137-1170.

Myeong-Gu Seo, and W. E. Douglas Creed. "Institutional Contradictions, Praxis, and Institutional Change: A Dialectical Perspective." *The Academy of Management Review*, vol. 27, no. 2, 2002, pp. 222–247.

Oliver, C. (1992). The antecedents of deinstitutionalization. *Organization Studies*, 13(4), 563-588.

Pache, A. C., & Santos, F. (2013). Inside the hybrid organization: Selective coupling as a response to competing institutional logics. *Academy of Management Journal*, 56(4), 972-1001.

Scott, R.W. (2001). Institutions and organizations. *Thousand Oak, CA: Sage Publications*

Selznick, P. (1949). *TVA and the grass roots: A study in the sociology of formal organization* (Vol. 3). Univ of California Press.

Smets, M., & Jarzabkowski, P. (2013). Reconstructing institutional complexity in practice: A relational model of institutional work and complexity. *Human Relations*, 66(10), 1279-1309.

Suddaby, R., Seidl, D., & Lê, J. K. (2013). Strategy-as-practice meets neo-institutional theory. *Strategic Organization* vol. 11, no. 3 (2013): 329-344

Tracey, P., Phillips, N., & Jarvis, O. (2011). Bridging institutional entrepreneurship and the creation of new organizational forms: A multilevel model. *Organization Science*, 22(1), 60-80.

Zilber, T. B. (2009). Institutional maintenance as narrative acts. In T. B. Lawrence, R. Suddaby, & B. Leca (Eds.), *Institutional work: Actors and agency in institutional studies of organizations* (pp. 205–235). Cambridge, UK: Cambridge University Press

Tables

Table 5.1. Operationalization of constructs

Construct	Operationalization
Exploitative innovation	The extent to which units build on existing knowledge and meet the needs of existing customers (Jansen et al., 2006)
Explorative innovation	The extent to which units depart from existing knowledge and pursue innovations for emerging customers or market (Jansen et al., 2006)
Creative institutional work	Activities of actors to create new institutions
Transformative institutional work	Activities of actors to transform existing institutions
Disruptive institutional work	Activities of actors to disrupt existing institutions

Table 5.2. Correlation matrix

Study Variable	Mea n	s.d.	0	1	2	3	4	5
<i>Main study variables</i>								
00. Exploration	4.16 44	1.21 952	0.77					
01. Exploitation	4.92 34	1.13 030	0.44 9**	0.76				
02. Creating institutional work	3.41 03	1.33 994	0.44 9**	0.34 5**	0.83 0			
03. Transforming institutional work	4.04 55	1.27 650	0.38 2**	0.40 6**	0.76 2**	0.84 7		
04. Disruptive institutional work	4.96 43	1.44 050	0.24 5**	0.09 5*	0.31 0**	0.32 6**	0.91 1	
<i>Control Variables</i>								
05. Organization age	49.5 513	77.7 9405	-0.10 1**	-0.49	-0.12 8**	-0.11 5*	0.46	
06. Organization size	1.75 80	0.99 256	0.00 7	0.18 4**	0.01 2	0.12 3*	0.16 5**	0.24 6**

1-tailed test * $p < 0.05$ ** $p < 0.01$; Cronbach's alpha's on diagonal

Table 5.3. Linear regression results predicting exploration and exploitation behavior

Variable	Exploration innovation		Exploitation innovation	
	Model 1	Model 2	Model 3	Model 4
Intercept	4.317	2.437	5.308	4.071
<i>Control variables</i>				
Age	-0.003* *	-0.002*	-0.003* *	-0.002**
Log_Size	0.066	0.019	-0.0006 **	-0.0005**
<i>Independent variables</i>				
Creating institutional work		0.344**		0.91
Transforming institutional work		0.059		0.239**
Disrupting institutional work		0.103*		-0.037
R ²	0.027	0.228	0.045	0.197
Adjusted R ²	0.024	0.216	0.04	0.185
Durbin Watson		1.980		1.921

* p < 0.05 ** p < 0.01

Appendices

Appendix 1. List of questionnaire items

Variable	Question
Exploratory innovation1	Wij zetten producten en/of diensten in de markt die compleet nieuw zijn voor ons
Explorative innovation2	Onze organisatie speelt in op vragen die verder gaan dan ons bestaande aanbod
Exploratory innovation3	We benutten veelvuldig nieuwe mogelijkheden in nieuwe markten
Exploratory innovation4	Onze organisatie gebruikt geregeld nieuwe distributiekkanalen
Exploitative innovation1	Wij vergroten de efficiëntie van onze productieprocessen en dienstverlening
Exploitative innovation2	Wij vergroten schaalvoordelen door het verbeteren van ons marktaandeel in onze huidige markten
Exploitative innovation3	Onze organisatie verdiept bestaande klantrelaties
Exploitative innovation4	Er vinden regelmatig kleine aanpassingen plaats aan onze producten en diensten
Creative institutional work 1	Medewerkers nemen regelmatig initiatief om nieuwe bedrijfsactiviteiten te introduceren
Creative institutional work 2	Medewerkers nemen regelmatig initiatief om nieuwe protocollen voor bedrijfsactiviteiten te creëren
Creative institutional work 2	Medewerkers nemen regelmatig initiatief om nieuwe richtlijnen voor het meten van het succes van bedrijfsactiviteiten te creëren
Transformative institutional work 1	Medewerkers nemen regelmatig initiatief om bestaande bedrijfsactiviteiten te veranderen

**Transformative
institutional work 2**

Medewerkers nemen regelmatig initiatief om bestaande protocollen is voor het uitvoeren van bedrijfsactiviteiten te veranderen

**Transformative
institutional work
p3**

Medewerkers nemen regelmatig initiatief om bestaande richtlijnen voor het meten van het succes van bedrijfsactiviteiten te veranderen

**Disruptive
institutional work 1**

Medewerkers betwisten regelmatig het nut van bestaande bedrijfsactiviteiten

**Disruptive
institutional work 2**

Medewerkers betwisten regelmatig bestaande protocollen voor het uitvoeren van bedrijfsactiviteiten

**Disruptive
institutional work 3**

Medewerkers betwisten regelmatig bestaande richtlijnen voor het meten van het succes van bedrijfsactiviteiten

Conclusion and Discussion

How does renewal of organizational strategies occur, while strong forces encourage organizations to maintain the status quo? Powerful principles such as fear of uncertainty and desire to be legitimate render people within organizations hesitant to move outside the lines of the familiar. Yet recent history is full of examples of people and organizations who have somehow overcome these barriers and have taken steps to transform institutional rules (cross-sector partnerships (XSP's), online-only grocery shops), disrupt them (Uber, AirBnB), or even institute new rules (ISO standards in the manufacturing industry). Institutional entrepreneurship is the behavior aimed at changing institutions or creating new ones. Institutional work is the term for the actual activities carried out by actors to in order to create, transform and disrupt institutions, but also to maintain them.

In this dissertation, building on institutional theory, fit, innovation and framing literature, I aim to increase academic and managerial understanding of the drivers and performance effects of institutional entrepreneurship at micro- and macro-levels of analysis. The studies in this book move from macro to micro-level and then revert back to macro-level to further delineate the phenomenon of institutional entrepreneurship and the institutional work carried out to achieve it.

The *first* study provides a theoretical foundation for institutional entrepreneurship research. I provide scholars with an overview of the alternative points of view in order to encourage them to articulate the approach selected and avoid the ambiguity for the audience in understanding the theoretical basis of the research. This theoretical study contains a review of institutional theory, which results in a typology of different institutional views. The study is the result of rigorous analysis of the status quo of papers published that use different types of institutional theory. I aim to provide insight into the variation between institutional views when it comes to the drivers and the potential for strategic renewal, in order to make visible the underlying assumptions of the theoretical lens used by the

authors. Table 6.1. outlines the different institutional perspectives and their assumed potential for strategic renewal.

Table 6.1. Institutional theories and the assumed potential for strategic renewal

Unit of analysis	Potential for strategic renewal	
	<i>Low</i>	<i>High</i>
Firm	Old Institutional Theory (Selznick, 1957)	Institutional entrepreneurship (Lounsbury and Crumley, 2007)
Industry	New Institutional Theory (DiMaggio and Powell, 1983) (Meyer and Rowan, 1977)	Neo-Institutional Theory (Greenwood and Hinings, 1996)

The *second* study is a macro-level study that contributes to the institutional fit literature by investigating the relationship between the fit of a firm with its regulatory environment and firm performance. We distinguish two categories of lack of regulatory fit. Firms can either deviate by keeping lower internal regulatory standards compared to what is externally enforced (under-compliance) or conversely by enforcing more stringent regulations than their industry prescribes (over-compliance). In order to create a continuous scale of regulatory fit, the latter is termed negative under-compliance. We hypothesize that there is a U-shaped relationship between the level of under-compliance and substantive performance such that firms that either over-comply or under-comply perform better than firms that operate at regulatory fit. Using survey data from 550 Dutch companies we indeed find that the two types of lack of regulatory fit are related to higher relative substantive performance than regulatory fit. Our results suggest that a lack of regularity fit is related to higher firm performance. We

therefore conclude that firm regulatory structures may be most beneficial to a company when tailored to firm-specific requirements rather than to the more generic industry standard. Table 6.2. summarizes the results of Study 2.

Table 6.2. Hypotheses in Study 2.

Hypothesis	Result
<i>H1a) At negative levels of under-compliance (i.e. over-compliance) we expect higher substantive performance than the industry average</i>	Supported
<i>H1b) At regulatory fit we expect lower substantive performance than the industry average</i>	Partially Supported
<i>Hypothesis 2: There is a negative relationship between the level of under-compliance and symbolic performance</i>	Rejected

The *third* study is a micro-level investigation of a process of institutional work. We examine the framing mechanisms used to maintain a cross-sector partnership (XSP). We study eight years of existence of an XSP that aims to create a market for recycled phosphorus, a nutrient that is critical to crop growth but whose natural reserves have significantly dwindled. Drawing on 27 interviews and over 3.000 internal documents, we study the evolution of different frames of diverse actors in an XSP. As opposed to a commonly held assumption in the XSP literature, we find that collaboration in a partnership does not have to result in a unanimous agreement around a single or convergent frame regarding an issue. Rather, an alternative route to successful collaboration amid diversity is the

maintenance of a productive tension between different frames through ‘optimal’ frame plurality – not excessive frame variety that may inhibit the emergence of agreements, but the retention of a select few frames and the deletion of others in achieving a narrowing frame bandwidth. We conclude that managers may not need to focus resources on reaching unanimous agreement among all partners on a single mega frame, but rather be used to enkindle unity in diversity, that allows sufficient common ground to emerge around an issue despite the diversity of actors and their positions.

For the *fourth* study we move back to the macro-level to contribute to the further theoretical and methodological delineation of the concept of institutional entrepreneurship. We use the systematic approach of innovation scholars to measure the institutional entrepreneurial behavior of individuals in firms. We then relate this to different types of innovative outcomes (exploration or exploitation). We develop a measure for different categories of institutional work and, using a survey among 346 managers of Dutch organizations, we find that that individual institutional work within firms that is more radical is related to higher firm levels exploratory innovation, while institutional work to transform institutions more gradually is related to firm-level exploitation-based innovation. We therefore conclude that the institutional entrepreneurial behavior of individuals within the firm effects the innovative outcomes at firm level.

Table 6.3. Hypotheses in Study 4.

Hypothesis	Result
<i>H1a: There is a positive relationship between individual-level institutional work carried out to create institutions and exploratory innovation at firm level</i>	Supported
<i>H1b: There is a positive relationship between individual-level institutional work carried out to disrupt institutions and exploratory innovation at firm level</i>	Supported
<i>H2: There is a positive relationship between individual-level institutional work carried out to transform institutions and exploitation-based innovation at firm level</i>	Supported

In sum, this dissertation expands the research on the topic of institutional entrepreneurship. We use diverse qualitative and quantitative methods to (1) theoretically examine the positioning of different institutional theories regarding strategic renewal, (2) demonstrate that organizations that execute institutional entrepreneurship when dealing with regulatory environments, perform significantly better than those that simply conform to existing standards, (3) describe the complexities of the institutional work performed to maintain institutions and (4) create a measure for the different types of institutional work that can be carried out to achieve institutional entrepreneurship, and demonstrating that more radical individual level institutional work is related to more radical innovation and less radical institutional work is related to more incremental exploitation-based innovation.

Our work can benefit managers by strengthening their confidence that individual initiatives of institutional entrepreneurship can be effective. Our work illustrates that institutions that managers come across in their professional environments can be influenced by individual institutional work carried out to create, maintain, transform or disrupt these institutions. Managers can inspire regulatory changes, they can influence the frames used in corporate communication and they can innovate within their respective firms.

Summary (English)

In this dissertation, building on institutional theory, fit, innovation and framing literature, I aim to increase academic and managerial understanding of the drivers and performance effects of institutional entrepreneurship at micro- and macro-levels of analysis. The studies in this book move from macro to micro-level and then revert back to macro-level to further delineate the phenomenon of institutional entrepreneurship and the institutional work carried out to achieve it.

Institutional theory explains how organizational behaviors are responses not solely to market pressures, but also to institutional pressures (Greenwood and Hinings, 1996). *Study 1* is a macro-level study containing a review and typology of different streams of institutional theory. Specifically, the study aims to provide insight into the various institutional views of strategic renewal. Strategic renewal is broadly defined as the strategic actions a firm undertakes to alter its path dependence (Volberda et al. 2001b: 160). Institutional theory can be separated into at least four different perspectives. These perspectives differ in level of analysis and the amount of agency assumed, as well as their views on strategic renewal.

Study 2 is also a macro-level study, which examines the conformity between Dutch firms' internal and external regulatory environment to determine fit, and links this to firm performance. Considerable debate exists about the effect of conformity on a firm's performance. We use the conformity between a firm's internal and external regulatory environment to determine fit and link this to firm performance. The U-shaped relationship between regulatory mis-fit and substantive performance that is found indicates the importance of institutional entrepreneurship. This conjectured relationship suggests that for firms that strive for success, deviation may well be a more attractive path than conformation.

Study 3 takes a micro-level approach. We examine the framing mechanisms used to maintain a cross-sector partnership (XSP). We carry out a qualitative case focusing on the use of different frames by diverse actors in an XSP. We demonstrate the role of framing in how actors avoid common XSP pitfalls such as debilitating conflict, and create sufficient common ground to

sustain collaboration. We find that collaboration in a partnership does not have to result in a unanimous agreement around a single or convergent frame regarding an issue. Rather, an alternative route to successful collaboration amid diversity is the maintenance of a productive tension between different frames through ‘optimal’ frame plurality via the retention of a select few frames and the deletion of others. This implies that in inter-organizational cooperations, resources need not be focused on reaching a complete or unanimous agreement among all partners on a single mega frame, but rather be used to enkindle unity in diversity, that allows sufficient common ground to emerge around an issue despite the diversity of actors and their positions.

For *Study 4* we zoom out to macro-level again, to use the systematic approach of innovation scholars to measure the institutional entrepreneurial behavior of individuals in firms. We then relate this to different types of innovative outcomes (exploration or exploitation). Our findings demonstrate that the existence of individual-level institutional entrepreneurship initiatives within firms is related to the type of firm-wide innovative behavior that is exhibited. We make the case that individual institutional work within firms that is more radical is related to exploratory innovation, while institutional work to transform institutions more gradually is related to exploitation-based innovation. These findings suggest that the institutional entrepreneurial behavior of individuals within the firm effects the innovative outcomes at firm level.

In sum, our work illustrates that the institutions that managers come across in their professional environments can be influenced by individual institutional work carried out to create, maintain, transform or disrupt these institutions.

Samenvatting (Nederlands)

De basis van deze dissertatie ligt bij de theoretische gebieden van institutionele theorie, innovatie en ‘framing’. Mijn doel is om de academische- en praktijkkennis van managers te verdiepen met betrekking tot de drijvende krachten achter – en de prestatie effecten van- institutioneel ondernemerschap. Hierbij zal ik zowel het micro- als het macro-niveau van dit fenomeen belichten. De studies in dit boek zijn geordend om van macro-naar micro niveau the verdiepen, om vervolgens weer terug te komen op macro-niveau. Op deze manier wordt het fenomeen van institutioneel ondernemerschap beschreven, alsmede het institutionele werk dat nodig is om dit te bereiken.

Institutionele theorie verklaart hoe het gedrag van organisaties niet enkel een respons is op invloeden vanuit de markt, maar ook op institutionele druk (Greenwood and Hinings, 1996). *Study 1* is een studie op macro-niveau die theoretische review en typologie bevat, van de verschillende stromingen binnen de institutionele theorie. De studie besteedt specifiek aandacht aan de verschillende invalshoeken die binnen de institutionele theorie bestaan wanneer het aankomt op strategische vernieuwing. Strategische vernieuwing kan breed gedefinieerd worden als de strategische acties die een bedrijf onderneemt om haar strategische koers aan te passen (Volberda et al. 2001b: 160). Institutionele theorie kan verder opgesplitst worden in ten minste vier verschillende perspectieven. Deze perspectieven verschillen van elkaar in het belichte analyseniveau en de hoeveelheid keuzevrijheid die wordt aangenomen, alsmede in hun kijk op strategische vernieuwing.

Study 2 is ook een studie op macro-niveau. Hierin wordt onderzoek gedaan naar het conformisme van van Nederlandse bedrijven op het gebied van regelgeving. Er bestaan in de bedrijfswetenschappen verschillende meningen over het effect van conformisme op de prestaties van een organisatie. In deze studie wordt de strengheid van interne regelgeving van bedrijven vergeleken met de standaard in hun externe milieu. Daarbij meten we de ‘fit’ van een bedrijf met het

externe regelgevingsklimaat. Dit gebruiken we vervolgens om een link te maken met bedrijfsprestaties. The U-vormige relatie die we vinden tussen de mate van ‘mis-fit’ op het gebied van regelgeving, en bedrijfsprestaties, geeft aan hoe belangrijk institutioneel ondernemerschap kan zijn. De suggestie die de uitkomsten van de studie wekken, is dat afwijken van de norm is een aantrekkelijker pad dan conformisme, voor bedrijven tie topprestaties nastreven.

In *study 3* wordt een micro-niveau lens gebruikt. We onderzoeken voor deze studie hoe ‘framing’ mechanismes gebruikt worden om intersectorale samenwerkingen te onderhouden. We voeren een kwalitatieve case study uit, waarbij we onderzoek doen naar de verschillende ‘frames’ die de diverse partners binnen intersectorale samenwerkingen bezigen. Met deze studie benadrukken we de rol van ‘framing’ in het ontwijken van bekende gevaren voor intersectorale samenwerkingen, zoals onoverkomelijke conflicten. ‘Framing’ zorgt dat voldoende overeenstemming bereikt kan worden voor het behoud van een langdurige samenwerking. Onze bevindingen laten zien dat dit mogelijk is doordat intersectorale samenwerking niet per definitie hoeft te resulteren in overeenstemming over een enkel specifiek ‘frame’. Sterker nog, gezien de diversiteit van de partners is succesvolle samenwerking mogelijk wanneer verschillende ‘frames’ parallel gebruikt worden, zelfs als ze op gespannen voet staan met elkaar. Er is echter een opmerkelijk proces te zien waarbij een aantal ‘frames’ actief geselecteerd worden om gebruikt te worden in de samenwerking, terwijl andere worden weggelaten. De implicaties van deze studie zijn dat er een limiet gesteld zou kunnen worden aan de hoeveelheid tijd en moeite die geïnvesteerd wordt in het bereiken van complete overeenstemming over het leidende ‘frame’ van de intersectorale samenwerking. In plaats daarvan is het bepalen van overeenstemming over een overkoepelend doel voldoende, en kan diversiteit gewaarborgd worden als het aankomt op de ‘frames’ die dit doel motiveren.

Voor *study 4* gaan we weer terug naar een macro-niveau aanpak. We maken hier gebruik van de systematische aanpak die innovatie wetenschappers

bezigen om het niveau van institutioneel ondernemerschap bij individuen in bedrijven te meten. We relateren dit vervolgens weer aan een van de twee typen innovatieve uitkomsten (exploratie of exploitatie) van een bedrijf als geheel. Onze bevindingen laten zien dat het bestaan van institutioneel ondernemerschap op individueel niveau gerelateerd kan worden aan het type innovatie dat de overhand heeft op bedrijfsniveau. We argumenteren dat meer radicaal individueel werk aan instituties gerelateerd is aan exploratieve innovatie, terwijl meer geleidelijk werk aan instituties is gerelateerd aan exploitatieve innovatie gemeten voor het gehele bedrijf. Deze resultaten suggereren dat institutioneel ondernemerschap op individueel niveau effect heeft op de innovatieve uitkomsten van een bedrijf als geheel.

In conclusie laat bovenstaande combinatie van studies zien dat de instituties die managers tegenkomen in diverse professionele milieus, beïnvloed kunnen worden door individueel werk aan instituties. Dit werk kan variëren in doel en intensiteit- van het creëren van instituties, tot het onderhouden, transformeren of zelfs ontwrichten ervan.

About the Author



Elizabeth Jacomijn Klitsie was born on January 7th, 1986 in Rotterdam, The Netherlands. She holds a cum laude Bachelor's degree in International Business Administration achieved in 2008, as well as a cum laude Master's degree in Strategic Management achieved in 2011, both from the RSM Erasmus University Rotterdam.

After graduating she worked at the Amsterdam branch of strategy consulting firm Roland Berger Strategy Consultants for a year. She started to build her network there and learned methods and techniques for systematic problem solving and strategic thinking that have proven useful throughout the subsequent academic trajectory. After this year she chose to shift to a more academic approach to the analysis of strategic puzzles by returning to the Strategic Management and Entrepreneurship department of the RSM Erasmus University to pursue a PhD.

Her main research interests include strategic renewal, the mechanisms behind institutional change and the place of communication and framing in these processes. She has presented her work at several conferences including the PhD Conference on Research in Business Economics and Management (PREBEM) (2012), where she was awarded the Best Track Paper Award for her paper titled 'The Influence of Institutional (Mis-)Fit on Performance'. She also presented her work international conferences including EURAM (2013), EGOS (2013) and the Academy of Management Annual Meeting (2015). Jacomijn's work was also presented at the 5th International Symposium on Cross Sector Social Interactions (2016). The paper presented there, co-authored with Prof. dr. S. Ansari and Prof. dr. H. W. Volberda was nominated for the Routledge Best Paper Award in Social Partnerships.

In the spring of 2015 she was a visiting scholar at the Judge Business School of the University of Cambridge. Her papers are currently under review in strategic management journals, one of them is close to being accepted for publication. In addition to her research she has been active in teaching throughout her academic career. She taught in the Strategic Business Plan course and was a lecturer for the course Introduction to Business. She also and re-edited the book used for the latter course -which is followed by over 1.000 first year RSM students annually. She also supervised many Master thesis projects and was first co-lecturer and then course coordinator of the Minor Strategy Consulting and also the MSc Elective Strategic Management Consulting. Currently, Jacomijn is an Assistant Professor in the Department Strategic Management and Entrepreneurship at Rotterdam School of Management, Erasmus University.

Author Portfolio

Education

Sept '15– Jan '16	Basiskwalificatie Onderwijs (BKO) <i>Risbo</i>
Sept '09 – March '11	MSc IBA Strategic Management (Cum Laude) <i>Rotterdam School of Management, Erasmus University</i>
Sept '05 – July '08	BSc International Business Administration (Cum Laude) <i>Rotterdam School of Management, Erasmus University</i>
Sept '03 – July '05	International Baccalaureate (Graduated 1 st in class) <i>Het Rijnlands Lyceum, Oegstgeest</i> <i>American Community School, Cobham, England</i>

Research

- Klitsie, E.J. Ansari, S., Volberda, H.W. 'Maintenance of Cross-Sector Partnerships: The Role of Frames in Sustained Collaboration' (**Journal of Business Ethics, forthcoming**)
Presented at International Symposium on Cross-Sector Social Interactions 2016, Toronto and Strategic Management Society Special Conference in Rome 2016
- Klitsie, E.J. Ansari, S., Volberda, H.W. 'Compliance or Defiance: Firm Responses to Regulation Related to Performance' (working paper)
Presented at The Academy of Management Conference 2015, Vancouver
- Klitsie, E.J. 'Strategic renewal in institutional contexts: The influence of institutional (mis)fit on performance' (working paper)
Presented at the Dutch organization for PhD researchers in Business Economics and Management annual conference (PREBEM) 2012, Amsterdam
- Klitsie, E.J., Volberda, H.W., Stienstra, M. 'To Comply or Defy: Institutional Entrepreneurship in Regulated Industries' (working paper)
Presented at European Academy of Management (EURAM) and European Group of Organizational Studies (EGOS) in 2013
- Klitsie, E.J., Volberda, H.W. 'Being lost and alone – the best environmental circumstances to achieve institutional entrepreneurship?' (working paper)

Honours and Awards

- April '16 Nominated for the **Routledge Best Paper Award in Social Partnerships**
International Symposium on Cross-Sector Social Interactions 2016, Toronto
Title: Maintenance Work in Cross-Sector Partnerships: Frame Plurality as Key to Solving Complex Social Issues
Co-authors: Volberda, H.W, Ansari, S.
- Mar '13 **Best Track Paper Award**
13th *PREBEM Conference, Amsterdam*
Title: 'The Influence of Institutional (Mis-)Fit on Performance'
- Jan '07- Jan '08 **Erasmus Honours Programme**

Teaching experience

Bachelor's Program, Rotterdam School of Management

- Sept-Dec '16 & '17 **Strategy Consulting (BSc Y3 minor)** (80 students)
Student evaluation: 8,4 out of 10
- July -Dec '14 & '15 **Bachelor Internship (BSc Y3)** (9 students)
- Sept '15 – Nov '15 **Introduction to Business (BSc Y1)** (+/- 700 and 350 students)
Student evaluation: 7,2 out of 10
- Oct '14 – Jan '15 **Organization Theory and Dynamics (BSc Y2)** (180 students)
- Dec '12 – June '14 **Strategic Business Plan (BSc Y1)** *Two consecutive years*
(64 students each)
Student evaluation 2013: 8,4 out of 10
Student evaluation 2014: 8,0 out of 10

Master's Program, Rotterdam School of Management

- Jan-Jun '17 & '18 **Strategic Management Consulting** (3 x 50 students)
Student evaluation: 4,5 out of 5
- Nov '13 - July '14 **Master's Thesis Supervision** (5 students)
Student evaluation: 4,3 out of 5

Executive Education, Rotterdam School of Management

- Nov '17 **Business Model Innovation**
Component of this course: Strategic Analysis

The ERIM PhD Series

The ERIM PhD Series contains PhD dissertations in the field of Research in Management defended at Erasmus University Rotterdam and supervised by senior researchers affiliated to the Erasmus Research Institute of Management (ERIM). All dissertations in the ERIM PhD Series are available in full text through the ERIM Electronic Series Portal: <http://repub.eur.nl/pub>. ERIM is the joint research institute of the Rotterdam School of Management (RSM) and the Erasmus School of Economics at the Erasmus University Rotterdam (EUR).

Dissertations in the last five years

Abbink, E.J., *Crew Management in Passenger Rail Transport*, Promotors: Prof. L.G. Kroon & Prof. A.P.M. Wagelmans, EPS-2014-325-LIS, <http://repub.eur.nl/pub/76927>

Acar, O.A., *Crowdsourcing for Innovation: Unpacking Motivational, Knowledge and Relational Mechanisms of Innovative Behavior in Crowdsourcing Platforms*, Promotor: Prof. J.C.M. van den Ende, EPS-2014-321-LIS, <http://repub.eur.nl/pub/76076>

Akemu, O., *Corporate Responses to Social Issues: Essays in Social Entrepreneurship and Corporate Social Responsibility*, Promotors: Prof. G.M. Whiteman & Dr S.P. Kennedy, EPS-2017-392-ORG, <https://repub.eur.nl/pub/95768>

Akin Ates, M., *Purchasing and Supply Management at the Purchase Category Level: Strategy, structure and performance*, Promotors: Prof. J.Y.F. Wynstra & Dr E.M. van Raaij, EPS-2014-300-LIS, <http://repub.eur.nl/pub/50283>

Alexander, L., *People, Politics, and Innovation: A Process Perspective*, Promotors: Prof. H.G. Barkema & Prof. D.L. van Knippenberg, EPS-2014-331-S&E, <http://repub.eur.nl/pub/77209>

Alexiou, A. *Management of Emerging Technologies and the Learning Organization: Lessons from the Cloud and Serious Games Technology*, Promotors: Prof. S.J. Magala, Prof. M.C. Schippers and Dr I. Oshri, EPS-2016-404-ORG, <http://repub.eur.nl/pub/93818>

Almeida e Santos Nogueira, R.J. de, *Conditional Density Models Integrating Fuzzy and Probabilistic Representations of Uncertainty*, Promotors: Prof. U. Kaymak & Prof. J.M.C. Sousa, EPS-2014-310-LIS, <http://repub.eur.nl/pub/51560>

Alserda, G.A.G., *Choices in Pension Management*, Promotors: Prof. S.G. van der Lecq & Dr O.W. Steenbeek, EPS-2017-432-F&A, <https://repub.eur.nl/pub/103496>

Benschop, N, *Biases in Project Escalation: Names, frames & construal levels*, Promoters: Prof. K.I.M. Rhode, Prof. H.R. Commandeur, Prof. M. Keil & Dr A.L.P. Nuijten, EPS-2015-375-S&E, <http://repub.eur.nl/pub/79408>

Berg, W.E. van den, *Understanding Salesforce Behavior using Genetic Association Studies*, Promotor: Prof. W.J.M.I. Verbeke, EPS-2014-311-MKT, <http://repub.eur.nl/pub/51440>

Beusichem, H.C. van, *Firms and Financial Markets: Empirical Studies on the Informational Value of Dividends, Governance and Financial Reporting*, Promoters: Prof. A. de Jong & Dr G. Westerhuis, EPS-2016-378-F&A, <http://repub.eur.nl/pub/93079>

Blik, R. de, *Empirical Studies on the Economic Impact of Trust*, Promotor: Prof. J. Veenman & Prof. Ph.H.B.F. Franses, EPS-2015-324-ORG, <http://repub.eur.nl/pub/78159>

Boons, M., *Working Together Alone in the Online Crowd: The Effects of Social Motivations and Individual Knowledge Backgrounds on the Participation and Performance of Members of Online Crowdsourcing Platforms*, Promoters: Prof. H.G. Barkema & Dr D.A. Stam, EPS-2014-306-S&E, <http://repub.eur.nl/pub/50711>

Bouman, P., *Passengers, Crowding and Complexity: Models for Passenger Oriented Public Transport*, Prof. L.G. Kroon, Prof. A. Schöbel & Prof. P.H.M. Vervest, EPS-2017-420-LIS, <https://repub.eur.nl/>

Brazys, J., *Aggregated Marcoeconomic News and Price Discovery*, Promotor: Prof. W.F.C. Verschoor, EPS-2015-351-F&A, <http://repub.eur.nl/pub/78243>

Burg, G.J.J. van den, *Algorithms for Multiclass Classification and Regularized Regression*, Promoters: Prof. P.J.F. Groenen & Dr. A. Alfons, EPS-2018-442-MKT, <https://repub.eur.nl/pub/103929>

Cancurtaran, P., *Essays on Accelerated Product Development*, Promoters: Prof. F. Langerak & Prof. G.H. van Bruggen, EPS-2014-317-MKT, <http://repub.eur.nl/pub/76074>

Chammas, G., *Portfolio concentration*, Promotor: Prof. J. Spronk, EPS-2017-410-F&E, <https://repub.eur.nl/pub/94975>

Cranenburgh, K.C. van, *Money or Ethics: Multinational corporations and religious organisations operating in an era of corporate responsibility*, Prof. L.C.P.M. Meijls, Prof. R.J.M. van Tulder & Dr D. Arenas, EPS-2016-385-ORG, <http://repub.eur.nl/pub/93104>

Consiglio, I., *Others: Essays on Interpersonal and Consumer Behavior*, Promotor: Prof. S.M.J. van Osselaer, EPS-2016-366-MKT, <http://repub.eur.nl/pub/79820>

Darnihamedani, P. *Individual Characteristics, Contextual Factors and Entrepreneurial Behavior*, Promotors: Prof. A.R. Thurik & S.J.A. Hessels, EPS-2016-360-S&E, <http://repub.eur.nl/pub/93280>

Dennerlein, T. *Empowering Leadership and Employees' Achievement Motivations: the Role of Self-Efficacy and Goal Orientations in the Empowering Leadership Process*, Promotors: Prof. D.L. van Knippenberg & Dr J. Dietz, EPS-2017-414-ORG, <https://repub.eur.nl/pub/98438>

Deng, W., *Social Capital and Diversification of Cooperatives*, Promotor: Prof. G.W.J. Hendrikse, EPS-2015-341-ORG, <http://repub.eur.nl/pub/77449>

Depecik, B.E., *Revitalizing brands and brand: Essays on Brand and Brand Portfolio Management Strategies*, Promotors: Prof. G.H. van Bruggen, Dr Y.M. van Everdingen and Dr M.B. Ataman, EPS-2016-406-MKT, <http://repub.eur.nl/pub/93507>

Duijzer, L.E., *Mathematical Optimization in Vaccine Allocation*, Promotors: Prof. R. Dekker & Dr W.L. van Jaarsveld, EPS-2017-430-LIS, <https://repub.eur.nl/pub/101487>

Duyvesteyn, J.G. *Empirical Studies on Sovereign Fixed Income Markets*, Promotors: Prof. P. Verwijmeren & Prof. M.P.E. Martens, EPS-2015-361-F&A, <https://repub.eur.nl/pub/79033>

Elemes, A., *Studies on Determinants and Consequences of Financial Reporting Quality*, Promotor: Prof. E. Peek, EPS-2015-354-F&A, <https://repub.eur.nl/pub/79037>

Ellen, S. ter, *Measurement, Dynamics, and Implications of Heterogeneous Beliefs in Financial Markets*, Promotor: Prof. W.F.C. Verschoor, EPS-2015-343-F&A, <http://repub.eur.nl/pub/78191>

Erlemann, C., *Gender and Leadership Aspiration: The Impact of the Organizational Environment*, Promotor: Prof. D.L. van Knippenberg, EPS-2016-376-ORG, <http://repub.eur.nl/pub/79409>

Eskenazi, P.I., *The Accountable Animal*, Promotor: Prof. F.G.H. Hartmann, EPS-2015-355-F&A, <http://repub.eur.nl/pub/78300>

Evangelidis, I., *Preference Construction under Prominence*, Promotor: Prof. S.M.J. van Osselaer, EPS-2015-340-MKT, <http://repub.eur.nl/pub/78202>

Faber, N., *Structuring Warehouse Management*, Promotors: Prof. M.B.M. de Koster & Prof. A. Smidts, EPS-2015-336-LIS, <http://repub.eur.nl/pub/78603>

Feng, Y., *The Effectiveness of Corporate Governance Mechanisms and Leadership Structure: Impacts on strategic change and firm performance*, Promotors: Prof. F.A.J. van den Bosch, Prof. H.W. Volberda & Dr J.S. Sidhu, EPS-2017-389-S&E, <https://repub.eur.nl/pub/98470>

Fernald, K., *The Waves of Biotechnological Innovation in Medicine: Interfirm Cooperation Effects and a Venture Capital Perspective*, Promotors: Prof. E. Claassen, Prof. H.P.G. Pennings & Prof. H.R. Commandeur, EPS-2015-371-S&E, <http://hdl.handle.net/1765/79120>

Fisch, C.O., *Patents and trademarks: Motivations, antecedents, and value in industrialized and emerging markets*, Promotors: Prof. J.H. Block, Prof. H.P.G. Pennings & Prof. A.R. Thurik, EPS-2016-397-S&E, <http://repub.eur.nl/pub/94036>

Fliers, P.T., *Essays on Financing and Performance: The role of firms, banks and board*, Promotors: Prof. A. de Jong & Prof. P.G.J. Roosenboom, EPS-2016-388-F&A, <http://repub.eur.nl/pub/93019>

Fourne, S.P., *Managing Organizational Tensions: A Multi-Level Perspective on Exploration, Exploitation and Ambidexterity*, Promotors: Prof. J.J.P. Jansen & Prof. S.J. Magala, EPS-2014-318-S&E, <http://repub.eur.nl/pub/76075>

Gaast, J.P. van der, *Stochastic Models for Order Picking Systems*, Promotors: Prof. M.B.M de Koster & Prof. I.J.B.F. Adan, EPS-2016-398-LIS, <http://repub.eur.nl/pub/93222>

Giurge, L., *A Test of Time: A temporal and dynamic approach to power and ethics*, Promotors: Prof. M.H. van Dijke & Prof. D. De Cremer, EPS-2017-412-ORG, <https://repub.eur.nl/>

Glorie, K.M., *Clearing Barter Exchange Markets: Kidney Exchange and Beyond*, Promotors: Prof. A.P.M. Wagelmans & Prof. J.J. van de Klundert, EPS-2014-329-LIS, <http://repub.eur.nl/pub/77183>

Gobena, L., *Towards Integrating Antecedents of Voluntary Tax Compliance*, Promotors: Prof. M.H. van Dijke & Dr P. Verboon, EPS-2017-436-ORG, <https://repub.eur.nl/pub/103276>

Groot, W.A., *Assessing Asset Pricing Anomalies*, Promotors: Prof. M.J.C.M. Verbeek & Prof. J.H. van Binsbergen, EPS-2017-437-F&A, <https://repub.eur.nl/pub/103490>

Hekimoglu, M., *Spare Parts Management of Aging Capital Products*, Promotor: Prof. R. Dekker, EPS-2015-368-LIS, <http://repub.eur.nl/pub/79092>

Hengelaar, G.A., *The Proactive Incumbent: Holy grail or hidden gem? Investigating whether the Dutch electricity sector can overcome the incumbent's curse and lead the sustainability transition*, Promotors: Prof. R.J. M. van Tulder & Dr K. Dittrich, EPS-2018-438-ORG, <https://repub.eur.nl/pub/102953>

Hogenboom, A.C., *Sentiment Analysis of Text Guided by Semantics and Structure*, Promotors: Prof. U. Kaymak & Prof. F.M.G. de Jong, EPS-2015-369-LIS, <http://repub.eur.nl/pub/79034>

Hogenboom, F.P., *Automated Detection of Financial Events in News Text*, Promotors: Prof. U. Kaymak & Prof. F.M.G. de Jong, EPS-2014-326-LIS, <http://repub.eur.nl/pub/77237>

Hollen, R.M.A., *Exploratory Studies into Strategies to Enhance Innovation-Driven International Competitiveness in a Port Context: Toward Ambidextrous Ports*, Promotors: Prof. F.A.J. Van Den Bosch & Prof. H.W. Volberda, EPS-2015-372-S&E, <http://repub.eur.nl/pub/78881>

Hout, D.H. van, *Measuring Meaningful Differences: Sensory Testing Based Decision Making in an Industrial Context; Applications of Signal Detection Theory and Thurstonian Modelling*, Promotors: Prof. P.J.F. Groenen & Prof. G.B. Dijksterhuis, EPS-2014-304-MKT, <http://repub.eur.nl/pub/50387>

Houwelingen, G.G. van, *Something To Rely On*, Promotors: Prof. D. de Cremer & Prof. M.H. van Dijke, EPS-2014-335-ORG, <http://repub.eur.nl/pub/77320>

Hurk, E. van der, *Passengers, Information, and Disruptions*, Promotors: Prof. L.G. Kroon & Prof. P.H.M. Vervest, EPS-2015-345-LIS, <http://repub.eur.nl/pub/78275>

Iseger, P. den, *Fourier and Laplace Transform Inversion with Applications in Finance*, Promotor: Prof. R. Dekker, EPS-2014-322-LIS, <http://repub.eur.nl/pub/76954>

Jacobs, B.J.D., *Marketing Analytics for High-Dimensional Assortments*, Promotors: Prof. A.C.D. Donkers & Prof. D. Fok, EPS-2017-445-MKT, <https://repub.eur.nl/pub/103497>

Kahlen, M. T., *Virtual Power Plants of Electric Vehicles in Sustainable Smart Electricity Markets*, Promotors: Prof. W. Ketter & Prof. A. Gupta, EPS-2017-431-LIS, <https://repub.eur.nl/pub/100844>

Keko, E., *Essays on Innovation Generation in Incumbent Firms*, Promotors: Prof. S. Stremersch & Dr N.M.A. Camacho, EPS-2017-419-MKT, <https://repub.eur.nl/pub/100841>

Khanagha, S., *Dynamic Capabilities for Managing Emerging Technologies*, Promotor: Prof. H.W. Volberda, EPS-2014-339-S&E, <http://repub.eur.nl/pub/77319>

Khattab, J., *Make Minorities Great Again: a contribution to workplace equity by identifying and addressing constraints and privileges*, Prof. D.L. van Knippenberg & Dr A. Nederveen Pieterse, EPS-2017-421-ORG, <https://repub.eur.nl/pub/99311>

Klooster, E. van 't, *Travel to Learn: the Influence of Cultural Distance on Competence Development in Educational Travel*, Promotors: Prof. F.M. Go

& Prof. P.J. van Baalen, EPS-2014-312-MKT, <http://repub.eur.nl/pub/51462>

Koendjibiharie, S.R., *The Information-Based View on Business Network Performance: Revealing the Performance of Interorganizational Networks*, Promoters: Prof. H.W.G.M. van Heck & Prof. P.H.M. Vervest, EPS-2014-315-LIS, <http://repub.eur.nl/pub/51751>

Koning, M., *The Financial Reporting Environment: The Role of the Media, Regulators and Auditors*, Promoters: Prof. G.M.H. Mertens & Prof. P.G.J. Roosenboom, EPS-2014-330-F&A, <http://repub.eur.nl/pub/77154>

Konter, D.J., *Crossing Borders with HRM: An Inquiry of the Influence of Contextual Differences in the Adoption and Effectiveness of HRM*, Promoters: Prof. J. Paauwe, & Dr L.H. Hoeksema, EPS-2014-305-ORG, <http://repub.eur.nl/pub/50388>

Korkmaz, E., *Bridging Models and Business: Understanding Heterogeneity in Hidden Drivers of Customer Purchase Behavior*, Promoters: Prof. S.L. van de Velde & Prof. D. Fok, EPS-2014-316-LIS, <http://repub.eur.nl/pub/76008>

Krämer, R., *A license to mine? Community organizing against multinational corporations*, Promoters: Prof. R.J.M. van Tulder & Prof. G.M. Whiteman, EPS-2016-383-ORG, <http://repub.eur.nl/pub/94072>

Kroezen, J.J., *The Renewal of Mature Industries: An Examination of the Revival of the Dutch Beer Brewing Industry*, Promotor: Prof. P.P.M.A.R. Heugens, EPS-2014-333-S&E, <http://repub.eur.nl/pub/77042>

Kysucky, V., *Access to Finance in a Cross-Country Context*, Promotor: Prof. L. Norden, EPS-2015-350-F&A, <http://repub.eur.nl/pub/78225>

Lee, C.I.S.G., *Big Data in Management Research: Exploring New Avenues*, Promoters: Prof. S.J. Magala & Dr W.A. Felps, EPS-2016-365-ORG, <http://repub.eur.nl/pub/79818>

Legault-Tremblay, P.O., *Corporate Governance During Market Transition: Heterogeneous responses to Institution Tensions in China*, Promotor: Prof. B. Krug, EPS-2015-362-ORG, <http://repub.eur.nl/pub/78649>

Lenoir, A.S. *Are You Talking to Me? Addressing Consumers in a Globalised World*, Promoters: Prof. S. Puntoni & Prof. S.M.J. van Osselaer, EPS-2015-363-MKT, <http://repub.eur.nl/pub/79036>

Leunissen, J.M., *All Apologies: On the Willingness of Perpetrators to Apologize*, Promoters: Prof. D. de Cremer & Dr M. van Dijke, EPS-2014-301-ORG, <http://repub.eur.nl/pub/50318>

Li, D., *Supply Chain Contracting for After-sales Service and Product Support*, Promotor: Prof. M.B.M. de Koster, EPS-2015-347-LIS, <http://repub.eur.nl/pub/78526>

Li, Z., *Irrationality: What, Why and How*, Promotors: Prof. H. Bleichrodt, Prof. P.P. Wakker, & Prof. K.I.M. Rohde, EPS-2014-338-MKT, <http://repub.eur.nl/pub/77205>

Liu, N., *Behavioral Biases in Interpersonal Contexts*, Supervisors: Prof. A. Baillon & Prof. H. Bleichrodt, EPS-2017-408-MKT, <https://repub.eur.nl/pub/95487>

Liket, K., *Why 'Doing Good' is not Good Enough: Essays on Social Impact Measurement*, Promotors: Prof. H.R. Commandeur & Dr K.E.H. Maas, EPS-2014-307-STR, <http://repub.eur.nl/pub/51130>

Lu, Y., *Data-Driven Decision Making in Auction Markets*, Promotors: Prof. H.W.G.M. van Heck & Prof. W. Ketter, EPS-2014-314-LIS, <http://repub.eur.nl/pub/51543>

Ma, Y., *The Use of Advanced Transportation Monitoring Data for Official Statistics*, Promotors: Prof. L.G. Kroon and Dr J. van Dalen, EPS-2016-391-LIS, <http://repub.eur.nl/pub/80174>

Manders, B., *Implementation and Impact of ISO 9001*, Promotor: Prof. K. Blind, EPS-2014-337-LIS, <http://repub.eur.nl/pub/77412>

Mell, J.N., *Connecting Minds: On The Role of Metaknowledge in Knowledge Coordination*, Promotor: Prof. D.L. van Knippenberg, EPS-2015-359-ORG, <http://hdl.handle.net/1765/78951>

Meulen, van der, D., *The Distance Dilemma: the effect of flexible working practices on performance in the digital workplace*, Promotors: Prof. H.W.G.M. van Heck & Prof. P.J. van Baalen, EPS-2016-403-LIS, <http://repub.eur.nl/pub/94033>

Micheli, M.R., *Business Model Innovation: A Journey across Managers' Attention and Inter-Organizational Networks*, Promotor: Prof. J.J.P. Jansen, EPS-2015-344-S&E, <http://repub.eur.nl/pub/78241>

Moniz, A., *Textual Analysis of Intangible Information*, Promotors: Prof. C.B.M. van Riel, Prof. F.M.G de Jong & Dr G.A.J.M. Berens, EPS-2016-393-ORG, <http://repub.eur.nl/pub/93001>

Mulder, J. *Network design and robust scheduling in liner shipping*, Promotors: Prof. R. Dekker & Dr W.L. van Jaarsveld, EPS-2016-384-LIS, <http://repub.eur.nl/pub/80258>

Naumovska, I., *Socially Situated Financial Markets: A Neo-Behavioral Perspective on Firms, Investors and Practices*, Promotors: Prof. P.P.M.A.R. Heugens & Prof. A. de Jong, EPS-2014-319-S&E, <http://repub.eur.nl/pub/76084>

Neerijnen, P., *The Adaptive Organization: the socio-cognitive antecedents of ambidexterity and individual exploration*, Promotors: Prof. J.J.P. Jansen, P.P.M.A.R. Heugens & Dr T.J.M. Mom, EPS-2016-358-S&E, <http://repub.eur.nl/pub/93274>

Okbay, A., *Essays on Genetics and the Social Sciences*, Promotors: Prof. A.R. Thurik, Prof. Ph.D. Koellinger & Prof. P.J.F. Groenen, EPS-2017-413-S&E, <https://repub.eur.nl/pub/95489>

Oord, J.A. van, *Essays on Momentum Strategies in Finance*, Promotor: Prof. H.K. van Dijk, EPS-2016-380-F&A, <http://repub.eur.nl/pub/80036>

Peng, X., *Innovation, Member Sorting, and Evaluation of Agricultural Cooperatives*, Promotor: Prof. G.W.J. Hendriks, EPS-2017-409-ORG, <https://repub.eur.nl/pub/94976>

Pennings, C.L.P., *Advancements in Demand Forecasting: Methods and Behavior*, Promotors: Prof. L.G. Kroon, Prof. H.W.G.M. van Heck & Dr J. van Dalen, EPS-2016-400-LIS, <http://repub.eur.nl/pub/94039>

Peters, M., *Machine Learning Algorithms for Smart Electricity Markets*, Promotor: Prof. W. Ketter, EPS-2014-332-LIS, <http://repub.eur.nl/pub/77413>

Plessis, C. du, *Influencers: The Role of Social Influence in Marketing*, Promotors: Prof. S. Puntoni & Prof. S.T.L.R. Sweldens, EPS-2017-425-MKT, <https://repub.eur.nl/pub/103265>

Pocock, M., *Status Inequalities in Business Exchange Relations in Luxury Markets*, Promotors: Prof. C.B.M. van Riel & Dr G.A.J.M. Berens, EPS-2017-346-ORG, <https://repub.eur.nl/pub/98647>

Pozharliev, R., *Social Neuromarketing: The role of social context in measuring advertising effectiveness*, Promotors: Prof. W.J.M.I. Verbeke & Prof. J.W. van Strien, EPS-2017-402-MKT, <https://repub.eur.nl/pub/95528>

Protzner, S. *Mind the gap between demand and supply: A behavioral perspective on demand forecasting*, Promotors: Prof. S.L. van de Velde & Dr L. Rook, EPS-2015-364-LIS, <http://repub.eur.nl/pub/79355>

Pruijssers, J.K., *An Organizational Perspective on Auditor Conduct*, Promotors: Prof. J. van Oosterhout & Prof. P.P.M.A.R. Heugens, EPS-2015-342-S&E, <http://repub.eur.nl/pub/78192>

Rietdijk, W.J.R. *The Use of Cognitive Factors for Explaining Entrepreneurship*, Promotors: Prof. A.R. Thurik & Prof. I.H.A. Franken, EPS-2015-356-S&E, <http://repub.eur.nl/pub/79817>

Rietveld, N., *Essays on the Intersection of Economics and Biology*, Promotors: Prof. A.R. Thurik, Prof. Ph.D. Koellinger, Prof. P.J.F. Groenen, & Prof. A. Hofman, EPS-2014-320-S&E, <http://repub.eur.nl/pub/76907>

Rösch, D. *Market Efficiency and Liquidity*, Promotor: Prof. M.A. van Dijk, EPS-2015-353-F&A, <http://repub.eur.nl/pub/79121>

Roza, L., *Employee Engagement in Corporate Social Responsibility: A collection of essays*, Promotor: Prof. L.C.P.M. Meijs, EPS-2016-396-ORG, <http://repub.eur.nl/pub/93254>

Schie, R. J. G. van, *Planning for Retirement: Save More or Retire Later?*
Promoters: Prof. B. G. C. Dellaert & Prof. A.C.D. Donkers, EOS-2017-415-MKT, <https://repub.eur.nl/pub/100846>

Schoonees, P. *Methods for Modelling Response Styles*, Promotor: Prof. P.J.F. Groenen, EPS-2015-348-MKT, <http://repub.eur.nl/pub/79327>

Schouten, M.E., *The Ups and Downs of Hierarchy: the causes and consequences of hierarchy struggles and positional loss*, Promoters; Prof. D.L. van Knippenberg & Dr L.L. Greer, EPS-2016-386-ORG, <http://repub.eur.nl/pub/80059>

Smit, J. *Unlocking Business Model Innovation: A look through the keyhole at the inner workings of Business Model Innovation*, Promotor: Prof. H.G. Barkema, EPS-2016-399-S&E, <http://repub.eur.nl/pub/93211>

Sousa, M.J.C. de, *Servant Leadership to the Test: New Perspectives and Insights*, Promoters: Prof. D.L. van Knippenberg & Dr D. van Dierendonck, EPS-2014-313-ORG, <http://repub.eur.nl/pub/51537>

Stadt, J.L., *Leading Public Housing Organisation in a Problematic Situation: A Critical Soft Systems Methodology Approach*, Promotor: Prof. S.J. Magala, EPS-2014-308-ORG, <http://repub.eur.nl/pub/50712>

Straeter, L.M., *Interpersonal Consumer Decision Making*, Promoters: Prof. S.M.J. van Osselaer & Dr I.E. de Hooge, EPS-2017-423-MKT, <https://repub.eur.nl/pub/100819>

Subaşı, B., *Demographic Dissimilarity, Information Access and Individual Performance*, Promoters: Prof. D.L. van Knippenberg & Dr W.P. van Ginkel, EPS-2017-422-ORG, <https://repub.eur.nl/pub/103495>

Szatmari, B., *We are (all) the champions: The effect of status in the implementation of innovations*, Promoters: Prof. J.C.M & Dr D. Deichmann, EPS-2016-401-LIS, <http://repub.eur.nl/pub/94633>

Tuijl, E. van, *Upgrading across Organisational and Geographical Configurations*, Promotor: Prof. L. van den Berg, EPS-2015-349-S&E, <http://repub.eur.nl/pub/78224>

Tuncdogan, A., *Decision Making and Behavioral Strategy: The Role of Regulatory Focus in Corporate Innovation Processes*, Promoters: Prof. F.A.J. van den Bosch, Prof. H.W. Volberda, & Prof. T.J.M. Mom, EPS-2014-334-S&E, <http://repub.eur.nl/pub/76978>

Uijl, S. den, *The Emergence of De-facto Standards*, Promotor: Prof. K. Blind, EPS-2014-328-LIS, <http://repub.eur.nl/pub/77382>

Valogianni, K. *Sustainable Electric Vehicle Management using Coordinated Machine Learning*, Promotors: Prof. H.W.G.M. van Heck & Prof. W. Ketter, EPS-2016-387-LIS, <http://repub.eur.nl/pub/93018>

Vandic, D., *Intelligent Information Systems for Web Product Search*, Promotors: Prof. U. Kaymak & Dr Frasinca, EPS-2017-405-LIS, <https://repub.eur.nl/pub/95490>

Veelenturf, L.P., *Disruption Management in Passenger Railways: Models for Timetable, Rolling Stock and Crew Rescheduling*, Promotor: Prof. L.G. Kroon, EPS-2014-327-LIS, <http://repub.eur.nl/pub/77155>

Verbeek, R.W.M., *Essays on Empirical Asset Pricing*, Promotors: Prof. M.A. van Dijk & Dr M. Szymanowska, EPS-2017-441-F&A, <https://repub.eur.nl/pub/102977>

Vermeer, W., *Propagation in Networks: The impact of information processing at the actor level on system-wide propagation dynamics*, Promotor: Prof. P.H.M. Vervest, EPS-2015-373-LIS, <http://repub.eur.nl/pub/79325>

Versluis, I., *Prevention of the Portion Size Effect*, Promotors: Prof. Ph.H.B.F. Franses & Dr E.K. Papies, EPS-2016-382-MKT, <http://repub.eur.nl/pub/79880>

Vishwanathan, P., *Governing for Stakeholders: How Organizations May Create or Destroy Value for their Stakeholders*, Promotors: Prof. J. van Oosterhout & Prof. L.C.P.M. Meijs, EPS-2016-377-ORG, <http://repub.eur.nl/pub/93016>

Vlaming, R. de., *Linear Mixed Models in Statistical Genetics*, Prof. A.R. Thurik, Prof. P.J.F. Groenen & Prof. Ph.D. Koellinger, EPS-2017-416-S&E, <https://repub.eur.nl/pub/100428>

Vries, H. de, *Evidence-Based Optimization in Humanitarian Logistics*, Promotors: Prof. A.P.M. Wagelmans & Prof. J.J. van de Klundert, EPS-2017-435-LIS, <https://repub.eur.nl/pub/102771>

Vries, J. de, *Behavioral Operations in Logistics*, Promotors: Prof. M.B.M de Koster & Prof. D.A. Stam, EPS-2015-374-LIS, <http://repub.eur.nl/pub/79705>

Wagenaar, J.C., *Practice Oriented Algorithmic Disruption Management in Passenger Railways*, Prof. L.G. Kroon & Prof. A.P.M. Wagelmans, EPS-2016-390-LIS, <http://repub.eur.nl/pub/93177>

Wang, P., *Innovations, status, and networks*, Promotors: Prof. J.J.P. Jansen & Dr V.J.A. van de Vrande, EPS-2016-381-S&E, <http://repub.eur.nl/pub/93176>

Wang, R., *Corporate Environmentalism in China*, Promotors: Prof. P.P.M.A.R Heugens & Dr F. Wijen, EPS-2017-417-S&E, <https://repub.eur.nl/pub/99987>

Wang, T., *Essays in Banking and Corporate Finance*, Promoters: Prof. L. Norden & Prof. P.G.J. Roosenboom, EPS-2015-352-F&A, <http://repub.eur.nl/pub/78301>

Wasesa, M., *Agent-based inter-organizational systems in advanced logistics operations*, Promoters: Prof. H.W.G.M van Heck, Prof. R.A. Zuidwijk & Dr A. W. Stam, EPS-2017-LIS-424, <https://repub.eur.nl/pub/100527>

Weenen, T.C., *On the Origin and Development of the Medical Nutrition Industry*, Promoters: Prof. H.R. Commandeur & Prof. H.J.H.M. Claassen, EPS-2014-309-S&E, <http://repub.eur.nl/pub/51134>

Wessels, C., *Flexible Working Practices: How Employees Can Reap the Benefits for Engagement and Performance*, Promoters: Prof. H.W.G.M. van Heck, Prof. P.J. van Baalen & Prof. M.C. Schippers, EPS-2017-418-LIS, <https://repub.eur.nl/>

Witte, C.T., *Bloody Business: Multinational investment in an increasingly conflict-afflicted world*, Promoters: Prof. H.P.G. Pennings, Prof. H.R. Commandeur & Dr M.J. Burger, EPS-2018-443-S&E, <https://repub.eur.nl/pub/104027>

Yang, S., *Information Aggregation Efficiency of Prediction Markets*, Promotor: Prof. H.W.G.M. van Heck, EPS-2014-323-LIS, <http://repub.eur.nl/pub/77184>

Yuan, Y., *The Emergence of Team Creativity: a social network perspective*, Promoters: Prof. D. L. van Knippenberg & Dr D. A. Stam, EPS-2017-434-ORG, <https://repub.eur.nl/pub/100847>

Ypsilantis, P., *The Design, Planning and Execution of Sustainable Intermodal Port-hinterland Transport Networks*, Promoters: Prof. R.A. Zuidwijk & Prof. L.G. Kroon, EPS-2016-395-LIS, <http://repub.eur.nl/pub/94375>

Yuferova, D. *Price Discovery, Liquidity Provision, and Low-Latency Trading*, Promoters: Prof. M.A. van Dijk & Dr D.G.J. Bongaerts, EPS-2016-379-F&A, <http://repub.eur.nl/pub/93017>

Zhang, Q., *Financing and Regulatory Frictions in Mergers and Acquisitions*, Promoters: Prof. P.G.J. Roosenboom & Prof. A. de Jong, EPS-2018-428-F&A, <https://repub.eur.nl/pub/103871>

Zuber, F.B., *Looking at the Others: Studies on (un)ethical behavior and social relationships in organizations*, Promotor: Prof. S.P. Kaptein, EPS-2016-394-ORG, <http://repub.eur.nl/pub/94388>

This dissertation uses mixed methods to increase academic and managerial understanding of the drivers and performance effects of institutional entrepreneurship at micro- and macro-levels of analysis. Study 1 is a macro-level study containing a review and typology of different streams of institutional theory. Study 2 is a quantitative macro-level study, examining the conformity between Dutch firms' internal and external regulatory environment (fit), and linking this to firm performance. The U-shaped relationship between regulatory mis-fit and substantive performance that is found, suggests that for firms that strive for success, deviation rather than conformation may be the key to success. Study 3 examines the framing mechanisms used to maintain a cross-sector partnership (XSP). We carry out a qualitative case study focusing on the use of different frames by diverse actors in an XSP. We find that collaboration in a partnership does not have to result in a unanimous agreement around a single or convergent frame. This implies that resources need not be focused on reaching unanimous agreement among all partners on a single mega frame, but rather be used to enkindle unity in diversity, where several frames are maintained simultaneously. Study 4 uses a macro-level quantitative approach to demonstrate that the existence of individual-level institutional entrepreneurship initiatives within firms is related to the type of exhibited firm-wide innovative behavior. In sum, this dissertation illustrates that the institutions that managers come across in their professional environments can be influenced by individual institutional work carried out to create, maintain, transform or disrupt these institutions.

ERIM

The Erasmus Research Institute of Management (ERIM) is the Research School (Onderzoekschool) in the field of management of the Erasmus University Rotterdam. The founding participants of ERIM are the Rotterdam School of Management (RSM), and the Erasmus School of Economics (ESE). ERIM was founded in 1999 and is officially accredited by the Royal Netherlands Academy of Arts and Sciences (KNAW). The research undertaken by ERIM is focused on the management of the firm in its environment, its intra- and interfirm relations, and its business processes in their interdependent connections.

The objective of ERIM is to carry out first rate research in management, and to offer an advanced doctoral programme in Research in Management. Within ERIM, over three hundred senior researchers and PhD candidates are active in the different research programmes. From a variety of academic backgrounds and expertises, the ERIM community is united in striving for excellence and working at the forefront of creating new business knowledge.



ERIM PhD Series Research in Management

Erasmus University Rotterdam (EUR)
Erasmus Research Institute of Management
Mandeville (T) Building
Burgemeester Oudlaan 50
3062 PA Rotterdam, The Netherlands

P.O. Box 1738
3000 DR Rotterdam, The Netherlands
T +31 10 408 1182
E info@erim.eur.nl
W www.erim.eur.nl