Preface

The speed at which some businesses have adopted process standards suggests that many previously unscrutinized areas are ripe for change. (Davenport, 2005, p. 108)

Recently, business process standardization has enjoyed increasing attention from both researchers and practitioners. However, neither a concise definition of Business Process Standardization (BPS) nor an accurate analysis of drivers/antecedents and consequences/value dimensions has been offered so far.

This book is the first to exclusively focus on business process standards and standardization. It is also the first to propose a multi-theoretical research framework to analyze consequences and value dimensions of BPS based on a comprehensive overview of the state of the art of BPS research.

Offering a rare combination of qualitative and quantitative research approaches, the book provides an in-depth multi-methodological analysis of the benefits organizations may obtain from BPS and how these can best be achieved.

On the theoretical side, we propose a multi-theoretical approach to analyze BPS phenomena by combining aspects of established theories like the resource-based view of the firm and dynamic capabilities to build the first comprehensive multi-theoretical framework for BPS research. On the empirical side, the book combines a qualitative and a quantitative approach to analyze BPS: two quantitative surveys in combination with four multi-perspective case studies allow for a multi-methodological validation of the theoretical research model.

A data set obtained from two large quantitative surveys, conducted among the 1,000 largest companies in Germany in 2007 and 2009 allows one to quantitatively analyze the impact of BPS. The results are among the first providing an empirical operationalization to show and explain a significant positive impact of BPS on business process performance and business process flexibility. Further, case studies from different industries (tourism, automotive, banking, energy) reveal detailed insights into BPS initiatives and shed light on the actual BPS value creation.

At the end, consolidating the qualitative and quantitative findings, the book provides a roadmap for future research along five distinct research directions.

INTRODUCTION

In the evolution of Information and Communication Technology (ICT), standards and standardization have played an important role (David, 1985; Farrell & Saloner, 1985; Katz & Shapiro, 1985). Since the start of the new millennium, a new theme is emerging, especially, but not exclusively, among practitioners: business process standards.
While there seems to be a consensus on the desirability of business process standards, the concept has not yet been fully developed, and there is even less of a clear definition, let alone a systematic understanding of the “how” and “why” of its benefits. Particularly with regard to business process standards, the argument of Lyytinen and King (2006) still holds: “Despite the importance of standardization, the IS [Information Systems] field has not pursued research on it vigorously” (p. 405) and has not sufficiently focused on “why” and “how” standards emerge and what their impact and economics are.

Hence, two research questions guide our work: The first one, “What is BPS?,” deals with the activity of standardizing business processes itself and aims at providing a concise definition of BPS. The second research question, “What are relevant impact dimensions of BPS and what is the impact of BPS along these dimensions?,” aims at identifying dimensions impacted by BPS and at analyzing the actual impact of BPS along the identified dimensions.

RELEVANCE OF RESEARCH TOPIC

Multiple successful BPS programs have been conducted over the course of the last years with a focus on large multinational organizations allowing them to significantly improve the performance of the standardized processes. For example, British Petroleum, the fifth-largest energy company in the world measured by 2012 revenues, ran a BPS program (Hadfield, 2007), which allowed them to save up to GBP 600 m over the next few years by standardizing business processes and IT systems at all of its petrol stations around the world.

On the practitioners’ side—for the upcoming years—business process optimization and standardization is one of the top priorities. In a study conducted by Gartner, priorities and plans of more than 1,500 Chief Information Officers (CIO) were captured. The survey findings showed that “improving business processes” was the number one priority for participating CIOs (McDonald, 2010).

In addition, researchers show a significantly increased interest in BPS resulting in a higher number of publications in this field. Selected recent publications in the field of BPS itself are (e.g. Bala & Venkatesh, 2007; Beimborn, Joachim, & Muenstermann, 2009; Rosenkranz, Seidel, Mendling, Schaefermeyer, & Recker, 2010; Schaefermeyer, Grgecic, & Rosenkranz, 2010; Schaefermeyer & Rosenkranz, 2011; Schaefermeyer, Rosenkranz, & Holten, 2012; Tregear, 2010; Wimble, Pentland, Hillison, & Tripp, 2010).

On both the practitioners’ as well as the researchers’ sides, an active BPS community has developed, investigating and driving the topic. On the researchers’ side today, dedicated journals and special issues in both the field of standards and standardization as well as the field of business process optimization and standardization exist (e.g. the International Journal of IT Standards and Standardization Research or a special issue of MISQ, “Standard Making: A Critical Research Frontier for Information Systems Research” [Lyytinen & King, 2006] as well as the Business Process Management Journal or the International Journal of Business Process Integration and Management). On the practitioners’ side, several online communities are emerging where practitioners can share ideas and collaborate in both the field of standards and standardization as well as the field of business process optimization and standardization.
CHALLENGES

The research community agrees upon the necessity to investigate BPS a lot more intensively; hence, numerous calls for more and more intense research on BPS exist (Romero, Dijkman, Grefen, & van Weele, 2012; Sánchez-Rodríguez, Hemsworth, Martínez-Lorente, & Clavel, 2006; Schaefermeyer & Rosenkranz, 2011; Stetten, Muenstermann, Eckhardt, & Laumer, 2008; Ungan, 2006; Venkatesh, 2006).

Although the number of publications in the field of BPS has increased within the last years, no concise and accepted definition of BPS is available. In spite of the significantly increased interest in BPS, surprisingly, no concise and broadly accepted definition of BPS is available. Different authors still use a broad range of different interpretations of the term BPS, which are not consistent and lead to incommensurable research results.

The existing research on BPS is lacking a solid theoretical approach as well as comprehensive compilation of drivers/antecedents and consequences/value dimensions of BPS. Most authors follow the classical line of reasoning to explain performance improvements realized by BPS solely leveraging arguments such as economies of scale and scope. Doing so, they succeed in understanding and explaining one of the key value drivers of BPS but fail to understand differences in the level of process performance improvement achieved, which to a large extent seem to be context sensitive. Building on that, so far none of the authors in the field of BPS has provided a comprehensive compilation of drivers/antecedents and consequences/value dimensions of BPS, which in most BPS initiatives seems to a large extent to determine the level of the process performance improvements achievable.

Very few and narrow empirical studies in BPS have been conducted so far. One major shortcoming—if not the most important one—of existing research in the field of BPS is that only very few and narrow empirical studies on BPS exist at all, and that empirical (quantitative) evidence on the impact of BPS on business process performance as well as the corresponding business performance is missing.

MULTI-METHODOLOGICAL APPROACH

This book combines qualitative and quantitative elements to answer the research questions mentioned before: Four qualitative case studies are combined with two quantitative surveys of the 1,000 biggest companies in Germany. This multiple-method research approach combining quantitative and qualitative research—which is one of the core strengths of this book—allows one to gain insights into both the existence and the intensity of causal relations.

The quantitative surveys were carried out on the 1,000 biggest companies in Germany in 2007 and 2009. The unit of focus was the recruitment process in these companies.

Four qualitative case studies were conducted to get a deeper understanding of the way in which BPS generates its impact in the identified impact dimensions (e.g., process performance or process flexibility). The case studies originate from multiple industries (travel, automotive, finance, and energy) and yield insights into BPS across industries. The unit of analysis are the respective BPS initiatives in the four case study organizations: Travel, Automotive, Finance Group, and Energy. The Travel case study investigated a Europe-based multinational services firm with approximately 10,000 employees.
standardizing all touristic key processes. The Automotive case study looked at an automotive supplier with approximately 25,000 employees standardizing HR processes with a special focus on the recruiting process. The Finance Group case study investigated a banking group with more than 100,000 employees standardizing multiple front and back office processes. The Energy case study looked at an energy supplier with approximately 5,000 employees standardizing the order-to-cash processes.

RESULTS AND IMPLICATIONS

To lay the foundation for answering the two guiding research questions, at the beginning, we provide a “state of the art BPS research” overview by analyzing 119 well selected research publications with respect to a) definitions of BPS used, b) drivers/antecedents of BPS mentioned, and c) consequences/value dimensions analyzed.

On the theoretical side, we propose a multi-theoretical framework for BPS research by combining aspects of established theories, such as the Resource-Based View (RBV) of the firm, the dynamic capabilities view, and boundary spanning capabilities. We propose to consider BPS as a dynamic capability along three classes of activities: sensing, seizing, and transforming. The sensing class of activities focuses on selecting an area for BPS in an organization, the seizing class of activities aims at defining an archetype process and planning the BPS activities, and the transforming class of activities focuses on implementing the business process standard in an organization.

To allow for more precision in defining BPS, we introduce the terms archetype process and to homogenize a set of process variants against an archetype process. Applying this terminology and zooming in into the seizing class of activities of BPS—considered as a dynamic capability and leveraging the theoretical concept of boundary spanning capabilities—we propose a decomposition of BPS into Business Process Standardization – Homogenization (BPS-H) and Business Process Standardization – Combined Homogenization and Optimization (BPS-H+O). We propose to define BPS-H as conducting a BPS effort and developing the archetype process candidates leveraging internal resources to a focal organization, not necessarily aiming at obtaining a time-, cost-, and quality-wise optimal archetype process. In contrast, we propose to define BPS-H+O as conducting a BPS effort and developing the archetype process candidates aiming at obtaining a time-, cost-, and quality-wise optimal archetype process, particularly by leveraging both resources internal and external to the focal organization.

Building upon the developed multi-theoretical framework and the provided definitions of BPS, BPS-H, and BPS-H+O, three research models are developed: the basic research model analyzing the direct impact of BPS on Business Process Performance (BPP), the detailed research model analyzing the impact of BPS on the performance dimensions time (BPT), cost (BPC), and quality (BPQ), and the extended research model analyzing the impact of both BPS-H only and BPS-H+O on BPP and Business Process Flexibility (BPF).

On the empirical side, this book combines a quantitative and a qualitative approach to analyze BPS: two quantitative surveys in combination with four multi-perspective case studies allowed for a multi-methodological validation of the three research models. Key contributions of this book—with respect to empirical quantitative research—are the development and validation of operationalizations of the BPS,
BPS-H, and BPS-H+O constructs. Both the quantitative surveys as well as the four case studies confirm the direct positive impact of BPS on BPP (as well as on BPT, BPC, BPQ) and BPF. They also confirm a larger positive direct impact of BPS-H+O on BPP and BPF compared to the impact of BPS-H on a stand-alone basis. These results are among the first to provide an empirical confirmation showing and explaining a significant positive impact of BPS on BPP and BPF.

At the end, consolidating the qualitative and quantitative findings this book provides a roadmap for future BPS research along five distinct research directions. The first two of the five proposed directions aim at extending the research models to contain both more drivers/antecedents as well as more consequences/value dimensions of BPS. The next two aim at shedding light on the interplay of BPS with both data standards and SOA. The last proposed research direction aims at analyzing how to enhance BPS towards a continuous BPS competency.

Summarizing this book’s main findings, we advance the field of BPS research through the following seven key contributions:

1. Develop a “state of the art BPS research overview” as well as a multi-theoretical framework for BPS research,
2. Provide a concise definition of BPS as dynamic capability, including the decomposition into BPS-H on a stand-alone basis and BPS-H+O,
3. Develop three research models around BPS (basic, detailed, and extended model),
4. Develop and validate operationalizations of the BPS, BPS-H, and BPS-H+O constructs,
5. Consistently theoretically derive and quantitatively and qualitatively show a direct positive impact of BPS on BPP (as well as on BPT, BPC, BPQ) and BPF,
6. Consistently quantitatively and qualitatively find a larger positive direct impact of BPS-H+O on BPP and BPF compared to the impact of BPS-H on a stand-alone basis,
7. Provide a roadmap for future research comprising five distinct fields of research.

**STRUCTURE AND ORGANIZATION OF THE BOOK**

The book is structured in four sections. In Section 1, we develop the concept of BPS. The purpose of Chapter 1 (“Introduction”) is to give an overview of the work at hand: Firstly, it introduces BPS, motivates the research topic, and formulates a set of research questions to be answered. Then, it explains the methodology used, provides a definition of key terms used, and gives an overview of the structure of the book. Finally, it presents the main findings of the book. Chapter 2 (“State of the Art of BPS Research”) provides an overview of the state of the art of BPS research including an overview of drivers/antecedents and consequences (value dimensions) of BPS.

Section 2 focuses on theory and model development. In Chapter 3 (“Deriving a Multi-Theoretical Framework for BPS Research”), we first provide the theoretical foundations for BPS research based on selected established theoretical lenses and derive a multi-theoretical framework for BPS research. Using the multi-theoretical framework, Chapter 4 (“Model Development and Hypotheses”) aims at developing three research models and respective sets of hypotheses around BPS.

In Section 3, the quantitative and qualitative empirical validations are presented. The goal of Chapter 5 (“Evaluation of BPS and its Impact: Quantitative Approach”) is a quantitative confirmation of the research models and the hypotheses developed in Chapter 4. Firstly, Structural Equation Modeling (SEM) using
the Partial Least Squares (PLS) methodology applied in this research effort is introduced, including a set of quality criteria to evaluate PLS models. Then, the surveys conducted—“Recruiting Trends 2007 and 2009”—are presented with details on the process in focus, the construct operationalization used, as well as the data collection carried out. Finally, the results of the surveys are presented. The goal of Chapter 6 (“Evaluation of BPS and its Impact: Qualitative Approach”) is a qualitative confirmation of the research models and the hypotheses developed in Chapter 4. Firstly, the case study research method is introduced. Then, four case studies are discussed with details on the respective case study background, the case study results, and a short case outlook. Finally, a cross-case analysis is described.

Section 4 draws overall conclusions and proposes a roadmap for further research. After having achieved a good understanding of BPS in the previous chapters, the goal of Chapter 7 (“Discussion of Findings”) is to discuss the findings of the research effort at hand and derive conclusions and recommendations. After a summary of the findings, in a first step, both the quantitative and qualitative results are discussed; then, in a second step, the implications of the findings to both theory and practice are presented. Finally, potential limitations to our research are identified and put into perspective.

The goal of Chapter 8 (“Further BPS Research”) is to offer a roadmap for further research around BPS. Along five distinct directions—and partly already based on some initial findings from research in progress—promising paths for further research are presented.

In the appendices, we compile additional details on the execution of quantitative surveys or interview questionnaires used while conducting the case studies.

TARGET AUDIENCE

Both researchers and practitioners alike will benefit from the book because of its new theoretical and management perspectives on why, how, and with which impact particular business process standards are developed and used.

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REFERENCES


**ENDNOTES**

1 We are very thankful that the four case study organizations offered to participate in our research effort. As we guaranteed full data and identity confidentiality to the four case study organizations, we sanitized and anonymized all data and pieces of information provided in this book, including the names of the four organizations, which we decided to simply call Travel, Automotive, Finance Group, and Energy.