

What You Can Do to Inhibit Business Process Standardization

Research-in-Progress

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Abstract

Business process standardization (BPS) has recently got into focus of the BPM literature as a methodology to substantially enable efficiency potentials and therefore improve process performance. So far, the BPS literature has exclusively focused on success factors for BPS and relevant capabilities. By contrast, inhibiting factors have not been sufficiently considered, yet, but success factors respectively enablers and inhibitors are not simply the opposites.

The objective of this paper is to identify factors which *inhibit* BPS and to deduce management actions which help successfully standardize processes. To answer this question, we study the case of an international process standardization project in a global maintenance company. We derive a set of inhibiting factors for BPS. Thereby, some of these inhibitors have to be considered for any organizational change project while others are BPS specific. The specific inhibitors are analyzed in detail and discussed by mirroring them to non-BP standardization research.

Keywords

Business Process Management, Business Process Standardization, Standardization Theory, Inhibitors

Introduction

Over the past few decades, many companies have restructured their business processes from a purely functional towards a process oriented organization (Barua et al. 1995; Goldkuhl and Lind 2008; Kettinger et al. 1997; Münstermann et al. 2010a; Münstermann et al. 2010b; Skrinjar et al. 2008; Tallon et al. 2000). In this context, business process management (BPM) as a holistic management approach (Pritchard and Armistead 1999; Zairi 1997) has become prevalent. To enhance a company's performance, business process standardization (BPS) has recently got into focus of the BPM literature as a methodology to substantially enable and achieve efficiency potentials (e.g., improved operative process performance, increased transparency and controllability and realized economies of scale and skill) (Davenport 2005; Münstermann and Eckhardt 2009; Münstermann et al. 2010b; Ramakumar and Cooper 2004; Swaminathan 2001; Wüllenweber et al. 2008). While academia (Münstermann et al. 2010b; Venkatesh 2006) and practitioners likewise perceive BPS to be desirable, it can also be a major obstacle since processes may have to be changed throughout the organization. Especially in globally operating organizations, BPS means to struggle with complex and international processes (Münstermann et al. 2010b).

The BPS literature has yet exclusively focused on success factors (e.g., Münstermann and Eckhardt 2009; Münstermann et al. 2010a; Münstermann et al. 2010b) for BPS and relevant capabilities (e.g., Jurisch et al. 2012) for business process change (BPC). These are vital works to understand what is necessary to successfully implement BPS. By contrast, inhibiting factors have not been sufficiently considered, yet, and success factors respectively enablers and inhibitors are not simply the opposites (Cenfetelli and Schwarz 2011). Inhibitors are worth to be considered because "inhibitors are more just as the antipoles of enablers

(e.g., the opposite of usefulness or reliability) and so are distinct constructs worthy of their own investigation” (Cenfetelli and Schwarz 2011, p.808).

For this reason, the objective of our work is to identify factors which inhibit BPS and to deduce management actions which help successfully standardize processes. Therefore, our research question is: *Which factors inhibit BPS and which managerial actions are relevant to avoid these identified inhibiting factors?* To answer this question, we aim at conducting a series of case studies. This research-in-progress paper presents the outcomes of a first case where we had the opportunity to examine an international process standardization project in a global maintenance company. We derive a first set of inhibiting factors which should be carefully considered when planning and conducting process standardization projects within an organization.

The remainder of this paper is structured as follows: In the next section, after a brief review of the literature about BPM and BPS in general, the case study will be introduced. Based on this, we will identify inhibiting factors for BPS. Finally, the results are critically discussed by trying to depict possible solutions from the non-BP standardization literature and issues our next research steps are suggested.

Theoretical Background

One management discipline which tries to handle the increasing complexity of business processes is business process management (BPM). According to Luftman and Kempaiah (2008, p.100), “BPM focuses on making business processes more efficient, effective, and capable of adapting to the fast-changing environment”. Thereby, as a holistic management discipline, BPM includes a multitude of methodologies and tools to handle with processes which are its core element. According to Davenport and Short (1990), a business process is a “set of logically related tasks performed to achieve a defined business outcome” (Davenport and Short 1990, p.12).

Implementing BPM is often connected with the goal to increase process performance. This is supposed to be achieved by identifying opportunities for continuous improvement (Deming 1994). After a process is modeled, deployed, managed and measure, a process will be optimized and/or standardized (business process standardization; BPS) which has become more and more important (Davenport 2005; Manrodt and Vitasek 2004; Münstermann et al. 2010a).

There is no clear definition about what process standardization is. There are even various definitions about what standards are. The most common definition of standard respectively standardization is provided by ISO/IEC: “Standards are documents, established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics or activities or their results, aimed at the achievement of the optimum degree of order in a given context” (ISO 2011, p.9). Accordingly, Sánchez-Rodríguez et al. (2006) define a process standard as “the best, easiest and safest way to do an activity”. Moreover, business process standardization (BPS) makes “process activities transparent and achieve uniformity of process activities across the value chain and across firm boundaries” (Wüllenweber et al. 2008, p.213). In this paper, we follow the definition of Münstermann and Weitzel (2008) which sees BPS as the activity of aligning existing variants against a standard process.

BPS aims to increase operational performance, realize cost savings, and enhance quality (Manrodt and Vitasek 2004). Furthermore, BPS and the combined reduction of process variations lead to higher process performance (Beimborn et al. 2009; Frei et al. 1999; Münstermann et al. 2010a; Tsikriktsis and Heineke 2004) due to less process errors, facilitating communication, and economies of scale (Wüllenweber et al. 2008). But BPS does not only impact process performance but also process maturity. This is explained by increased cross-organizational transparency, better monitoring ability (Wüllenweber et al. 2008), and more effective coordination of organization-wide process changes (Deming 1986; Imai 1986; Shewhart 1986; Wüllenweber et al. 2008).

Research Methodology

To identify inhibiting factors of BPS, case studies seem to be the most feasible approach (Eisenhardt 1989). Thus, observations of rather complex organizational phenomena in their natural setting can be made which helps to receive a profound and realistic understanding about it (Babbie 1983).

In the following, we present results from a first (pilot) case. The case study was conducted in a globally operating maintenance company. For reasons of anonymity we will call the company “Repair”. Repair serves hundreds of customers all over the world. Due to severe compliance regulations as well as environment guidelines, Repair uses a process-oriented management system to document its processes and organizational structures, in which processes are mapped to process models. To standardize Repair’s processes around the globe, it has set up a huge BPS initiative that aims at standardizing all major operations across the maintenance sites in eight different countries. Within this project, we were able to collect data regarding the effectiveness of the procedures that were applied to develop and to roll out the new process standards. As a part, we conducted seven interviews with people being involved or responsible with the standardization of seven different business processes at multiple maintenance sites. In the course of this evaluation, we derived inhibiting factors for successful BPS. Thereby, we focused not only on inhibiting factors but also on success factors. The following table shows all interviewees and their responsibilities at a glance.

Interviewee	Position	Process Management Role
Mr A	Senior Management	Process Owner
Mr B	Group Leader	Process Owner
Mrs C	Process Expert	Process Employee
Mrs D	Team Leader	Process Owner
Mrs E	Team Leader	Process Owner
Mr F	Group Leader	Process Owner
Mr G	Process Expert	Process Employee

Table 1. Interviewees

All seven interviews took place in person and were held by two researchers. Furthermore, all interviews were digitally recorded, transcribed, and analyzed following the Open Coding methodology of Corbin and Strauss (2008).

Preliminary Case Study Results

This section explains the main inhibiting factors for BPS, extracted from the pilot case study and listed in Table 2. Thereby, inhibitors are not just the antipoles of BPS enablers. Research shows that negative stimuli is assigned more importance than positive stimuli (Gauggel et al. 2000) and negative information is circulated quicker than positive one (Cenfetelli and Schwarz 2011). Therefore, inhibitors do not only lead to unsuccessful BPS but block out the whole initiative. If the inhibitors are not considered and avoided, the employees’ motivation will decrease dramatically and their commitment turns to obstruction: *“When the initiative started, the other sites were very shy and reluctant. They thought we wanted to quit their jobs or something like that. We had to fight for their trust. But when we achieved that, we were a great team and everybody was enthusiastic about what will happen. But then, the initiative was not supported by top management any more. That was the death blow. The involved employees were frustrated and we lost our credibility”* (Process Expert).

<ul style="list-style-type: none"> - BPS-specific inhibitor #1: Unclear and asymmetric allocation of costs and benefits - BPS-specific inhibitor #2: Unclear accountabilities and responsibilities
<ul style="list-style-type: none"> - Generic inhibitor #1: Lead of the BPS project by an unexperienced manager who is not involved in the particular business process, insufficient BPM skills - Generic inhibitor #2: Missing top management support, conflictive strategic directives - Generic inhibitor #3: Insufficient project budget

Table 2. Inhibiting Factors

Some of these inhibitors have to be considered for any organizational change project and are therefore more generic (cf., Laumer and Eckhardt 2010; Pardo del Val and Martínez Fuentes 2003; Piderit 2000). Others are explicitly relevant for business process standardization (e.g., unclear and asymmetric allocation of costs and benefits as well as unclear accountabilities and responsibilities). All inhibitors are described in the following:

BPS-specific inhibitor #1: Unclear and asymmetric allocation of costs and benefits

In the case study, we found that nearly all standardization projects faced the discussion on how to allocate the standardization project costs as well as how to balance higher operation costs after implementing the standard process at some of the sites in order to create the global benefit. For example, the rollout of a global document database to handle maintenance manuals caused higher IT costs at several sites where only a simple Microsoft Excel solution was used before. But on a global, organization-wide level, the implementation of this database made sense due to lower document handling costs by uploading a document only once to the global system instead of doing it several times at every site. As a consequence, the sites had to invest a lot to realize the new standard process: *“It was a simple cost-benefit calculation. For us, the investment was not worthy enough and so we didn’t adopt the new standard”* (Process Expert).

BPS-specific inhibitor #2: Unclear accountabilities and responsibilities

Our findings show that an unaligned organizational governance set-up is an inhibitor for successful BPS. With Repair’s BPS initiative *“the newly defined standard process shaped up as difficult to live. As a consequence, some units deviated from the standard process in the meantime. This process was too generic and the specifics of the different units were not considered enough. So, to make the process livable and realizable it is necessary that every involved person could identify himself or herself with it”* (Senior Manager). This result matches with the existing BPS literature (e.g. Münstermann and Eckhardt 2009; Münstermann et al. 2010). Designing a process standard which defines optimal workflows and procedures is just one first step. The second is to ensure that this standard process gets actually and effectively implemented into the different parts of the organization; third it has to be ensured that organizational units and single workers adhere to the standard over time, because even after a successful roll-out, new process variants will likely appear because workers will identify local optimization potentials (which might not be beneficial from the overall organization’s perspective) and change their individual process, accordingly (Weitzel et al. 2006).

Generic inhibitor #1: Lead of the BPS project by an unexperienced manager who is not involved in the particular business process, insufficient BPM skills

Our case study results show that an unexperienced manager and an incapable team can negatively affect the success of a BPS project: *“For our process, the initiative failed. It is hard to succeed if the project manager has not enough knowledge about the process and do not know the responsible persons”* (Process Owner). In contrast, – and as we can learn from alignment literature – an experienced (project) manager has – beside detailed expert knowledge about the process – an extensive communication network all over the company. Therefore, new connections can be established or refreshed more easily. This in turn supports the BPS initiative (c.f., Rockart et al. 1996). In addition, according to Münstermann et al. (2010b), the mixed variety of

competencies and backgrounds of the BPS initiative team helps effectively design the standard process. Furthermore, the integration of managers being currently and in future responsible enhances the motivation (Münstermann et al. 2010b) for adhering to the standard process: “The persons who are sent by the different sites should be able to somehow fight for their sites’ interests. They should not be shy and reluctant” (Process Expert). This increases the participants’ identification with the new standard process and thus facilitates its successful roll-out at the different sites.

Generic inhibitor #2: Missing top management support, conflictive strategic directives

As mentioned above, a designed process standard is just one first step. The second step is to ensure that this standard process gets actually and effectively implemented into the whole organization. Our results from the Repair case study show that the BPS initiative started very well but when top management changed their attitude about it, the whole project failed: “*We were a good team and everybody was prepared to change our processes. But when the management quit its support and involvement, the initiative’s failure was predictable*” (Process Expert). Due to missing top management support and involvement, the project team members and employees turned their backs on the BPS initiative: “*We lost the plot. The project members took other tasks and resources got lost*” (Process Expert). If the BPS initiative will be reactivated someday, it will be very hard to convince and motivate the employees again because “*The involved employees were frustrated and we lost our credibility*” (Process Expert). In addition, the employees’ motivation and adoption behavior is not only dependent from the degree of top management support (Münstermann and Eckhardt 2009; Münstermann et al. 2010b) but also from top management *involvement*, as we can learn from alignment research (Wagner and Weitzel 2012). As a consequence, top management support as well as top management involvement is crucial for the success of a BPS initiative.

Generic inhibitor #3: Insufficient project budget

At Repair the BPS initiative went very well at the beginning. After convincing skeptical employees “*everybody was prepared to change our processes*” (Process Expert). But then a hard cost cutting program stopped the initiative which was unexpected for the process employees and owners. As we can learn from alignment literature, the challenges to achieve alignment are often rooted in lacking knowledge about corporate strategy and business requirements, lacking awareness about the importance of alignment and lacking willingness to organizational change including locus of control (Chan and Reich 2007). These factors can be transferred to the BPM and BPS context as well in which conflictive or ambiguous strategic directives are focused in the following. Responsible managers do not always know about corporate strategy (Reich and Benbasat 2000) or they are not sure about how to adapt it (Baets 1992). In addition, formal strategies are often affected by ambiguity which also has implications on the applicability (Campbell 2005). Thereby, managers have to handle ambiguity between espoused strategies, strategies in use, and managerial actions which are not rarely conflictive (Chan and Reich 2007).

What can we learn from (non-BP) standardization research?

The derived inhibiting factors corroborate the factors mentioned by Münstermann and Eckhardt (2009), Münstermann et al. (2010b), and Kettenbohrer et al. (2013). As mentioned above, some of these inhibitors have to be considered for any organizational change project (cf., Laumer and Eckhardt 2010; Pardo del Val and Martínez Fuentes 2003; Piderit 2000) while others are very BPS specific. In the following, we will focus on on the latter and discuss them by mirroring them against previous non-BP standardization research and transferring those findings to our BPS context.

When it comes to standardization, it should be made clear that “standards are not only a technical question. They determine the technology that will implement the Information Society, and consequently the way in which industry, users, consumers and administrations will benefit from it” (CEU 1996, p.1). As a consequence, standardization considers technical as well as non-technical issues and generates standards which resulted from social interactions between the involved stakeholders. Therefore, not only technical issues should be put into consideration but also economic and social factors (Jakobs 2013). Beyond, not all stakeholders benefit likewise from standardization (Jakobs 2013). For instance - using the

example mentioned above again - the rollout of a global document database to handle manuals causes higher IT costs at several sites where only a simple Microsoft Excel solution was used before. On a global, organization-wide level, the implementation of this database makes sense due to lower document handling costs by uploading a document only once to the global system instead of doing it several times at every site. As a consequence, the sites had to invest a lot to realize the new standard process. Therefore, it is crucial to accept that standards not only have technical consequences, but also influence economic and social issues. Incorporating this perspective could lead to a beneficial standardization to all (Jakobs 2013). In the following discussion, we focus only on economic issues by using an economic perspective.

Standards provide compatibility and help to realize cooperation (Buxmann et al. 1999). But, for achieving these benefits, common use of the standard is necessary to exchange information and to connect with each other. Therefore, the value of a standard to one user is dependent on others using it as well (Weitzel et al. 2006), making the decision to adopt or not adopt a standard being interdependent. This implies a coordination problem, the so-called standardization problem (Besen and Farrell 1994; Buxmann et al. 1999; Wiese 1990). Thereby, the “network effects” describe the relationship between the value of an asset (the standard) and the number of its users (Weitzel et al. 2000). The larger the network size, the higher is the perceived benefit for an actor (Fuentelsaz et al. 2012). To raise a very classical example, for a person, the value of a phone raises if more persons in his or her personal environment also have a phone so that they can call each other. Especially in information technology and telecommunication markets, the need for compatibility to exchange information but also the need for complementary products/services lead to network effects (Weitzel et al. 2000). Due to network effects, coordination problems exist which can lead to market failure (e.g., start-up problem, excess inertia, excess momentum, lock in effect, path dependency) (Amit and Zott 2001; Farrell and Klemperer 2007; Shapiro and Varian 1998; Weitzel et al. 2000).

When it comes to a standardization decision (Who should adopt the standard?), centralized and decentralized standardization decisions have to be differentiated. From a centralized perspective, the objective is to search for a global optimum in the overall network (i.e. which actors should adopt the standard to maximize the overall value (benefits minus cost of all actors). To determine the optimal decision, the aggregate net benefits (the difference of all standardization benefits and costs from all involved actors summed up) need to be considered (v. Westarp et al. 2000; Weitzel et al. 2006). In contrast, the decentralized question is an individual actor’s search for his/her individual optimum (individual benefits minus individual cost). In many scenarios decentralized decisions will differ from the centrally optimal decision, creating the standardization problem (Weitzel et al. 2006).

In cases of centralized coordination, several problems can occur, with the main issues being data problems, complexity problems, and implementation problems (v. Westarp et al. 2000; Weitzel et al. 2000). We will describe these three problems in the following, transfer them to the BPS context, and also highlight potential solutions (i.e., managerial implications) from the previous standardization literature.

- *Data problem:* In situations which bear asymmetric distribution of information and opportunistic actors with individual preferences, it is hardly possible to get unaltered and complete data from all actors. The actors know that their reports influence the allocation (v. Westarp et al. 2000; Weitzel et al. 2000), which might be to their disadvantage. In the context of BPS, the data problem turns out to be the following: The headquarter aspires to standardize business processes organizational-wide. Thereby, reports from the different sites serve as basis for the centralized decision. These reports should not only include key performance indicators about the actual and the expected process run-time but also data about the needed human and technical capacities, capital expenditure, and investments for trainings etc. if standardization is executed. If the calculated business case for BPS, based on the reports, is positive at the overall firm level, the decision will be in favor of organization-wide business process standardization – although some sites might have enormous investments which would not justify their individual benefits. As a consequence, sites have the incentive to cheat and not to provide the true figures (v. Westarp et al. 2000).

Integration and standardization require planning and coordination of all involved network participants. Therefore, data (costs and profits) serve as basics if a network solution is desirable. A central decision instance (headquarter) decides on common resources but division managers have own interests. So, it is problematic to get complete and unaltered data. To get complete data

relevant for BPS, it is reasonable to share the profit with all involved standardization partners (headquarter as well as sites). But, this does not guarantee unaltered data. Therefore, an incentive for truthful reporting should be added. For instance, the Weitzman schema could be used which pegs the reporting of a manager to her reward. For the reporting manager, it is optimal to report the data which she assumes. If she reports wrong data, her reward is lower than the reward which she gets in case of truthful reporting (Weitzman 1976). But, this schema can lead to wrong incentives, if only scarce financial resources for investments exist and the anticipated profit is not distributed consistently over the required investment sum. Another possible solution could be the Groves schema (Mas-Colell et al. 1995). It is an alternative to profit sharing in which truthful reporting is one but not the single Nash equilibrium. The basic idea of the Groves schema is that truthful reporting is optimal for every manager (agent) independent of the others' reporting. The reward does not depend on the actual profit but on the reported profits (Mas-Colell et al. 1995).

To solve the data problem and to successfully implement BPS, the potentially differing loci of standardization efforts vs. benefits have to be taken into account. While the standardization effort appears at the site, the main benefit from BPS might appear on the overall firm level (e.g. compliance, economies of scale) (Weitzel et al. 2003). Hence, the headquarters respectively the BPS project team has to consider potential agency problems in truthful reporting and to implement certain incentives and governance mechanisms. At this point, the Weitzmann schema or the Groves schema could be impulses for such extensions.

- *Complexity problem:* The complexity problem in an IT standardization setting indicates that a network with n entities consists of $n*(n-1)$ links among them. As a consequence, identifying the optimum means comparing all possible combinations of standardizing vs. non-standardizing of the entities to identify the cost/benefit-optimal configuration (v. Westarp et al. 2000). In the following, we assume that a company consisting of a headquarter and different sites is a network. The entities are the different processes which are supposed to be standardized. The difference to the non-BPS context is now that in the BPS context there are no, respectively less, direct network effects because from a site's perspective it is not relevant if a specific other site has adopted the standard process or not. Thereby, the complexity problem does not arise from the selection of a given technology standard and from evaluating the resulting bilateral benefits among each pair of interacting entities. However, there can be a substantial complexity problem in terms of determining the standard process. Typically, an organization will design a standard process by comparing process variants existing at the different sites and by identifying and combining best practices from those (Kettenbohrer et al. 2013; Münstermann and Weitzel 2008) (Manrodt and Vitasek 2004; Münstermann et al. 2010b; Münstermann and Weitzel 2008). Therefore, it is obvious that BPS is different from non-BP standardization and needs to be analyzed independently.
- *Implementation problem:* Even in centrally coordinated systems, it is not certain that the predetermined solutions are adhered to. Actually, in modern, budget-driven organizations, the authority to give directives is limited and also the existence of contracts and agreements does not automatically lead to adherence (v. Westarp et al. 2000). In the context of BPS, the implementation problem means that designing a process standard is not enough. It is crucial to ensure that this standard process gets actually and effectively implemented into the different parts of the organization and organizational units and single workers adhere to the standard. Thereby, local optimizations identified and changed by workers should be avoided because they might not be beneficial on an overall firm level. Standards constitute networks in which interdependencies exist. Therefore, depicting individual and collective costs and benefits is necessary to identify and balance asymmetries (Aubert et al. 1998; Poppo and Zenger 2002). Hence, possible approaches which are suggested by the non-BP standardization literature could be any transfer-payments sharing profits or a network-wide ROI (v. Westarp et al. 2000).

Transferring the implementation problem to the BPS context means, that designing a process standard is not enough but ensuring that the standard process gets actually and effectively implemented into the different parts of the organization is crucial. Therefore, and to reduce resistance to change (Keen 1981; Laumer and Eckhardt 2010) a governance model with clearly defined accountabilities and responsibilities (Kettenbohrer et al. 2013; Nesheim 2011; Rohloff

2011) could help: *“It is essential to make accountabilities and responsibilities more transparent. Every involved person has to know his or her role in the process. As a consequence, everyone has to know his or her tasks, accountabilities and responsibilities”* (Senior Manager).

Up to now, BPS methodologies (e.g., Davenport and Short 1990; Kettenbohrer et al. 2013; Manrodt and Vitasek 2004; Münstermann and Weitzel 2008; Ugan 2006) have focused on standardizing business processes without considering standardization theory and related issues (e.g., standardization problem). But, for ensuring successful BPS in an organization, these issues have to be considered. There should be discussions about how to allocate the standardization costs as well as how to balance higher operation costs after implementing the standard process at some of the sites in order to achieve the global benefit (Weitzel et al. 2003) (cf. the example of the rollout of a global document database mentioned above). Furthermore, an BPS initiative has to consider potential agency problems in truthful reporting (Aubert et al. 1998; Poppo and Zenger 2002), leading to certain incentives and project membership selection mechanisms.

Finally, some managerial implications can be drawn regarding the generic BPS inhibitors, as well. First, the BPS project team should set up carefully and correctly. This means primarily to involve experienced managers with an extensive communication network as well as project members with various competencies and backgrounds to drive the BPS initiative (Münstermann et al. 2010b; Rockart et al. 1996). Referring to top management, not only support is required but also involvement. As research on organizational change shows, active involved top management is one of the most critical organizational success factors (Wagner and Weitzel 2012). Accordingly, BPS initiatives need supportive and involved management to keep the involved employees motivated. In turn, actions to increase management involvement could be regular project meetings, reading of reports, and critical discussions about the BPS initiative (Wagner and Weitzel 2012).

Finally, to avoid conflictive strategic directives, it is important to ensure that all responsible managers know about the corporate strategy (Reich and Benbasat 2000) and that they know how to adopt it (Baets 1992), in the first step. In the second step, the espoused strategies as well as the strategies in use and the deduced managerial actions are supposed to be aligned (Chan and Reich 2007).

Conclusion and Next Steps

The paper offers first insights about which factors inhibit business process standardization. To derive these insights, a case study in a globally operating maintenance company was conducted and the main inhibiting factors for BPS examining from the case study were discussed. These inhibitors are discussed by mirroring them to the literature on non-BPS standardization and managerial implications for avoiding or reducing these inhibitors are drawn. Particularly, we put focus on the economic aspects related with standardization, which have not been addressed by the previous BPS literature and are likely to get neglected during BPS projects in practice, too. In the subsequent steps of our research, we will proceed with data collection by gathering further cases in other companies and analyze other types of processes to evaluate the validity and completeness of the identified inhibiting factors for BPS. Eventually, we will come up with a comprehensive framework of inhibiting factors and corresponding management actions. The validity of this framework and the relative importance will then be evaluated by quantitative empirical research in various global organizations that have undergone comprehensive business process standardization initiatives. Thus, we will contribute to the still immature literature on BPS capabilities (Jurisch et al. 2012) by adding both a perspective on tackling BPS inhibitors and comprehensive framework of management actions accompanying process standardization initiatives.

REFERENCES

- Amit, R., and Zott, C. 2001. "Value Creation in E-Business " *Strategic Management Journal* (22:6-7), pp. 493-520.
- Aubert, B.A., Patry, M., and Rivard, S. 1998. "Assessing the Risk of It Outsourcing," in: *31st Hawaii International Conference on System Sciences*. Hawaii.
- Babbie, E. 1983. *The Practice of Social Research*, (3rd ed.). Belmont Wadsworth Publishing
- Baets, W. 1992. "Aligning Information Systems with Business Strategy " *Journal of Strategic Information Systems* (1:4), pp. 205-213.
- Barua, A., Kriebel, C.H., and Mukhopadhyay, T. 1995. "Information Technologies and Business Value: An Analytic and Empirical Investigation " *Information Systems Research* (6:1), pp. 3-23.
- Beimborn, D., Gleisner, F., Joachim, N., and Hackethal, A. 2009. "The Role of Process Standardization in Achieving It Business Value," in: *42nd Hawaii International Conference on System Sciences*. Big Island, Hawaii.
- Besen, S., and Farrell, J. 1994. "Choosing How to Compete: Strategies and Tactics in Standardization " *Journal of Economic Perspectives* (8:2), pp. 117-131.
- Buxmann, P., Weitzel, T., and König, W. 1999. "Auswirkung Alternativer Koordinationsmechanismen Auf Die Auswahl Von Kommunikationsstandards," *Zeitschrift für Betriebswirtschaft: Ergänzungsheft* 02/99 Innovation und Absatz), pp. 133-151.
- Campbell, B. 2005. "Alignment: Resolving Ambiguity within Bounded Choices " in: *9th Pacific Asia Conference on Informations Systems* Bangkok, Thailand
- Cenfetelli, R.T., and Schwarz, A. 2011. "Identifying and Testing the Inhibitors of Technology Usage Intentions " *Information Systems Research* (22:4), pp. 808-823.
- CEU. 1996. "Communication from the Commissions to the Council and the Parliament 'Standardization and the Global Information Society: The European Approach'."
- Chan, Y.E., and Reich, B.H. 2007. "It Alignment: What Have We Learned? ," *Journal of Information Technology* (22), pp. 297-315.
- Corbin, J., and Strauss, A.L. 2008. *Basics of Qualitative Research. Techniques and Procedures for Developing Grounded Theory*. Los Angeles: SAGE Publications.
- Davenport, T.H. 2005. "The Coming Commoditization of Processes," *Harvard Business Review* (June), pp. 101-108.
- Davenport, T.H., and Short, J.E. 1990. "The New Industrial Engineering: Information Technology and Business Process Redesign," *Sloan Management Review* (31:4), pp. 11-27.
- Deming, W.E. 1986. *Out of the Crisis*. Cambridge Massachusetts Institute of Technology
- Deming, W.E. 1994. *The New Economics for Industry, Government, Education*. Cambridge: Massachusetts Institute of Technology, Center for Advanced Engineering Study
- Eisenhardt, K.M. 1989. "Building Theories from Case Study Research " *Academy of Management Review* (14:4), pp. 532-550.
- Farrell, J., and Klemperer, P. 2007. "Coordination and Lock-In: Competition with Switching Costs and Network Effects," in *Handbook of Industrial Organization* M. Armstrong and R. Porter (eds.). Amsterdam Elsevier
- Frei, F.X., Kalakota, R., Leone, A.J., and Marx, L.M. 1999. "Process Variation as a Determinant of Bank Performance: Evidence from the Retail Banking Study," *Management Science* (45:9), pp. 1210-1220.
- Fuentelsaz, L., Maicas, J.P., and Polo, Y. 2012. "Switching Costs, Network Effects, and Competition in the European Mobile Telecommunications Industry " *Information Systems Research* (23:1), pp. 93-108.
- Gauggel, S., Weitasch, A., Bayer, C., and Rolko, C. 2000. "The Impact of Positive and Negative Feedback on Reaction Time in Brain-Damaged Patients " *Neuropsychology* (14:1), pp. 125-133.
- Goldkuhl, G., and Lind, M. 2008. "Coordination and Transformation in Business Processes: Towards an Integrated View " *Business Process Management Journal* (14:6), pp. 761-777.
- Imai, M. 1986. *Kaizen: The Key to Japan's Competitive Success*, (1 ed.). New York Random House.
- ISO. 2011. "Iso/Iec Directives, Part 2 - Rules for the Structure and Drafting of International Standards ".
- Jakobs, K. 2013. "Why Then Did the X.400 E-Mail Standard Fail? Reasons and Lessons to Be Learned " *Journal of Information Technology* (28), pp. 63-73.
- Jurisch, M.C., Palka, W., Wolf, P., and Krcmar, H. 2012. "Which Capabilities Matter for Successful Business Process Change? ," *Business Process Management Journal* (20:1), pp. 47-67.
- Keen, P.G.W. 1981. "Information Systems and Organizational Change," *Communications of the ACM* (24:1), pp. 24-33.
- Kettenbohrer, J., Beimborn, D., and Kloppenburg, M. 2013. "Developing a Procedure Model for Business Process Standardization " in: *International on Information Systems Milan*

- Kettinger, W.J., Teng, J.T., and Guha, S. 1997. "Business Process Change: A Study of Methodologies, Techniques and Tools " *MIS Quarterly* (21:1), pp. 55-98.
- Laumer, S., and Eckhardt, A. 2010. "Why Do People Reject Technologies? – Towards an Understanding of Resistance to It-Induced Organizational Change," in: *31st International Conference on Information Systems (ICIS)* St. Louis.
- Luftman, J., and Kempaiah, R. 2008. "Key Issues for It Executives 2007," *MIS Quarterly* (7:2), pp. 99-112.
- Manrodt, K.B., and Vitasek, K. 2004. "Global Process Standardization: A Case Study," *Journal of Business Logistics* (25:1), pp. 1-23.
- Mas-Colell, A., Whinston, M.D., and Green, J.R. 1995. *Microeconomic Theory* Oxford Oxford University Press.
- Münstermann, B., and Eckhardt, A. 2009. "What Drives Business Process Standardization? A Case Study Approach " in: *International Conference on Information Resources Management (CONF-IRM)*.
- Münstermann, B., Eckhardt, A., and Weitzel, T. 2010a. "The Performance Impact of Business Process Standardization: An Empirical Evaluation of the Recruitment Process," *Business Process Management Journal* (16:1), pp. 29-56.
- Münstermann, B., Möderer, P., and Weitzel, T. 2010b. "Setting up and Managing Business Process Standardization: Insights from a Case Study with a Multinational E-Commerce Firm " in: *43rd Hawaii International Conference on System Science* Manoa, Hawaii
- Münstermann, B., and Weitzel, T. 2008. "What Is Process Standardization?," in: *International Conference on Information Resources Management*. Niagara Falls, Canada.
- Nesheim, T. 2011. "Balancing Process Ownership and Line Management in a Matrix-Like Organization," *Knowledge and Process Management* (18:2), pp. 109-119.
- Pardo del Val, M., and Martínez Fuentes, C. 2003. "Resistance to Change: A Literature Review and Empirical Study," *Management Decision* (41:2), pp. 148-155.
- Piderit, S.K. 2000. "Rethinking Resistance and Recognizing Ambivalence: A Multidimensional View of Attitudes toward an Organizational Change," *Academy of Management Review* (25:4), pp. 783-794.
- Poppo, L., and Zenger, T. 2002. "Do Formal Contracts and Relational Governance Function as Substitutes or Complements?," *Strategic Management Journal* (23:8), pp. 707-725.
- Pritchard, J.P., and Armistead, C. 1999. "Business Process Management - Lessons from European Business " *Business Process Management Journal* (5:1), pp. 10-35.
- Ramakumar, A., and Cooper, B. 2004. "Process Standardization Proves Profitable," *Quality* (43:2), pp. 42-45.
- Reich, B.H., and Benbasat, I. 2000. "Factors That Influence the Social Dimension of Alignment between Business and Information Technology Objectives " *MIS Quarterly* (24:1), pp. 81-113.
- Rockart, J.F., Earl, M.J., and Ross, J.W. 1996. "Eight Imperatives for the New It Organization " *Sloan Management Review* Fall), pp. 43-55.
- Rohloff, M. 2011. "Advances in Business Process Management Implementation Based on a Maturity Assessment and Best Practice Exchange " *Inf Syst E-Bus Manage* (9), pp. 383-403.
- Sánchez-Rodríguez, C., Hemsworth, D., Martínez-Lorente, A.R., and Clavel, J.G. 2006. "An Empirical Study on the Impact of Standardization of Materials and Purchasing Procedures on Purchasing and Business Performance," *Supply Chain Management: An International Journal* (11:1), pp. 56-64.
- Shapiro, C., and Varian, H.R. 1998. *Information Rules: A Strategic Guide to the Network Economy* Boston Harvard Business School Press
- Shewhart, W.A. 1986. *Statistical Method from the Viewpoint of Quality Control* New York Dover Publication
- Skrinjar, R., Bosilj-Vuksic, V., and Indihar-Stemberger, M. 2008. "The Impact of Business Process Orientation on Financial and Non-Financial Performance " *Business Process Management Journal* (14:5), pp. 738-754.
- Swaminathan, J.M. 2001. "Enabling Customization Using Standardized Operations," *California Management Review* (43:3), pp. 125-135.
- Tallon, P.P., Kraemer, K.L., and Gurbaxani, V. 2000. "Executives' Perceptions of the Business Value of Information Technology: A Process-Oriented Approach " *Journal of Management Information Systems* (16:4), pp. 145-173.
- Tsikriktsis, N., and Heineke, J. 2004. "The Impact of Process Variation on Customer Dissatisfaction: Evidence from the U.S. Domestic Airline Industry," *Decision Sciences* (35:1), pp. 129-142.
- Ungan, M.C. 2006. "Standardization through Process Documentation," *Business Process Management Journal* (12:2), pp. 135-148.
- v. Westarp, F., Weitzel, T., Buxmann, P., and König, W. 2000. "The Standardization Problem in Networks - a General Framework " in *Standards and Standardization: A Global Perspective*, K. Jakobs (ed.). Idea Publishing Group.

- Venkatesh, V. 2006. "Where to Go from Here? Thoughts on Future Directions for Research on Individual-Level Technology Adoption with a Focus on Decision Making " *Decision Sciences* (37:22), pp. 497-518.
- Wagner, H.-T., and Weitzel, T. 2012. "How to Achieve Operational Business-It Alignment: Insights from a Global Aerospace Firm " *MIS Quarterly Executive* (11:1), pp. 25-36.
- Weitzel, T., Beimborn, D., and König, W. 2006. "A Unified Economic Model of Standard Diffusion: The Impact of Standardization Cost, Network Effects, and Network Topology " *MIS Quarterly* (30:Special Issue), pp. 489-514.
- Weitzel, T., Wendt, O., and v. Westarp, F. 2000. "Reconsidering Network Effect Theory " in: *European Conference of Information Systems* Vienna, Austria
- Weitzel, T., Wendt, O., v. Westarp, F., and König, W. 2003. "Network Effects and Diffusion Theory: Network Analysis in Economics," *International Journal of IT Standards and Standardization Research* (1:2), pp. 1-21.
- Weitzman, M.L. 1976. "The New Soviet Incentive Model," *The Bell Journal of Economics*), pp. 251–257.
- Wiese, H. 1990. *Netzeffekte Und Kompatibilität* Stuttgart Poeschel.
- Wüllenweber, K., Beimborn, D., Weitzel, T., and König, W. 2008. "The Impact of Process Standardization on Business Process Outsourcing Success," *Information Systems Frontiers* (10:2), pp. 211-224.
- Zairi, M. 1997. "Business Process Management: A Boundaryless Approach to Modern Competitiveness " *Business Process Management Journal* (3:1), pp. 64-80.