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Abstract

Business Process Management (BPM) is an influential concept in information systems (IS) research and management practice. While a great number of studies dealt with developing methods, procedures, or tools for BPM, especially process modeling, today the question of how to assess and – from that point on – to develop BPM capabilities in a real-life organization has become key to BPM practice and is becoming a central element in BPM research as well. A plethora of BPM maturity models have been designed for the purpose of guiding the development of BPM capabilities in organizations. In this study, we take a critical perspective on maturity models for BPM capability development and present a case study example where maturity model-based guidance is rendered to be inadequate if not further considering organizational position and environment. Our theory discussion introduces alternative takes on BPM capability development, lays out implications for BPM practice, and presents potentially fruitful paths for future research and theory in the area of BPM capability development.

Keywords: Business Process Management, maturity model, capability development.

1   Introduction

Business Process Management (BPM) as an integrated approach to manage and improve organizational processes is of growing importance in both practice and IS research. Recently, improving business processes was named the number one priority for CIOs worldwide (Gartner Inc., 2010). Similarly, McKinsey identified the improvement of efficiency and effectiveness of business processes as the two top IT priorities for 2009 (McKinsey, 2008). All of these goals can be achieved using BPM as it is a set of measures to improve business processes. Thus, BPM helps to gain and sustain competitive advantage (Broadbent, Weill, & St. Clair, 1999). BPM has its roots in Total Quality Management (TQM) and Business Process Reengineering (BPR). As such, it is an established approach combining both incremental and radical measures of process change.

The question of BPM capability development is becoming a central one in contemporary BPM research. In the past, scholars focused on the concept BPM and corresponding techniques, methods, and information systems, while today, the focus has shifted towards the development of BPM capabilities. The concept of BPM has been widely applied and a plethora of techniques and methods have been researched and developed. A multitude of information systems to support BPM exists on the market. Current research increasingly focuses on the advancement of BPM capabilities in organizations, often resulting in capability maturity models (Fisher, 2004; Hammer, 2007; Rosemann & vom Brocke, 2010; Rosemann & De Bruin, 2005; Rosemann, De Bruin, & Power, 2006).

BPM maturity models adopt a life cycle perspective on organizational change by depicting unified staged pattern of capability development (Becker, Niehaves, Pöppelbuß, & Simons, 2010; De Bruin, Rosemann, Freeze, & Kulkarni, 2005; Lee & Kim, 2001; McCormack et al., 2009; Van De Ven & Poole, 1995). They typically outline a single path organizations are recommended to pursue towards highly mature BPM. They refer to a company's BPM capabilities as a whole (Rosemann & De Bruin, 2005) and aim at providing a "holistic assessment of all areas relevant to BPM" (Rohloff, 2009, p. 133). Therefore, they usually cover multiple dimensions such as governance, methods and tools, IT, and culture (Rohloff, 2009; Rosemann & De Bruin, 2005). Looking at these models, having reached the highest maturity level suggests being most effective and most efficient at BPM. They agree that organizations typically start on low maturity stages with uncoordinated, ad hoc BPM efforts and then pursue their path to a highly mature, integrated, and collaborative BPM (Niehaves & Plattfaut, 2011; Rohloff, 2009; Rosemann & vom Brocke, 2010; Rosemann & De Bruin, 2005).

Besides life cycle theory, however, other theoretical perspectives on organizational development exist. In this paper, we challenge the interpretation often brought forward by maturity models that only highly mature BPM is effective and efficient. Moreover, we argue that organizations do not develop on a prescribed path but through constant (re-)alignment with their respective environment. This approach follows the Lamarckian view on evolutionary theory as described by Van de Ven and Poole (1995) meaning that BPM capabilities are developed if needed for competitive survival and that they are acquired through learning and imitation. In this paper, we therefore question the implications of existing developmental models for BPM capabilities and seek to identify their shortcomings.

The remainder of the paper is structured as follows. After this introduction we explicate our theoretical background starting with BPM and a set of developmental theories. In this section, explicit research questions will be formulated (section 2). Next, we present our research methodology (case study research; section 3). In section 4, we present the findings we gathered through an in-depth case study of an organization. Then, we discuss these findings with regards to implications for the case study partner in specific as well as theory and practice in general. We give limitations and outline promising paths for future research (section 5). The paper closes with a brief conclusion (section 6).

2 Theoretical Background

2.1 Business Process Management

The roots of Business Process Management (BPM) can be found in Business Process Reengineering (BPR) and Total Quality Management (TQM). The concept of BPR was developed within a Massachusetts Institute of Technology's management research program. Scholars examined the role that IT would play in organizations in the 1990s (Peppard & Fitzgerald, 1997) and emphasized that BPR projects are radical, revolutionary, and a one-time undertaking (Davenport & Short, 1990; Hammer, 1990; Hung, 2006; Zairi & Sinclair, 1995). Although TQM focuses on improving organizational processes, too, it is considered a rather incremental, evolutionary approach aiming at continuous improvement (Hung, 2006; Zairi & Sinclair, 1995). However, most contemporary literature in business process research recognizes that both concepts have to be viewed as complementary and integral parts of a process-oriented strategic management system (Davenport, 1993; Hung, 2006; Martinsons & Hempel, 1998; Zairi & Sinclair, 1995). For example, Kettinger et al. (1997, p. 56) argue on BPR that "[r]ather than a 'quick fix', BPR is increasingly recognized as a form of organizational change characterized by strategic transformation of interrelated organizational subsystems."

Against this background, BPM can be regarded as a management approach that applies measures of both punctuated and incremental change. Here, we follow the perspective of other scholars, e.g., Armistead and Machin (1997, p. 887) who argue that BPM is "concerned with how to manage processes on an ongoing basis, and not just with the one-off radical changes associated with BPR." Accordingly, BPM is a holistic approach for the management of organizations and their processes (Armistead & Machin, 1998; Rosemann, De Bruin, & Power, 2006). BPM can be seen as a set of recurring projects that aim at the continuous change of organizational procedures (for aspects particularly dedicated to change see, for instance, Kettinger, Teng, & Guha, 1997; Sarker, Sarker, & Sidorova, 2006). The focus of BPM projects can range from purely organizational to more technical perspectives (Rosemann, De Bruin, & Power, 2006); the latter is especially taken in the course of information systems implementations (for an overview on the relationship between information systems and the innovation of business processes see Tarafdar & Gordon, 2007).

Today, developmental models for BPM capabilities are becoming a key theme in research and practice. BPM can no longer be considered a new methodology. It builds upon at least 20 years of scientific research (e.g., Davenport & Short, 1990; Hammer, 1990) and a plethora of methods have been developed for BPM. Although no consensus on the notion of BPM could be achieved so far, our community appears to have a fair understanding of the concept BPM and the respective techniques, methods, and information systems. One major question today is how organizations can and should advance their BPM capabilities (Fisher, 2004; Hammer, 2007; Rosemann & De Bruin, 2005; Rosemann, De Bruin, & Power, 2006).

2.2 Developmental Theories for BPM

2.2.1 Theory perspectives on development

In a literature review, van de Ven and Poole (1995) identified about 20 different developmental theories that explain change in organizations. They grouped these theories into four distinct classes of underlying 'ideal-types', which are life cycle, evolution, dialectic, and teleology theories. We select the life cycle and the evolutionary perspective for our further analysis. Van de Ven and Poole (1995) argue that the interplay of different theoretical perspectives can help researchers to get a comprehensive understanding of organizational progression. They call for a juxtaposition of different

theoretical perspectives since contrasting their constituent elements can help to develop new theories having higher explanatory power. However, they also underline the difficulties of simply integrating alternative theories (Van De Ven & Poole, 1995).

We selected the life cycle perspective due to its obvious similarity with the outline and popular ways of describing maturity stages. We decided to juxtapose it with the evolutionary perspective since we assume that the latter fits to organizations that vary their BPM traits in order to achieve a fit with their environment and thus ensure competitive survival and not to simply follow an inherent logic.

Life cycle theories follow the key metaphor of organic growth and are widely used for explaining the development of an organizational entity from its initiation to termination. Life cycle theories have the logic that change is immanent to the entity, i.e., each entity has a preconfigured developmental logic it follows. This developmental logic is mostly a unitary, cumulative, and conjunctive sequence. Unitary means that there is a single sequence of stages or phases. Cumulative means that each stage includes all characteristics of the prior one; and conjunctive refers to the stages being derived from a common underlying process. Hence, the entities develop linearly and irreversible through an ordered sequence of steps.

Evolutionary theories subsume different (and sometimes contradictory) theories originally used by natural scientists to explain the evolution of species. Some even specify evolution similar to the life cycle perspective we have just introduced. Teo and King (1997), for instance, claim that "the evolutionary perspective emphasizes the presence of predictable patterns" (p. 188). The key of all interpretations of evolutionary theory is that entities need to survive in a competitive environment. Hence, entities compete with similar entities for resources. From the evolutionary perspective, development can be described by a sequence of variation, selection, and retention. Theories building on Darwin stress that evolution occurs thorough a survival of the fittest meaning that only those entities best fitting to their environment survive (Van De Ven & Poole, 1995). Thus, change happens only between generations. This view is at least challenging when analyzing organizational change (Van De Ven & Poole, 1995). Other evolutionary theories, especially when building on Lamarck, argue that entities acquire traits within a generation through learning or imitation (Van De Ven & Poole, 1995). Independent of these diverse interpretations, we conclude that according to evolutionary theories entities strive to achieve a fit with their environment.

	Life Cycle	Evolution
Key Metaphor	Organic growth	Competitive survival
Logic	Immanent program, prefigured sequence, compliant adaptation	Natural selection among competitors in a population
Event Progression	Linear and irreversible sequence of prescribed stages in unfolding of immanent potentials present at the beginning	Recurrent, cumulative and probabilistic sequence of variation, selection, and retention events
Generating Force	Preconfigured program or rule regulated by nature, logic, or institutions	Population scarcity, competition, commensalism

Table 1.   Selection of Ideal-Type Theories explaining Change (van De Ven & Poole, 1995)

2.2.2   Models of BPM Development

Developmental models for BPM exist mainly under the term BPM maturity models (Fisher, 2004; Hammer, 2007; Rosemann, De Bruin, & Power, 2006; see Rosemann & vom Brocke, 2010 for a comprehensive review of maturity models in BPM). The concept of maturity implicitly relies on life cycle theories (Lee & Kim, 2001). BPM maturity models outline stages (typically four or five) through which an organization develops towards the most beneficial form of BPM. Although it is generally admitted that the upper most stage must not necessarily represent the actual desired to-be situation for all organizations, it is expected that low maturity in certain BPM capability areas are a motivation to identify and implement better routines. Usually, the retrogression towards lower maturity stages is not

intended. Moreover, organizations are expected not to overleap stages as each stage builds on the achievements of the other. Maturity models claim to serve multiple functions: First, they help to describe the status quo. Second, they serve as a prescriptive tool as they allow for deriving improvement measures. Third, they can be used for comparison and benchmarking against industry standards or other organizations (De Bruin, Rosemann, Freeze, & Kulkarni, 2005).

Although widely adopted in practice and academia, maturity models are subject to frequent criticism. They have been characterized as "step-by-step recipes" that oversimplify reality and lack empirical foundation (Benbasat, Dexter, Drury, & Goldstein, 1984; De Bruin, Rosemann, Freeze, & Kulkarni, 2005; J. L. King & Kraemer, 1984; McCormack et al., 2009; Rosemann & vom Brocke, 2010). In particular, problems are considered to be the neglect of multiple equally advantageous paths (Kazanjian & Drazin, 1989), organization-specific internal characteristics (e.g., the technology at hand and intellectual property), and diverging environmental characteristics (e.g., the market situation; Teece, Pisano, & Shuen, 1997; Teo & King, 1997). These issues may constrain a maturity model's applicability in its standardized version (Iversen, Nielsen, & Norbjerg, 1999). King and Kraemer (1984) recommend that maturity models should not focus on a sequence of levels toward a predefined 'end state', but on factors driving evolution and change. Further criticism refers to the multitude of almost identical maturity models, the dissatisfactory traceability of their design, and a non-reflective adaptation of existing models to new application domains (Becker, Knackstedt, & Pöppelbuß, 2009; Becker, Niehaves, Pöppelbuß, & Simons, 2010; Iversen, Nielsen, & Norbjerg, 1999).

Theories for development apart from maturity models are, to the best of our knowledge, not used in contemporary BPM research so far. However, they seem possible as well. In this paper we evaluate the perspective of evolutionary theory to both describe and prescribe the development of BPM capabilities in organizations. This perspective on BPM capability development requires the inclusion of organizational and environmental aspects. Together, these aspects form the contingency variables that influence BPM capability development (Teo & King, 1997).

Against this backdrop, we set out to answer the following research questions:

1. *What prescriptions for development can an evolutionary developmental model give for a specific case study organization? And how do they differ to life cycle model-based recommendations?*

2. *What implications for BPM capability development and use of developmental models for BPM can be derived from application in the case study organization?*

3   Research Methodology

Following the above stated research objectives, we chose to conduct an in-depth case study and tie in with the rich tradition of qualitative IS research (e.g., Kern & Willcocks, 2002; Mingers, 2003; Remenyi & Williams, 1996). We summarize the case study setting and discuss the process of data collection and analysis.

Case Setting. The organization studied, named SAVINGCO for anonymity, is a German savings and loan association/building society with over 2 million customers and 1,000 employees in Germany. SavingCo works in a network with other building societies using the same brand. The members of this network only operate in their respective regions. SAVINGCO sells its services mainly through collaboration with other partners as local banks and independent contractors. The market position is rather steady and secure. Due to existing contracts network partners will not enter other markets and the competition from other organizations is considered as being rather low. The main product of SavingCo did not change much in the past 50 years.

Data Collection. The period of intensive data collection took place in 2008 and 2009. Our team of four researchers (with the help of student assistants) collected data from multiple sources to be able to exploit the synergetic effects of combining them via triangulation (Capaldo, 2007; Yin, 2003). Three

distinct sources of evidence are included in our analysis: focused individual interviews (primary method), direct observations, and documentary information.

- *Focused individual interviews:* The primary sources of evidence are interviews with the key actors in SAVINGCO's BPM efforts. Interview partners included head of organization department, head of a functional department, head of internal auditing, head of revision, and head of IT. The head of the organization department is the person formally responsible for BPM efforts at SAVINGCO. He was first contacted by the authors and connected us with other actors. Regarding the interviewee selection, we thus followed a purpose-driven snowball sampling approach (Salganik & Heckathorn, 2004). As a result, the interviews led to a total of 320 minutes of recording time, and more than 70,000 words of transcript. An interview lasted more than 1 hour in average. Each interview was guided by an interview guideline specifically adapted to the corresponding interviewee. The guideline included a set of open questions to uncover with new variables relevant to BPM development from an evolutionary theory perspective.

- *Documentary information:* Supplementary source of evidence included, for instance, information material produced by or about the organization such as process documentations, organizational charts, press articles, internet sources, or other reports. In addition, the CIO provided us with the slides of a dedicated presentation that discussed in-depth the status quo of BPM at SAVINGCO.

- *Direct observations:* We were able to directly observe the settings and relevant events throughout multiple site visits and informal (not transcribed) meetings. This included, for instance, observing the working procedures and analyses of BPM tools applied. These direct observations yielded additional understanding of the case study setting.

Data Analysis. First, all interview data was reviewed in the light of both available documentary information and direct case observations. Afterwards, two authors carefully coded the data. We applied the six core elements of BPM according to Rosemann and vom Brocke (2010) as our basic framework for coding. We consider this framework as sufficiently empirically substantiated because "it is based on a sound academic development process" (Rosemann & vom Brocke, 2010, p. 111) including a comprehensive literature review, a series of Delphi studies, and applications in variuos cases. These core elements comprise strategic alignment, governance, methods, information technology, people, and culture; and they equal the factors of the BPM maturity model as outlined by Rosemann et al. (2006). In addition, data gathered on the organizational environment was analyzed. In case of unresolved differences in the course of coding, the other authors were consulted. Since the detailed assessment kit for the BPM maturity model was not publicly accessible at the time of data analysis, we relied on available publications (De Bruin, Rosemann, Freeze, & Kulkarni, 2005; Rosemann & De Bruin, 2005; Rosemann, De Bruin, & Power, 2006) to justify our estimations of SAVINGCO's maturity and recommendations for improvement. We also considered further BPM maturity models (Hammer, 2007; Rohloff, 2009) for deriving implications.

4 Findings

4.1 BPM Capability Assessment: SavingCo

4.1.1 Strategic Alignment

Strategic alignment describes the tight linkage of business processes to organizational priorities. This linkage enables the translation of business process change action into business performance improvements. Unaligned changes of business processes could hamper the development of the organization (Rosemann, De Bruin, & Power, 2006).

SAVINGCO's business processes are aligned to the organizational priorities. SAVINGCO employs an organization-wide BPM strategy. Multiple interviewees agreed that this strategy is constantly

evaluated with regards to the business strategy. Moreover, the organization monitors the processes with regards to their goal-orientation. Their process architecture is standardized and used organization-wide. Moreover, output measurement figures are included in the process architecture. When aligning their strategy, SAVINGCO closely collaborates with partner organizations. However, some interviewees criticize the current state of collaboration with clients and see un-used potential here. All in all, SAVINGCO has a good BPM strategy in place which is aligned with the overall business strategy.

4.1.2   Governance

The factor BPM *governance* covers the establishment of accountability and decision making standards. BPM governance is very close connected to corporate and IT governance and focuses on methods, roles and responsibilities for decision making processes (Rosemann, De Bruin, & Power, 2006).

The BPM governance structure of SAVINGCO is on a high maturity level. Next to yearly external audits of processes and BPM the internal auditing department established BPM and process control together with the corresponding functional units. The head of internal auditing stated "We constantly try to improve our process monitoring. We ask department heads how we could help them and they often have good ideas." Moreover, SAVINGCO collaborates with supply chain partners (here: sales organizations) with regards to inter-organizational BPM controlling. Moreover, processes are benchmarked using data from partner organizations. Hence, SAVINGCO has a well-thought BPM governance in place.

4.1.3   Methods

BPM *methods* cover the techniques and approaches needed to support and enable process-related actions in each stage of the process life cycle. Various authors suggest a plethora of life cycles (van der Aalst, ter Hofstede, & Weske, 2003; zur Muehlen, 2004; Neumann, Probst, & Wernsmann, 2003; Scheer, Adam, & Erbach, 2005; Van Der Aalst, Netjes, & Reijers, 2007). However, BPM methods are needed for each major stage independent of the specific life cycle chosen (Rosemann, De Bruin, & Power, 2006).

SAVINGCO has organization-wide standardized methods; however, these methods are of varying quality. For process modeling no specific notation is used, they rather rely on textual descriptions. However, interviewees agree that they are aware of process modeling languages. They use textual modeling as they consider it to be the easiest to understand. With this method, most processes are documented. However, a high-level graphical depiction of different functions and processes is used for job descriptions. The process models are accessible by all employees via the intranet. Moreover, the process models include quantitative and qualitative figures for process control. For the introduction of new processes change management methods are in place. A project management method has been recently introduced. Some employees criticize this method as being too formal. Concluding, SAVINGCO has organization-wide methods that are not always state of the art.

4.1.4   Information Technology

The factor *information technology* (IT) does not only cover both software and hardware but also the corresponding information management systems that enable or support business processes. IT support is needed in process design as well as in process execution (Rosemann, De Bruin, & Power, 2006).

The BPM related IT landscape at SAVINGCO suits the employed BPM methods. As such, SAVINGCO does not have a specific tool for process management but uses standard office software. The same holds true for project management. Here, managers rely on spreadsheets and text documents. However, a workflow management system is in place. A head of a functional department stated that "We do not have a single process without IT support." However, some systems are quite old and have

to be renewed in the future. According to the IT department, this is not of top urgency as most IT interfaces are standardized. All in all, the current BPM-related IT landscape is on a moderate level.

4.1.5 People

The factor *people* embraces all human resource related capability areas. The organization needs to develop the capabilities to develop the workforce to be BPM-ready. Moreover, the capabilities of certain individuals and groups to improve business processes are covered as well (Rosemann, De Bruin, & Power, 2006).

The people capabilities at SAVINGCO is developed to an intermediary level. In general, the employees have the skills necessary for BPM. From a formal perspective, persons responsible for both BPM and for each process are designated. The only critical point that came up in the case study is BPM training. Here, some managers agree that the general education and training programs could be improved. Summarizing, this factor is on a medium level of maturity.

4.1.6 Culture

Culture refers to the rather soft factors of behaviors and attitudes towards business process change and improvement. The culture of an organization needs to foster the development of both business processes and business process management (Rosemann, De Bruin, & Power, 2006).

At SAVINGCO, employees are considered to be change-reluctant to a certain extent. However, managers agree that this is "just normal." Here, the good change management methods of SAVINGCO help to overcome inertia. Moreover, top management actively supports BPM and the corresponding organization department. Employees are able to suggest process changes and monetary incentives have been set for good ideas. Last, taking a social network perspective, the corresponding persons at SAVINGCO are interconnected. This BPM network also includes persons from partner organizations. Concluding, the culture of SAVINGCO with regards to BPM is on a good level.

4.2 Environmental Variables

The market environment of SAVINGCO is very stable. Due to the positioning of the organization in a collaborative network competition is quite low. New competitors are not anticipated as entry barriers exist to a substantial degree. Market shares did not change much in the last years. Moreover, the strong existing customer base is content with the current product. Product or service innovations are not needed. Hence, the need for process innovation resulting from market dynamics is rather low.

The organization, its assets and traits, do not require process changes on a regular basis. As there are very few product innovations, the internal services are quite stable, too. Moreover, the top management of SAVINGCO is aware of an aging workforce. Although this workforce is not fully change-reluctant, they are said to be slower with regards to learning. Hence, in the organizational situation of SAVINGCO the introduction of new processes would come hand in hand with high training efforts. The self-perception of managers at SAVINGCO is that all necessary BPM capabilities exist.

5 Discussion

5.1 Implications

Implications for SAVINGCO. For many of the six factors, the BPM capabilities at SAVINGCO would not represent the upper most possible maturity level, neither as depicted by the BPM maturity model (Rosemann et al. 2006) nor by considering various other maturity models (Hammer, 2007; Rohloff,

2009). However, SAVINGCO has reached a sophisticated level in some capability areas. The organization has a BPM strategy in place which is aligned with the business strategy. Governance methods are implemented and work well. Key performance indicators are used to measure process performance. SAVINGCO employs a standardized set of BPM methods and uses suitable IT to support them. The employees and managers are familiar with common BPM approaches and the culture is at least not opposing process change. Working together on process improvements with partners of the SAVINGCO business network is commonplace.

Nevertheless, certain BPM capabilities suggested by BPM maturity models are either missing or on a low level. At SAVINGCO, Process management and redesign are not considered core competencies (Hammer, 2007). There is no BPM center of excellence installed at SAVINGCO (Rosemann, De Bruin, & Power, 2006). According to the BPM maturity model such a center would maintain standards and strive for an inclusion of BPM into each manager's daily activities (Rosemann, De Bruin, & Power, 2006). Moreover, although existing BPM measures are good, they cannot be called an "organi[z]ation-wide approach to business process management that incorporates customers, suppliers, distributors and other stakeholders" (Rosemann, De Bruin, & Power, 2006, p. 4). Furthermore, looking at the capability area "process design and modeling" (Rosemann & vom Brocke, 2010, p. 116 f.), neither process modeling techniques nor process modeling software tools are applied to analyze as-is and conceptualize to-be processes (Rohloff, 2009). From the IT perspective, the organization so far lacks, for instance, solutions to derive process models from log files (Rosemann & vom Brocke, 2010). The IT tools used also do not support process simulation. Hence, the current BPM capabilities at SAVINGCO are on a rather low level for certain factors (Rosemann, De Bruin, & Power, 2006).

All in all, BPM maturity models following a life cycle theory would assess SAVINGCO as being of medium maturity. As several capabilities are either missing or on a low level, maturity models would recommend to consider a development towards the next higher maturity levels, and finally to the upper most levels. This would include the implementation of so far missing or under-developed capabilities.

BPM development models following our interpretation of an evolutionary theory perspective would acknowledge an environment-BPM-fit and argue only for slight advancements (ad Research Question 1). Apparently, the market environment of SAVINGCO does not demand quick reactions to market changes. Hence, more resources dedicated to BPM would only create new costs without delivering reasonable benefits. However, a slight progression could indeed result in a better environment-BPM-fit. Here, e.g., SAVINGCO could contemplate to introduce tool support for graphical process modeling.

Implications for Theory. In general, considering costs, the optimal "maturity level" for an organization highly depends on its environment. The achievement of highly mature BPM requires enormous resources specifically dedicated to process change. These resources cause costs for both initial set-up and maintenance. However, when the market environment is not dynamic and, thus, does not demand quick responses to environmental changes, these costs might not pay off.

To conclude, developmental models for BPM should not adopt a pure life cycle theory (ad Research Question 2). As the key metaphor of life cycle theories is that of organic growth implying that change is immanent and targeted towards the highest level of maturity, such models seem to be unsuitable for both description and prescription (the actual primary purposes of those models; De Bruin et al. 2005) of organizational BPM development. Other theoretical foundations (evolutionary theory as discussed here or contingency theory as mentioned by Teo & King, 1997; Trkman, 2010) seem to be more appropriate and give better advice.

Implications for Practice. Organizations in low dynamic environments should only aim at an intermediary maturity level when using a classical maturity model. Our discussion showed that BPM capabilities on a high maturity level are unsuitable for low dynamic environments. Here, the creation and maintenance comes with costs that cannot be paid off. Thus, when applying a developmental model for BPM or even buying the consulting service of BPM capability assessment, organizations should analyze the underlying imperatives of the developmental model. Implicitly, life cycle theory

provides organizations with the imperative of developing on one single path towards one ideal-type target. However, this perception may not hold true for all application settings. Therefore, organizations should not interpret maturity models as a race for the highest maturity level possible but as a possible guideline for selecting an appropriate one. Also, they can target unequal maturity levels in different capability areas as these may be of varying relevance.

All in all, this paper can help organizations in a closer analysis of the used methodology and, thus, in deriving better action plans for capability improvement. In the specific organization we studied the existing capabilities are sufficient, although they are only on a medium level.

5.2   Limitations and Future Research

Our research is limited by two main aspects. First, as we employed a qualitative research methodology, some results are a matter of interpretation and reading of case narratives. Here, other scholars will probably derive slightly different findings. However, although some aspects were matter of discussion, all four authors agreed on the presented interpretation. Hence, we argue that our case reading is empirically sound and valid. Second, the generalizability of our study can be questioned as we only studied one organization. Here, we have to admit that more studies will help arguing for our implications as they allow for cross-case analysis. However, we believe that our suggestion of including other theoretical perspectives (as evolutionary theory) to maturity model research is valid independent of the specific case study.

Three main areas of future research seem to be promising. First, future studies can focus on fostering the presented theoretical perspective. Especially cases with a different environment-BPM-relationship can be insightful. In our case study, an organization with an apparent environment-BPM-fit was presented. However, other cases are possible as well: Organizations may exhibit too many, too sophisticated, too few, or underdeveloped BPM capabilities resulting in a misfit with their environment. Second, other theoretical foundations could be discussed for describing BPM development, e.g., the theory perspectives (comprising contingency theory, dynamic capabilities, and task-technology-fit) discussed by Trkman (Trkman, 2010). Arguments that BPM develops through opposing forces of thesis and anti-thesis (dialectics) or that BPM improvement is guided by goals that are set and reset (teleology) may also be valid (Van De Ven & Poole, 1995). Third, the presented results form a first basis of a potential process theory of BPM capability improvement based on evolutionary theory. To us, further explication of this theoretical perspective on BPM capability progression seems promising.

6   Conclusion

In this paper, we introduced into BPM and showed that contemporary research presents an increasing number of developmental models for BPM. Referring to an existing review on developmental theories we presented four distinct types of theories. We argued that existing developmental models (maturity models) implicitly rely on life cycle theories. Applying case study research we compared the results life cycle-based models and evolutionary theory would give for the specific organization under analysis. Life cycle theory would suggest the development to the highest possible maturity stage while evolutionary theory would argue for only purposeful adaptations as a general environment-BPM-fit exists.

To conclude, maturity models following life cycle theory can give wrong advice. They can be useful as an instrument (e.g., for consultancies) that depict how sophisticated organizational capabilities can become. However, from a theoretical perspective, they may even harm the organization. Hence, the usage of other developmental theories for BPM should be discussed and brought forward. This paper provides a starting point for this discussion and future research.

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