Success Factors in Process Performance Management for Services – Insights from a Multiple-Case Study

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Abstract

Process Performance Management (PPM) comprises the planning, monitoring, and control of process performance. Even though numerous methods and concepts for managing process performance do exist, many service companies develop their own PPM approaches and systems to monitor and control their service processes. However, they are often unaware of the factors which really are important when applying PPM. Therefore this paper aims to identify which factors are critical for the successful application of PPM for services. The findings of a multiple-case study research provide a first understanding of the causal relationships and, as a result, 'process knowledge/models' and 'information quality' appear to be important success factors of PPM for services.

1. Introduction

Service companies are confronted with the need to increase the efficiency and effectiveness of their business processes when competing with other companies. Simultaneously, an efficient and effective management of business processes and their performance is needed. In Process Performance Management (PPM), with its two major phases measurement and improvement of business process performance [1], numerous methods and concepts were developed by researchers as well as by practitioners (e.g. [2-4]). These methods and concepts help to manage processes by deriving process performance indicators, measures, and figures from the company's vision, its strategy, and process objectives [5]. Besides the relevance to measure the current performance of business processes, PPM additionally supports to rate the possible process performance in the near future by using techniques like process mining, simulation [1], and mathematical forecasting.

Especially in the service business, the need to increase efficiency and effectiveness of the business processes is of utmost importance. Since the quality of the outcome of a service depends on customer requirements which are difficult to affect [6], and since the outcome, especially in the service business, is at least mostly immaterial [7] (as well as difficult to quantify [8]), processes are in the focus of Performance Management even more. In consequence, the necessity to apply PPM for services is obvious. Therefore the following research question is addressed: What are possible success factors which contribute to the success of PPM for services?

The paper follows the multi-method approach of Gable [9], which comprises both the discussion of the state of the literature by means of a literature review as well as the analysis of data collected by means of a multiple-case study. After this short introduction, basic concepts and related work will be presented. Section 3 deals with the findings of a literature review, especially with the collection of success factor categories. In section 4, a multiple-case study which describes insights gained from four cases will be presented – followed by a short interpretation. The paper ends with a conclusion and an outlook on future research.

2. Basic concepts and related work

2.1. Process Performance Management

The performance measurement of business processes contributes significantly to the sustainability of process improvement and process management within an organization [10]. PPM can be defined as the use of performance measurement information to affect positive change in processes (see [2-4]). PPM provides the prompt and continuous monitoring of past process performance, allows to estimate future process performance, and supports the identification of optimization potentials in business processes [11]. This on-going management of business processes within the organization includes amongst others the following tasks [10]: (1) establish (negotiate) process performance targets; (2) ensure consistency with the organizational strategy and objectives; (3) report and
analyze the actual performance levels as compared to the established and agreed targets; (4) progressively move from a reactive to a proactive and, finally, to a predictive state. To determine the performance of business processes, not only different performance indicators, measures and figures are used, but even process performance measurement systems [5]. These information systems support PPM on a technical level by automatically calculating process measures and figures. Further, they allow inter-organizational PPM [4], if the process extends over different organizations.

### 2.2. Characteristics of services

The prevalence of service business has grown together with an increasing awareness of the importance of services in general [12]. But services are not only offered exclusively, more often combinations of products and services (integrated solutions) are demanded and boundaries between products and services become blurred. In particular, the so-called ‘services-dominant logic’ of Vargo and Lusch [13, 14] has claimed that a new paradigm now exists – whereby all business is really service business. According to this view, customers are collaborative partners in the co-creation of value. The conventional paradigm of ‘goods-dominant logic’ perceived customers as a target group for which tangible products are manufactured and to which they are distributed. In contrast, the new ‘services-dominant logic’ perceives the customer as a co-producer of a customized solution. In this solution, services predominate over goods, because the goods are posited merely as distribution mechanisms for the service provision, which realizes the real value of the interaction [13, 15, 16].

In fact, the new ‘services-dominant logic’ has defined the main characteristics of services which should be considered by the PPM. This means that the new ‘service-dominant logic’ does present some particular challenges for the application of PPM:

- Firstly, because the customer is seen as a co-producer [15], which means he takes part in the production of the customized solution. In consequence, the customer’s input can affect the performance of the solution in every activity in which the customer participates in the collaboration. The extent to which the performance of the solution can be affected by the customer must be considered by the definition of performance indicators and measures. The aim is to clarify the relation between customer activities (as a cause) and a changing performance (as a result).
- Secondly, since services are often generated by networks of organizations [15], the application of PPM should be extended across the whole process, irrespective of organizational boundaries. The aim is basically the same as for the first challenge: in order to control the performance it is necessary to monitor the complete creation process (end-to-end) and to identify the organization which is responsible for performance changes which e.g. could be caused by time delays.
- Thirdly, as the new ‘services-dominant logic’ places particular emphasis on knowledge and skills as being fundamentally important resources and sources of competitive advantage [16], the application of PPM requires specific performance indicators and measures to control the knowledge-based services in order to control their contribution to the performance.

### 2.3. Related work

A major topic of research is the impact of information systems (IS) on business process effectiveness and organizational performance [17-19]. The theoretical foundation of this research is the resource-based view which argues that companies possess resources, either enabling them to gain competitive advantages or leading them to superior long-term performance [20]. While the contribution of IS to enterprises has been debated from several viewpoints in literature (e.g. [21, 22]), only very little discussion has been dedicated to the contribution of Performance Management Systems, not to mention PPM. Examples for these contributions are:

- Gleich [23] investigated the influence of performance management on the overall performance of a company and conclude that the process level – still neglected – must be considered.
- Janz [24] analyzed the relation between marketing communication and performance and identified several success factors. For example, information quality positively influences the use of information and therefore the efficiency and effectiveness of marketing performance management.
- Schreyer [25] focused on the development and implementation of performance measurement systems and identified incentive systems as an implementation-supportive instruments.
- Krause [26] found out that performance management systems have to be strongly related concerning the planning, generation, and improvement of performance. His work emphasizes the importance of the management view of process performance in contrast to the narrower measurement-only-view.

Several research studies focus on user acceptance, which is seen as the main factor for applying
Information Technology (see [27-29]). To have an impact on a company’s performance it is an essential precondition for PPM to be supported by a PPM System (PPMS) (see [27-29]). Although none of the identified studies place an emphasis on PPMS, their results suggest that user acceptance could be a prerequisite for PPMS, too.

A third research area focuses on the characteristics of PPM. Ariyachandra and Frolick discussed critical success factors in business performance management as a way of attaining strategic alignment [30]. Bucher and Winter identified factors defining Business Process Management (BPM) that are mainly related to PPM. Their exploratory analysis shows that, in addition to the extent to which performance measurement is conducted, the use of established methods and standards is considered crucial for successful PPM users [31]. Cleven et al. analyzed stereotype problem situations of PPM and highlight optimization potentials. For example, key performance indicator (KPI) enthusiasts define and implement many performance indicators, but only monitor and control a small number of processes using these KPIs [3].

In summary, three different research areas were found which provide a basis for success factors and the definition of a successful PPM application. However, empirical research and reviews of literature aiming to identify PPM success factors can hardly be found.

2.4. Research design

Based on the multi-method research design according to Gable [9] the first part of the paper provides first insights and success factor categories regarding the successful application of PPM. Therefore a representative literature review (see [32-34]) was conducted. The second and main part focuses on the case study approach. To prevent uniqueness and artificial conditions surrounding the case, not only a single pilot case study, but also a multiple-case study was conducted (see [35]). In addition, different types of service organizations were selected.

3. PPM success and success factor categories – derived from literature

3.1. Definition of PPM success

Before we can identify critical PPM success factors (independent variables), we have to concentrate on the dependent variables first and analyze how PPM success can be determined through concrete indicators. To make the success of methods, IS, or the acceptance of technologies measurable, several success and acceptance models were developed over the last few decades (see [36]). As Urbach et al. [36] identified, the DeLone & McLean IS success model [21, 22] is still the dominant basis of IS success measurement [36]. Several empirical studies confirmed the significance of this success model [37] which – in the updated version – comprises the dependent success variables ‘(intention to) use’, ‘user satisfaction’, and ‘net benefits’ [22]. Another well-known and intensively used model is the technology acceptance model (TAM) of Davis (see [28]), which similarly includes ‘actual system use’ as dependent success variable. Not less worth mentioning is the re-specified version of the IS success model by Seddon [38], who integrates both approaches, adds ‘expectations about net benefits’, and emphasizes the different levels of IS success measurement – individual, organization and society. In business management and management accounting, ‘performance’ or ‘success’ are often connected with ‘efficiency’ and ‘effectiveness’ (see [39]). The benefit from the use of information is maintenance or change of mental models, which leads to both higher efficiency and higher effectiveness, and, because of that, to a higher organizational and financial performance of the company [40, 41].

In summary, the research will use the following understanding of PPM success: PPM success represents the successful application of PPM in practice. Candidate measures for PPM success are ‘(intention to) use’, ‘user satisfaction’, and ‘customer satisfaction’ on the individual level, ‘efficiency and effectiveness of processes’ on the process level, and ‘profitability of organization’ – the final goal of every BPM activity – to meet financial net benefits on the organizational level. Using this understanding, the first research question is theoretically answered by consolidating the relevant literature.

3.2. Literature review on success factor categories

With the aim to obtain reliable results from the case study, we first identified potentially important variables through a literature review [9]. While the extent of the literature review can be characterized as representative (see [32-34]), the concept-centric approach according to [42] – based on the method ‘review’ [43] – is followed to synthesize the literature.

The review comprises books, theses, proceedings of conferences as well as journal papers. Relevant literature sources were selected from the following data bases: ACM Digital Library, EBSCOhost, Emerald, SAGE journals online, ScienceDirect, and
Combinations of the terms ‘process’, ‘performance’, ‘management’, ‘measurement’, ‘success’, and ‘factors’ as well as of their German counterparts were used as search keys – completed by forward and backward search. The selection of relevant resources followed three criteria: appropriate unit of analysis (application of PPM), inclusion of critical success factors or categories as well as preferably empirical validation of results. According to these criteria, 12 contributions were identified to be representative and appropriate for further evaluation.

To derive the frequencies of the mentions, the statements were consolidated. Because of different wordings (homonyms, synonyms), a systematic procedure based on the qualitative content analysis according to Mayring [44] was conducted. The aim of this analysis was to condense the available data to be able to focus the essential contents. Mayring proposes a procedure (inductive category development) to guide the development of categories to which the identified success factors could be allocated. In doing so, 11 categories of success factors (see Table 1) were established. We paid attention, as much as possible, that the identified categories do not overlap.

### Table 1. Candidate success factors

<table>
<thead>
<tr>
<th>Success factor category</th>
<th>Representative literature sources</th>
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<tbody>
<tr>
<td>Process knowledge/models</td>
<td>[3], [26]</td>
</tr>
<tr>
<td>Connection to the corporate strategy</td>
<td>[3], [23], [25], [26]</td>
</tr>
<tr>
<td>Expertise/competence</td>
<td>[25], [45], [46]</td>
</tr>
<tr>
<td>Ease of use</td>
<td>[28]</td>
</tr>
<tr>
<td>Usefulness</td>
<td>[28]</td>
</tr>
<tr>
<td>Information quality</td>
<td>[3], [22], [23], [24], [25], [26], [31], [47], [48]</td>
</tr>
<tr>
<td>System quality</td>
<td>[3], [22], [26], [45], [46], [48]</td>
</tr>
<tr>
<td>Service quality</td>
<td>[22], [48]</td>
</tr>
<tr>
<td>Process quality</td>
<td>[23], [26], [31], [45], [48]</td>
</tr>
<tr>
<td>Management support</td>
<td>[23], [31], [45], [48]</td>
</tr>
<tr>
<td>Incentive system</td>
<td>[23], [25]</td>
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</tbody>
</table>

Categories which do not fit into the context of PPM, e.g. regarding unique project performance (‘project implementation’ [49], ‘project management’ [45]), ‘collaboration quality’ [48]), were not further used. Simultaneously, context variables were not considered, since this paper focuses on the identification of PPM success factors and not on the nature of the relationships between these factors and PPM success.

### 4. Case study in the service business

The case study is based on the approach of Yin [35] and includes the following steps: (1) development of case study research design, (2) preparing for data collection, (3) data collection, (4) analysis of data, and (5) writing the case study report. As the underlying overall research is exploratory – theory-building of success factors in PPM –, the nature of the case study is exploratory, too. Therefore this research has been guided by the exploratory-related methodological advices given in [50].

#### 4.1. Case study research design

Relating to the research questions, the unit of analysis is clearly defined as ‘application of PPM’. Based on the literature review, candidate success factors were identified which represent the a priori specification of constructs in accordance with the representative literature. To gain comprehensive insight into real-life PPM success factors, PPM projects of service companies were defined as contexts of analysis. Therefore the authors concentrated on type four of the case study research design – multiple-case (embedded) – which even demands for several units of analysis within the same contexts of research [35]. As context of research three service companies and, for reasons of comparison, one company from the energy industry were selected. The three service companies were chosen to reflect three different types of service organizations: Shared Service Provider (SSP), network department (service organization) offering internal services, and classical service company. From these different kinds of organization types, we could obtain comparable data which focus on the provision of services.

The description of the following case study contains information about the context (company and project). According to the recommendations identified by Dubé and Paré, the case study research was team-based (author 1 and author 2) to capture greater richness [50], and to maximize the confidence in the findings [51]. Therefore different roles were taken on (investigator triangulation): project-involved researcher, independent researcher, interviewer, and interview assistant.

#### 4.2. Introduction to the cases

The data collection took place in four different organizations. For reasons of confidentiality the real names of the organizations are not used.
Case I: Service company A. The first case describes a PPM project at a German service company which provides business support activities for other companies. As a so-called SSP, company A provides services for several German energy suppliers, e.g. invoicing, accounts receivable management, and customer contact management. The German energy corporation which the company belongs to is one of the world’s largest investor-owned energy service providers with approx. 85,000 employees and a revenue of approx. EUR 93.0 billion in 2010.

In this case, the PPM project included the conceptual design and implementation of a process monitoring dashboard. The dashboard shows all data which are relevant for the efficient and effective control of processes for supplying customers with electricity and gas. The project started in 2008 with modeling activities and ended two years later in 2010.

Case II: Company B (does not belong to the service companies). The basis of this case is a PPM project carried out at a company in the energy industry, which is a Distribution Network Operator and energy supplier for retail and industrial customers in Australia. It is a state-owned enterprise with total assets of approx. AUD 8.0 billion and 4,500 employees.

A BPM project was conducted over a period of 5 years, including a PPM project towards the end. The main goal of the PPM project was to improve business performance and to increase customer satisfaction. Methods like the Balanced Scorecard as well as the DuPont-System of Financial Control, which is based on financial ratios, were used. Due to multiple reasons, the project was stopped early.

Case III: Departments (service organizations) of company C. This case illustrates a PPM project in a company in the manufacturing sector which produces electronic equipment in the field of power engineering.

The Germany-based company produces on-load tap-changers for power transformers in the high-voltage technology, where it has positioned as one of the world leaders. The group, which, in addition to the company C, includes 22 other subsidiaries spread all around the world, employs approx. 2,700 people. In the past fiscal year, these employees generated an overall sales figure of more than EUR 500 million. As for company C, two separate departments were chosen as embedded units of analysis.

Case IIIa: Human resource management (HRM). The first embedded context of analysis is the department of HRM which is responsible for the recruitment of employees for the entire group. This department was ideally suited for analysis because of a project to conceptualize and implement PPM methods and PPM systems especially designed for the needs of process controlling in HRM.

Case IIIb: Quality management (QM) and process management. This department attends to improving and optimizing all processes of the company. Thus all projects concerning the control of business processes and their improvement are managed by a team of about ten persons in this department. The main project in this case was an attempt to reorganize the company’s process map which contains all relevant business processes. This map should be the basis for the systematic and structured measurement of process performance.

Case IV: Service company D. The fourth case represents a relatively new German bank which was founded as a branch of another bank in June of 2009. This new bank offers multiple financial services to approx. 800,000 customers. It is owned by the second largest international insurance and financial services organization in the world with total assets of EUR 584 billion in 2009.

This case belongs to capacity management, especially staff planning. The bank is currently struggling with the task of predicting the process-related work load and controlling manpower resources.

4.3. Data collection and data analysis

The data collection (see Table 2) was conducted from spring 2010 to January 2011. As Yin emphasizes, different sources of evidence were used to address a broader range of behavioral issues [35]. We focused on a broad variety of sources like documentations, direct observation, physical artifacts, and semi-structured interviews. We also collected a mix of qualitative and quantitative data by using interview techniques (case II-IV) as well as semi-structured surveys (Case IIIb).

<table>
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<tr>
<th>Case</th>
<th>Researcher</th>
<th>Period of Time</th>
<th>Data Collection</th>
<th>Interviewee</th>
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</thead>
<tbody>
<tr>
<td>I</td>
<td>Authors 1 and 2</td>
<td>2007-2009</td>
<td>Project documentations, artifacts, direct observations</td>
<td>Manager process architecture and governance</td>
</tr>
<tr>
<td>II</td>
<td>Author 2</td>
<td>Spring 2010</td>
<td>Interview</td>
<td>Executive Director HRM</td>
</tr>
<tr>
<td>IIIa</td>
<td>Author 1</td>
<td>2010</td>
<td>Interview, survey, project documentations</td>
<td>Head and members of QM</td>
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<tr>
<td>IIIb</td>
<td>Author 1</td>
<td>2010-2011</td>
<td>Interview, survey, project documentations</td>
<td>Head of process/production reporting back-office</td>
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<tr>
<td>IV</td>
<td>Author 1</td>
<td>Winter 2010</td>
<td>Interview</td>
<td>Head of process/production reporting back-office</td>
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Data triangulation was used to increase the credibility and validity of the results concerning both the collected data (interviews, surveys, and observations/documentations) and the persons who analyzed the data (authors 1, 2, and students). To collect comparable data, we conducted semi-structured interviews and surveys concerning actual and supposed success factors as well as barriers and constraints towards PPM success. Case study protocols and a case study database supported the collection phase.

As this multiple-case study provided first insights into candidate success factors, which, however, will have to be validated through further research, case study data were mainly analyzed by pattern matching to discover typical success factors for PPM application and by a coherent cross-case synthesis (see Yin [35]).

4.4. Findings of the case study

The collected data were analyzed regarding the underlying patterns of PPM success factors. As result of the analysis, all PPM success factors identified through the case study could be assigned to our existing eleven success factor categories. However, three categories remained empty and we had to rename and generalize some categories. Concrete KPIs could not be included as a new success factor category because KPIs are company- or industry-specific.

Table 3 shows the PPM success factors identified by analyzing the case study data (original cases in brackets). Since not all PPM success factor categories can be described in detail, we will exemplarily discuss some categories and findings in the following.

**Process knowledge/models.** The collected data show that process knowledge – preferably in the form of process models – is one of the most important success factors for PPM for services. An illustrating example of this fact is case I, which was the starting point for our research. Before the PPM dashboard project started, many resources had been tied up in modeling business processes for supplying customers with electricity and gas. The fact, however, that many project participants knew but very few details about the underlying business processes turned out to be negative. Especially while defining measures, knowledge about what should be measured and how the underlying business process evolves step by step is mandatory. Although general process knowledge in the form of process models did exist, the individual process knowledge of the PPM project participants was missing. Therefore a strong relationship between the two categories ‘process knowledge/models’ and individual process-specific ‘expertise/competence’ could be observed.

**Information quality.** The PPM project of organization B (case II) could build on a rather comprehensive description of 22 regularly updated business processes, for which many key figures at different levels of detail were measured. However, the project was stopped early, because the measurement of so many key figures turned out to be very complex, while the accuracy of measurement was challenging. Moreover, a second reason for stopping the project was

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<td><strong>Incentive system</strong></td>
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I=Case I, II=Case II, and so forth
that some of the established figures and measures were inappropriate. It is, however, not only due to these experiences that ‘data and information quality’ is a critical success factor in PPM, which case IV (financial services) had already suggested.

‘Where do I get data from? That’s very tricky. This is company-specific and a real success factor. And we do not need a real-time monitoring. What we want to see is, if it works fine. We have quality targets: productivity, processing time, and backlogs. That’s what we monitor and benchmark every day.’ (Head of process/production reporting in the back-office, organization IV)

‘Reliability of measurement algorithms’, ‘transparency of data’ and ‘simple figures and measures’ were identified as further PPM success factors regarding information quality.

**Incentive system.** Besides ‘usefulness’ and ‘service quality’, the data analysis showed rather no success factor for the category ‘incentive system’. Although some interviewees assessed such incentive systems as interesting, they said that these systems were currently not used, e.g. due to labor laws being very strict in Germany.

‘Incentive systems are desirable. Currently, however, there is no planning to introduce such an incentive system, but I would appreciate it.’ (Executive Director HRM organization IIIa)

In order to prevent overlapping categories, we analyzed the correlations among the eleven success factor categories. We could identify a strong relationship between ‘process knowledge/models’ and ‘expertise/competence’. To point out the differentiation between the individual knowledge of a member of staff (business, company, product, project management etc.) and the knowledge of the business processes (process flow and design) within the enterprise, we changed the description of both success factors. ‘Expertise/competence’ was specified to ‘individual knowledge and competence’, whereas ‘process models’ was generalized to ‘process knowledge’, which includes process models. The other nine categories did not show any significant correlation. Hence, they can be regarded as non-overlapping.

### 4.5. Interpretation of the case study results

Analyzing the results of the case study led us to presume that information quality could be the most important success factor category for applying PPM. The high importance of data and information quality becomes obvious due to the large number of mentions of success factors related to this category, like ‘simple and appropriate figures and measures’ and different specialization of ‘communication of information’. In addition to the high number of mentions, we observed that, at the start of an interview, almost all interviewees of the different companies described the KPIs used by them when we asked for PPM success factors. It seems that practitioners mainly ascribe PPM success to the process KPIs, having been implemented due to their appropriateness to monitor and manage the underlying processes. This suggests to stronger integrate process-oriented measures and KPIs to improve information and data quality in PPM concepts.

A second interesting finding is that some of the success factors obviously do not only affect PPM success in particular, but also, more generally, BPM success or the success of information systems themselves. This further confirms results from other research studies. An example is ‘management support’, which is not a PPM-specific success factor (see [45]), but is critical for any activity in a company that aims to improve the effectiveness and efficiency of processes and to increase the profitability of the enterprise. Similarly, ‘incentive systems’ is a non-PPM-specific success factor, too (see [25]). It may be seen as the complementing counterpart of ‘usefulness’ and ‘ease of use’, both placing emphasis on the usage phase of an information system (see [28]). ‘Incentive systems’ rather focus the phase after the usage of an information system, as they promise personal rewards or punishment for good respectively poor process performance to PPM users. This can be seen as a positive motivation or, more negatively, as pressure to use the information system. Both types of incentives can influence the success of any information system, therefore representing a non-PPM-specific, but nonetheless important success factor for PPM application.

As a side effect, we observed that our two underlying PPM phases measurement and improvement [1] had to be extended by a new phase: the understanding of the underlying processes by means of process modeling. It is obvious that the practitioners of our case study rate process models much higher regarding their usefulness to develop a PPM than the authors of the literature (e.g. [23]). Existing PPM methods and approaches often assume that process models are up-to-date and comprehensively represent all important and necessary processes or parts of processes. The data of our case study reveal that this requirement is not fulfilled by most of the companies. In all of the four cases, the underlying business processes were renewed or initially modeled before the actual PPM project started with the planning of process KPIs and the targeted process performance. The results of our case studies could be a starting point to reconsider the phases of PPM in order to integrate process modeling techniques.
As described in chapter 2.2. (characteristics of services), the new ‘services-dominant logic’ defined the main characteristics of services which differentiate the creation of services from the production of products [15, 16]. The characteristics are described on a general level [15]. Their appearance in real world differs e.g. the customer can be integrated in many activities or only during the specification of the order. In either case the characteristics should be considered by setting up the PPM since they define challenges for a successful application of PPM. The first two characteristics (customer as a co-producer and network organization) pose the challenge that not all activities to create the service are in one hand and therefore performance indicators or measures have additionally to display responsibilities for e.g. time delays or quality losses. The third characteristic (knowledge-based services) describes knowledge and skills as success factors and therefore performance indicators or measures have to control their effects of the performance. As a matter of fact, the results of the data analysis do confirm that companies are aware of the three challenges of the ‘service-dominant logic’:

• Consideration of activities in which customers participate: The head of the back-office of Company A praised the possibility to show selective customer-related indicators online to his customers (Shared Service Integrators), or even to retail-customers. In contrast, Company C implemented process KPIs which respect customer participation, and, therefore, considered processing and waiting times caused by customers, which were excluded in the calculation of the process measures. These two examples show, in what way higher information quality of customer-related processes results in a more successful PPM, leads to better processes, to better services, and to a higher satisfaction of customers.

• Networks of organizations necessitating end-to-end processes: The success factor ‘process knowledge/models’ ensures a global view on processes across different organizations. Company A showed that service level agreements (SLAs) can be used to support end-to-end processes. Thus, the Shared Service Integrator monitored the whole business process. Company A as well as other participating companies like two different customer centers provided several process-oriented SLA KPIs (mainly related to quantity and processing time), which enabled the Shared Service Integrator to take up a comprehensive view on the whole end-to-end process across all involved companies. The prerequisite for such an overall network view is the knowledge about the entire process and, again, up-to-date process models.

• Knowledge-based services: The two identified success factor categories ‘process knowledge/models’ and ‘expertise/competence’ confirm this challenge. As shown by the side effect observation, especially process models are fundamental for starting successful PPM projects in practice. Additionally, individual expertise and competence of PPM users are important as well. As an example, the director of capacity management in the back office of company D reported that he and his staff met every day to discuss actual process performance and to exchange new knowledge gained while processing instances of financial service processes. It was extremely success-critical for him and his crew to be up-to-date and to share process-related information immediately. Several of the process KPIs discussed in the everyday meetings ensure that every member of the back-office knows the actual state of process performance to optimize their workload, and simultaneously the performance of the whole division. In summary, individual and process-related knowledge can be seen as indispensable for successful PPM for services.

5. Conclusion and outlook

The goal of this paper was to identify which success factors contribute to PPM success for services. Therefore a representative literature review and a multiple-case study were conducted. As a result, a list of PPM success factor categories containing even more detailed success factors could be identified.

Following the first steps of the multi-method approach of Gable, the representative literature review and the multiple-case study complemented each other very well. The results of our case study represent a reliable basis for further research. The identified success factors can help practitioners to focus on those factors of PPM application which are important and critical in the context of service companies.

Notwithstanding, our research has several limitations. First, we conducted a representative literature review which can, however, not claim to be complete. Second, the selection of the cases for the case study, too, is of critical importance. The results of the case study are strongly connected to the underlying context of the cases. And, third, the three success factor categories which could not be confirmed by the results of the case study need to be included in further research. ‘Usefulness’, ‘service quality’, and ‘incentive system’, whose relevance was already identified in literature, can not be completely denied by analyzing only a total of four cases. As a consequence of this, it could be that other cases in the service business
confirm them to be critical for PPM success factors. For this reason, all possible success factors must be included in our subsequent empirical research. The results of the statistical data analysis allow more accurate and reliable conclusions about the actual strength of impact of our possible success factors.

The next step of our overall research will be to develop a PPM success model which contains measurable items and relationships between dependent and independent variables. Following the multi-method approach, this conceptual PPM success model will be used to develop and conduct an online survey in which service companies all over the world can participate.

6. References


