Abstract

With the rise of Cloud Computing, many predicted a paradigmatic change of IT-based business processes. However, extant research is primarily focusing on technical aspects, such as security and scalability, hence the assumed paradigm shift has not been explored in more detail yet. Focusing on Software as a Service (SaaS) as underlying Cloud model, we conducted an extensive literature review to derive a conceptual model presenting the influence of flexible, SaaS-based business processes on operational agility. Moreover, these processes were classified into three categories: Enterprise Resource Planning Services, Work Support Services, and Decision Support Services. In addition, we conducted ten in-depth interviews with Cloud experts to reflect on potentially missing categories and to substantiate the categories derived from extant literature. The theoretical and empirical parts of our paper reveal that SaaS-enabled processes have a positive influence on operational agility of enterprises which provides first preliminary evidence for the predicted paradigm shift.

1. Introduction

Concurrent to its technical rise, the hype around Cloud Computing as a paradigm shift [20] attracted research as the increasing number of publications illustrates. Predominantly, extant literature dealing with Cloud Computing focuses on technical aspects. For instance, Armbrust et al. [3] summarize the prevalent technical issues of the growth of Cloud Computing into ten obstacles, such as availability of services, data lock-in scenarios, data transfer bottlenecks and scalability issues. Additionally, security aspects are investigated, e.g., by Ryan [40] who explored security aspects of Cloud Computing related to conference management systems. Another security related issue deals with data stored within Clouds being managed by external parties on remote servers [2].

Although there are an increasing number of publications dealing with technology and security issues of Cloud Computing, a lack of research exists on the role of Cloud Computing as enhancer of business processes. This is especially astonishing since Cloud Computing is often called a game or paradigm changer for business [12]. However, we found first indications that Cloud Computing indeed has an impact on business process level. For example, Iyer and Henderson [25] state that mixing different capabilities of Cloud Computing, such as location independence, ubiquitous access, and virtual business environments lead to an improved business agility. Additionally, Foster et al. [21] identify mobile interactive applications and the processing of business analytics as applications impacting on business processes’ improvement. Focusing on the financial services industry, Redshaw [38] notes that Cloud Computing will lead to “creative destruction” by enabling new services and processes, for instance reverse auctions.

Investigating the paradigm shift of Cloud Computing with regard to business processes, we deem Software as a Service (SaaS) as the most promising Cloud service model for our purpose. SaaS can be defined as software applications provided to the customer via thin clients [34]. SaaS can foster the flexibility of business processes and thus potentially extends the overall agility of an enterprise. Therefore, in the following this paper will emphasize on SaaS as one instance of Cloud Computing to explore its impact on business processes and in the end on the operational aspect of business agility. Business agility can be defined as the ability of an enterprise to sense and respond flexible to environmental changes [41]. This paper focuses on operational agility because it is defined as enterprises’ ability to transform business processes to benefit from innovative opportunities [41].

In our analysis section, we conceptualize a model which allows us to explain how SaaS positively...
influences operational agility via several business processes which benefit most from using SaaS. The identified business process categories were derived deductively from extant Cloud Computing and SaaS literature through a structured literature review [47] and inductively substantiated by additional insights from ten qualitative in-depth interviews conducted with senior information technology (IT) professionals from several firms. In essence, our central research questions are:

1. Which types of business processes are influenced by the usage of SaaS?
2. How do these SaaS-based business processes contribute to operational agility of an enterprise?

The remainder of this paper is structured according to the building blocks of conceptual research described by Yadav [49]: the following section defines the research domain and provides the literature background. Subsequently, we describe the research method, followed by the developed conceptual model which emerged from our literature review as well as the insights we gained from the conducted expert interviews. Finally, we discuss the model in detail and conclude with a short summary of our findings, its limitations, and future research directions.

2. Literature Background

2.1. Software as a Service - a Cloud Computing Service Model

Cloud Computing and SaaS came into existence in 2007 when companies such as Google, Amazon, and IBM started to provide their under-utilized computing power and storage capacities via the Internet to potential customers [12, 51]. Mell and Grance [34, p. 6] define Cloud Computing as: “ubiquitous, convenient on-demand network access to a shared pool of configurable computing resources”. This allows users to access the required capacities (e.g., servers, storage, applications) with minimal effort independent of time and quantity.

Cloud Computing is further classified by three different service models: Infrastructure as a Service (IaaS) provides hardware resources, such as processing, storage, or networks, as well as basic software, such as operating systems, to maintain the infrastructure [34]. Platform as a Service (PaaS) is mainly designated for the development and testing of new applications [21]. Finally, customers can access software applications on a pay-per-use model by utilizing Software as a Service (SaaS) [21].

Whereas PaaS is reserved for developers and IaaS can be used to support the other layers on an ad-hoc basis, SaaS is the Cloud service model which is most visible to corporate end-users [46] and eventually also to the business side. As a consequence, to explore which business processes are impacted by Cloud Computing as a business paradigm shifter we focus our research in this paper on SaaS.

2.2. Operational Agility

The concept of business agility originates from the manufacturing industry in the 1980s [45]. In contrast to other concepts such as flexibility, agility refers to the capability of a firm to adapt swiftly to changing environments [45]. Thus, business agility can be defined as the ability to sense and respond to opportunities and threats in an efficient, effective, and timely manner [15, 36, 44]. Consequently, agility is crucial for firms especially in volatile environments in order to stay competitive [44].

In this regard, IT plays an important role to gain sensing and responding capabilities [36]. While IT directly provides the required capabilities to detect technological or market changes in advance and react accordingly [36], it also indirectly improves sensing and responding capabilities by enhancing the width of resources (reach) and the information quality (richness) necessary in knowledge-intensive processes [36, 41]. Moreover, Sambamurthy et al. [41] differentiate agility into three basic dimensions: customer agility, partnering agility, and operational agility. Whilst customer agility describes the ability to explore and exploit innovation opportunities by leveraging customers, partnering agility refers to the ability of accessing knowledge, assets, and resources in a partnership network. Operational agility is the ability to redesign business processes to take advantage of innovative opportunities. Through the modularization of business processes, IT supports this ability of redesigning and creating new business processes [41].

To derive the ramifications of SaaS as one instance of Cloud Computing on business processes, this paper emphasizes on operational agility since partnering and customer agility are only indirectly related to the business processes compared to operational agility.

3. Research Method

To identify which SaaS-enabled business processes are having an impact on operational agility, we derived a conceptual model which we drew from a literature review as well as expert interviews we conducted. In our conceptual research approach, we were guided by
Hirschheim [24] who postulates that three elements in conceptual research are needed: claims, warrants, and grounds.

Thus, we provide plausible and testable statements (claims), and, e. g., have explicitly stated the research questions and deductively derived the model as well as propositions. To corroborate the statements, we conceptualized our model with deductively derived categories and propositions from extant Cloud Computing literature with focus on SaaS (grounds). Finally, to link the grounds to the claim, we conducted qualitative in-depth interviews in the field regarding the impact of SaaS on operational agility (warrants). In these interviews, we not only addressed the categorization and propositions derived from the extant literature to ensure coherence but also explored additional possible factors driving the business paradigm shift which not have been reported in extant literature.

3.1. Literature Review

To structure our literature review, we used the recommendations provided by Webster and Watson [47] for identifying the relevant literature and structuring the review. Thus, for publications on Cloud-based SaaS, we analyzed the content of eight information system (IS) journals from the Senior Scholars’ Basket of Journals of the Association for Information Systems (AIS). In order to analyze conference proceedings, we chose the four most important IS conferences for America and Europe. In addition, we included a backward search to review which articles were cited by our identified ones [47].

As mentioned above, Cloud Computing and hence SaaS, emerged for the first time in 2007. Therefore, we focused our search on the period from January 2007 to December 2011 which finally resulted in 214 papers. Of these, the majority (192) was identified in conference proceedings and only a few have been published in journals. Additionally, we observed a considerable increase in Cloud-related papers over the analyzed time period. Table 1 presents the conferences and journals included in our literature search as well as the number of results for each year.

The search results were checked for relevance by reading the abstract and introduction [47]. Afterward, to exclude irrelevant papers, the papers were clustered by their major topic of analysis and excluded if not eligible for our research. For example, papers were excluded as they related to risks or security topics (15 papers) or dealt with issues on Green IT (14 papers). Other papers investigated Cloud management topics such as resource allocation (10 papers) or focused on Web 2.0 technologies such as wikis, blogs, and crowdsourcing (10 papers). Another 42 papers were excluded from further consideration since they only mentioned Cloud or SaaS on a very generic level and were not related to business processes. Finally, we excluded another 7 papers referring to very specific SaaS applications such as health care, fraud systems, or students’ administrative systems. With regard to SaaS usage in a business context, this analysis of the papers resulted in 28 publications considered as relevant for our purpose.

After the pre-selection, the remaining 28 papers were evaluated to specify our view on the most commonly used SaaS applications in research. The predominance of these SaaS applications indicates their eligibility for business and business processes. Following a concept-centric approach [47], we clustered the SaaS applications into categories and sub-
categories presented in the conceptual model. Additionally, we examined the papers and searched for further support for the impact of SaaS on business processes. Evidence on different SaaS applications was collected by two different researchers and presented in a general list. Afterward, this list was evaluated regarding double counts. For example, we summarized GoogleDocs and Microsoft Office into the sub-category “Office Tools”. In order to cluster the three-main categories we looked for similarities, e.g., Customer Relationship Management (CRM) and Supply Chain Management (SCM) being part of Enterprise Resource Planning (ERP). The categories and sub-categories have been discussed among the authors to find a common agreement on the categorization.

3.2. Expert Interviews

Expert interviews conducted in an exploratory fashion enable researchers to investigate and understand the dynamics occurring in varying settings [16]. They can cover either single or multiple cases as well as multiple levels of analysis [50]. In this paper, we used in-depth expert interviews designed to complete the categorization of Cloud-based SaaS derived from extant literature. In doing so, we identified issues which were not covered in the extant literature which helped us to enhance our understanding of the business paradigm shift. In autumn 2010 and 2011, we conducted semi-structured in-depth interviews with Cloud experts from a financial services enterprise and experts working for different IT service providers, primarily in the financial service sector. Table 2 depicts the demographics of the interviewees and details of the interviews.

Each of the interviews presented in Table 2 was recorded, fully transcribed, and finally validated by the interviewee to ensure accuracy. Hence, through the management positions and expert knowledge on Cloud Computing of our interviewees, we were able to derive, support, and crosscheck our categorization with focus on SaaS.

4. Conceptual Model

To explore our research questions, which business processes are influenced by the usage of SaaS and how this affects the operational agility, we applied a twofold research method. Our approach, consisting of literature review and expert interviews, resulted in three major categories and ten sub-categories of business processes eligible for SaaS usage, as depicted in Figure 1.

Whilst one major category, ERP, was explicitly mentioned in the analyzed literature of SaaS and Cloud Computing [5, 7], a more thorough revision of the papers revealed the proposed classification into the categories Work Support Services and Decision Support Services. The borders of the sub-categories in Figure 1 visualize whether the categorization derived from literature was not commented by the interviewees (solid line), was substantiated by the interviewees (dashed line), or if the category was falsified by the interviewees, such as in the case of Business Intelligence (point-dash line).

The following sections illustrate in more detail how we derived the categories shown in Figure 1. Table 3 provides an overview on the extant Cloud Computing and SaaS literature that emerged from our literature review and indicates the categorization of the papers. In addition, Table 3 answers the first part of the research question by presenting the business processes predominantly analyzed in research. Thereof, we derived that those business processes are not only useful examples for research. Since several publications focused on SaaS in their case study or implementation research, we feel confident to conclude that these SaaS-based processes are also the ones most frequently used in business. In a second step and to answer the second part of our research question, we investigated the categorized papers. Therewith, we

<table>
<thead>
<tr>
<th>Interview No.</th>
<th>Enterprise</th>
<th>Position of Interviewee</th>
<th>Affiliation to Enterprise</th>
<th>Length of Interview</th>
<th>Length of Transcript</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IT service provider</td>
<td>Chief Executive Officer</td>
<td>8 years</td>
<td>20 minutes</td>
<td>2.5 pages</td>
</tr>
<tr>
<td>2</td>
<td>Bank</td>
<td>Chief Technology Officer</td>
<td>12 years</td>
<td>20 minutes</td>
<td>2 pages</td>
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<tr>
<td>3</td>
<td>IT cooperation</td>
<td>Cloud Portfolio Manager</td>
<td>8 years</td>
<td>20 minutes</td>
<td>3.5 pages</td>
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<tr>
<td>4</td>
<td>Bank</td>
<td>Lead Infrastructure Architect</td>
<td>15 years</td>
<td>n/a</td>
<td>6 pages</td>
</tr>
<tr>
<td>5</td>
<td>Bank</td>
<td>Chief Technology Officer</td>
<td>25 years</td>
<td>35 minutes</td>
<td>6 pages</td>
</tr>
<tr>
<td>6</td>
<td>Bank</td>
<td>Vice President / IT Director</td>
<td>18 years</td>
<td>87 minutes</td>
<td>24 pages</td>
</tr>
<tr>
<td>7</td>
<td>Bank</td>
<td>Lead Domain Architect</td>
<td>20 years</td>
<td>53 minutes</td>
<td>6 pages</td>
</tr>
<tr>
<td>8</td>
<td>Bank</td>
<td>Technology Director</td>
<td>20 years</td>
<td>28 minutes</td>
<td>28 pages</td>
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<tr>
<td>9</td>
<td>Bank</td>
<td>IT Analyst</td>
<td>15 years</td>
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<tr>
<td>10</td>
<td>Bank</td>
<td>Project Manager</td>
<td>3 years</td>
<td>57 minutes</td>
<td>14 pages</td>
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</table>

Table 2. Demographics of conducted interviews
identified statements which indicate that using SaaS or Cloud Computing for the business processes categorized in the first step will lead to an increase in flexibility or agility. Examples for these statements are also provided in the following sections.

4.1. Enterprise Resource Planning Services Category

As ERP systems are basically built for core corporate functions [39], we subsumed CRM, Human Capital Management (HCM), SCM and Financial Services (FIN) in this category. Thereof, Blau et al. [10] used CRM, SCM, and FIN to illustrate how composite services interplay in a service value network. Due to the modularization, services are substitutable which enables enterprises to react flexible on changes of the business environment [10]. Additionally, Kosalge and Tole [29] define eleven benefits resulting from the usage of Web 2.0 technologies (e.g., wikis, blogs, online communities, Cloud Computing). Two of those benefits also affect the usage of CRM SaaS by changing or improving business processes on the one hand and acquiring new customers on the other hand. Consequently, both papers indicate that especially the usage of CRM SaaS contributes to operational agility through additional flexibility or process change and improvement.

Empirical evidence on the adoption of ERP SaaS can be found in Benlian [7], Benlian et al. [8], and Koehler et al. [28]. In their studies on SaaS adoption and consumer preferences, Benlian [7] and Koehler et al. [28] present a high degree of adoption for applications with a low specificity, e.g. CRM and HCM. However, whilst Benlian [7] unveiled skepticism amongst the enterprises for “mission critical” processes such as ERP, Koehler et al. [28] show the enterprises’ willingness to use services affecting critical data such as accounting or billing.

<table>
<thead>
<tr>
<th>Literature Source</th>
<th>Enterprise Resource Planning</th>
<th>Work Support Services</th>
<th>Decision Support S.</th>
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<tr>
<td></td>
<td>ERP</td>
<td>CRM</td>
<td>HCM</td>
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<td>Baars and Kemper (2011)</td>
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<td>Bardhan et al. (2010)</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Baskerville (2011)</td>
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<tr>
<td>Benlian (2009)</td>
<td>x</td>
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<td>Benlian et al. (2010)</td>
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<td>Benlian et al. (2011)</td>
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<td>Blau et al. (2009)</td>
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<td>Boehringer et al. (2010)</td>
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<td>David and Mann (2007)</td>
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<td>Demirkhan et al. (2010)</td>
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<td>Elie-Dit-Cosaque and Pallud (2010)</td>
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<td>Elie-Dit-Cosaque and Pallud (2011)</td>
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<tr>
<td>Eurich et al (2011)</td>
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<td>Gregory (2010)</td>
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<td>Hervás et al. (2010)</td>
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<tr>
<td>Johansson and Newman (2009)</td>
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<tr>
<td>Kaganer and Vaast (2010)</td>
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<tr>
<td>Koehler et al. (2010)</td>
<td>x</td>
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<tr>
<td>Kosalge and Tole (2008)</td>
<td>x</td>
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<td>Leimeister et al. (2010)</td>
<td>x</td>
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<td>Lyons et al. (2009)</td>
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<td>Maedche (2010)</td>
<td>x</td>
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<td>Martens et al. (2011)</td>
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<td>Mettler et al. (2011)</td>
<td>x</td>
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<tr>
<td>Pallud and Elie-Dit-Cosaque (2011)</td>
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<td>Steinfeld et al. (2011)</td>
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<td>Susaria et al. (2010)</td>
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<td>Xiao et al. (2011)</td>
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<td><strong>Total = 28</strong></td>
<td>9</td>
<td>16</td>
<td>6</td>
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</table>
4.2. Work Support Services Category

The work support services category covers tools which support collaborative work in general or communication in terms of videoconferencing and instant messaging. Additionally, office suites like word processors or spreadsheet applications are included in this category. The usage of these applications is confirmed by one of our interviewees in the following way:

“Given the case that the market offers me standardized services which comply with my requirements, I can implement everything: E-Mails, Office, ...”

Research so far has approached SaaS-supported work support services from different directions but none of the identified ones focused on the relation between Cloud Computing and the work support service as a mean to improve operational agility (Table 3). For instance, Kosalge and Tole [29] conduct a comprehensive study to identify the business benefits of Web 2.0 technologies (e.g., wikis, blogs, online communities, Cloud Computing). According to their study, online collaboration is the most beneficial Web 2.0 application perceived by the end-user. Moreover, Kosalge and Tole [29] predict that increased online collaboration will improve communication and accelerate business decisions. Hence, we assume that this improvement and the additional momentum could positively influence operational agility.

Empirical evidence for adoption of collaboration SaaS can be found in Benlian [7], Elie-Dit-Cosaque and Pallud [17] Elie-Dit-Cosaque and Pallud [18] as well as in Pallud and Elie-Dit-Cosaque [37]. Elie-Dit-Cosaque and Pallud [17] describe the setup of a planned field survey on user adoption within a French insurance company. Within the survey, classical standard applications are replaced by communication and collaboration applications in the Cloud such as E-Mail, videoconferencing, instant messaging, shared office applications, etc. to improve collaboration amongst the employees in different regions. Presenting the empirical results in Elie-Dit-Cosaque and Pallud [18], the outcomes of the interviews are twofold. On the one hand, employees criticize the intense effort that has to be spent to learn how to use the new applications. On the other hand, employees state that the new applications mean more productivity and freedom to them. Consistently, one of our interviewees confirms:

“Collaboration [SaaS] exists already in many cases, for example LotusLive. However, there are still some security issues hampering adoption of collaboration SaaS.”
Whilst in the past IT deployment decisions had been made top down, Kaganer and Vaast [27] observe a new phenomenon enabled by the rise of social media. Drawing on the example of Cloud-based Google Docs, Kaganer and Vaast [27] explore how software is spread through the enterprise driven by the driving force of the end-user (bottom-up). One of our interviewees confirms this accordingly:

“ [...] The employee can also act as the trigger for changes in business processes. He already knows the technologies from private use. For example he can create an e-mail account within minutes, thus he starts wondering why some things take so much time in his job’s IT. [...]”

Consequently, literature discussing work support services emphasizes much more on the individual end-user than ERP services literature. Thus, the end-user could positively influence business processes and hence operational agility by adopting or triggering the usage of work support SaaS.

4.3. Decision Support Services Category

This category provides support services for management decisions [11], e. g., Business Intelligence (BI) [4, 11, 33, 43] and Personal Information Systems [6, 22]. Regarding BI, Baars and Kemper [4] point out that deploying BI in a Cloud could increase the agility of the system. Moreover, Susarla et al. [43] argue that BI improves decision making. Although literature indicates that BI SaaS will positively influence the decision making process and hence operational agility, the interviewed experts note:

“ [...] Business Intelligence. First of all, new concepts need to be developed. I can’t imagine an enterprise like a [car manufacturer] spontaneously analyzing their customer requirements [using Business Intelligence] without planning this in advance. This does not happen as flexible as Cloud systems would allow to do.”

“My opinion regarding Business Intelligence [used as SaaS] is that the degree of necessary enterprise specific customizations is much higher than for ERP [...] The more customizations are necessary the smaller is the relative advantage provided by the usage of SaaS.”

Accordingly, the explanation, why BI as a sub-category is rejected by the Cloud experts, is twofold. Firstly, implementing BI in the Cloud requires intensive customizations to adapt the system to the enterprise’s specificities. Secondly, the customization requires thorough pre-planning which contradicts the idea of flexible, ad-hoc usable software usage.

Therefore, we assume that although BI-SaaS is not as flexible available for SaaS-based business processes, it will nevertheless positively influence operational agility. The rationale behind this assumption is the emerging discussion on “Big Data” [1]. Therewith, Cloud Computing can be used for analytics and BI, based on the high amount of data available for firms [1].

With regard to Personal Information Management Systems (PIM), Gregory [22] expect capable knowledge workers to develop their own PIM within a Cloud, which allows them to access PIM via the web instead of connecting to local servers. Hence, this change might also increase flexibility in terms of availability of information for knowledge workers.

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**Figure 1. Impact of Cloud-based SaaS on Operational Agility**
4.4. Implications of the conceptual model

The antecedent sections presented the three categories of business processes positively influenced by the usage of SaaS which were derived from extant literature and mostly substantiated by in-depth expert interviews. We conceptualized a model to visualize the dependencies between SaaS usage, business processes improvement, and the ramifications on operational agility. On the one hand, we found evidence in the literature for the predominant types of SaaS applications. On the other hand, we found that SaaS is likely to positively influence operational agility or indications that SaaS will lead to increased flexibility and hence indirectly influences operation agility. However, we are among the first exploring potential intermediate steps between the IT flexibility provided by SaaS and the enterprises’ operational agility (see Figure 1). Hereby, we propose not a direct effect of flexibility to operational agility but rather a mediated effect through ERP Services, Work Support Services, and Decision Support Services. Thus, we propose:

P1: Through the usage of Software-as-a-Service Cloud Computing positively influences the flexibility of business processes.

P2: Flexible, SaaS-based business processes positively influence operational agility.

We found support for our first proposition in our expert interviews:

“[…] I think, enterprises will benefit from SaaS for processes in which enterprise-specific differences are marginal because they can simply use the service out of the socket. […]”

“Obviously, it [SaaS] is more flexible, especially in the context of changing environment, than providing everything inhouse where especially scaling up and down is very difficult […]”

Additionally, the model is corroborated by Tallon and Pinsonneault [44] who confirm that IT flexibility is comprised of both scalability and adaptability. As mentioned in the definition, both characteristics are features of Cloud Computing and hence of SaaS [21].

Furthermore, we ground our assumptions in 4.1-4.3, and hence of P2, regarding the rationale of the relationship between flexible business processes and operational agility on Sambamurthy et al. [41] and Overby et al. [36]. Both state that IT flexibility affects business agility and therewith operational agility.

In accordance with the definition of operational agility, we assume that flexibility induced via SaaS into the business process is one prerequisite to enable firms to redesign business processes. This capability will allow firms to react instantly on changing environments and thus gain operational agility.

5. Discussion and Conclusion

To investigate the impact of Cloud Computing as a business paradigm changer, we emphasized on the Cloud model SaaS. To answer our research questions which business processes are influenced by the usage of SaaS and in which way do these SaaS-based business processes contribute to the operational agility of a firm, we conducted a literature review and ten in-depth expert interviews.

Regarding the theoretical contribution of our research and to elaborate on our first research question, we derived three categories of SaaS-based business processes: ERP Services, Work Support Services and Decision Support Services. Furthermore, our findings revealed that SaaS induces flexibility into business processes and hence contributes to operational agility. To visualize these relations, we derived a conceptual model (Figure 1) depicting on the mediation effect of SaaS-supported business processes on operational agility and therefore answering the second research question. The conceptual model supports the identification of future research areas for a thorough investigation of the impact of the Cloud-driven paradigm shift on business processes.

For practitioners, the conceptual model can be used as basis to decide for which business processes SaaS should be used in future. Hence, the paper could advice managers in fostering the advantages of Cloud Computing not only in the IT department but also in business departments. In this context, CRM as the SaaS-process most often mentioned in our model could be worth considering to be migrated to SaaS as a first step. Finally, it is noteworthy that firms consider the impact of employees pushing SaaS they know from private use into the organization’s IT.

However, the research presented in this paper faces some limitations. Firstly, we have derived the conceptual model on basis on SaaS as one instance of Cloud Computing leaving aside IaaS and PaaS. Secondly, Cloud Computing as well as SaaS are only one instance of technological innovation on which we grounded our research, leaving a need for generalization. A third limitation lies in the analyzed impact on operational agility thereby excluding customer and partnering agility as dimensions of business agility. Finally, the paper provides only first empirical validation based on the in-depth interviews with subject matter experts in this field.

In order to support the model with additional data in future research, the constructs need to be operationalized to measure the relationship between Cloud Computing respectively SaaS and operational agility. Afterward, the model is intended to be empirically tested as part of a quantitative survey.
amongst corporate users of SaaS. Another important research field to pay attention to in future is desktop virtualization. Although our literature review did not reveal this category, our expert interviews depicted this aspect as it will contribute to the flexibility of workplaces and hence play a major role for enterprises when “cloudifying” their solutions.

Therewith, the business impact of location and device independent access to information requires deeper analysis emphasizing issues such as work flexibility, collaborative work, or work mobility.

6. References


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