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Adding experts' perceptions to complement existing research on information systems backsourcing

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Abstract:

This paper extends the existing literature on information systems (IS) backsourcing by the perception of practitioners. For this purpose, we conducted a series of qualitative, semi-structured interviews with IS sourcing experts. The interview questions focused on the participants' perceptions and experiences with the topic, on identifying reasons for and against IS backsourcing, and on revealing relevant trends pertinent to IS backsourcing. We then compared those findings with two previously conducted comprehensive literature reviews on academic and practitioner literature on IS backsourcing. By following this approach, we contribute to the existing research by verifying previous findings, for example, the most important reasons why companies decide in favor of IS backsourcing. Additionally, we were able to enhance previous contributions as we highlight the significance of differentiating between the scope of IS backsourcing by looking at the underlying services which are potentially backsourced. Further, we identified the importance of managers' personal preferences as an additional reason for IS backsourcing, for example, based on personal experiences or a perceived need for change. Based on our findings, we created a comprehensive overview of all aspects connected to the IS backsourcing process and derived opportunities for further research to contribute to the IS backsourcing research agenda.

Keywords:

backsourcing; insourcing; back in-house; information systems; expert interviews; academic literature.

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1. Introduction

Recently, the large German industry company thyssenkrupp decided to terminate its large-scale outsourcing contract with T-Systems [1]. Instead of jointly standardizing the information systems (IS) landscape and moving server capacity as planned to T-Systems' data centers, approximately 100 employees who were originally transferred to T-Systems were transferred back to thyssenkrupp [2]. According to press reports, the key reason for terminating the contract were collaboration issues between the two companies [1]. This recent example shows that the common practice of IS outsourcing does not always lead to the desired success [3], and companies decide to backsource IS services - a theme that could already be observed in previous cases [4]. In combination with the increase in digitalization and adoption of agile forms of collaboration over the recent years [5] and their impact on management control [6], this might be a sign towards a shift in the IS sourcing behavior. This motivated us to contribute to the emerging research area of IS back sourcing [7, 8] by conducting qualitative interviews with IS sourcing experts to discuss their perception on IS back sourcing and compare this to previous research in this field. By following this approach, we aim to provide insights into experts' perceptions and thus increase the connection between academic literature and the community of IS practitioners as suggested by several researchers [9]. This could also increase the practical relevance of IS research, which is an often discussed shortcoming of academic research [10].

The first academics to introduce the concept of IS back sourcing were Hirschheim and Lacity [11] and subsequently Lacity and Willcocks [12]. They defined it as the transition of those assets, activities, and skills required to perform IS services back in-house, which had been outsourced previously to one or multiple vendors. We observe that researchers use synonyms for the word back sourcing, for example, backshoring, reshoring, or relocating, to describe the transfer of value creating activities to the home country or at least to a neighboring country [8]. Therefore, we follow Nujen et al. [13] and highlight the change in ownership back to the mother organization as the distinctive characteristic of the term back sourcing. Consequently, back sourcing can also be combined with a change in location, for example, back to the country or region of the client organization. However, a location change is not a necessary condition for speaking of back sourcing [14]. The introduced definition of back sourcing naturally implies that the services in scope have been outsourced before [8]. Outsourcing is defined in the academic literature as transferring IS service provision to one or more third party vendors which represent over 80% of the IS budget [15, 16]. In contrast, academic literature defines insourcing as retaining 80% or more of the IS budget internally after having considered a potential outsourcing option [16]. Therefore, insourcing can be considered as a static state characterized by the internal provision of IS services, whereas back sourcing describes the process of transferring IS services back in house [14].

The paper is structured as follows. In section 2, we introduce our research approach. Here, we also introduce the addressed research questions. In section 3, we present both methodology and findings from related academic and practitioner literature. Subsequently, section 4 discusses the expert interviews by first introducing the applied methodology and then by presenting the findings in detail. Section 5 compares findings from all three sources of data before we will discuss the results in section 6. The final section concludes the paper.

2. Research approach

Within this paper, we are drawing on three major sources of data, (1) academic literature, (2) practitioner literature, and (3) expert interviews. Fig. 1 visualizes these three sources and how they will be used in the paper at hand. By combining publications for different target audiences and by applying different methods, namely literature reviews and expert interviews, we aim to increase rigor and relevance of our findings.

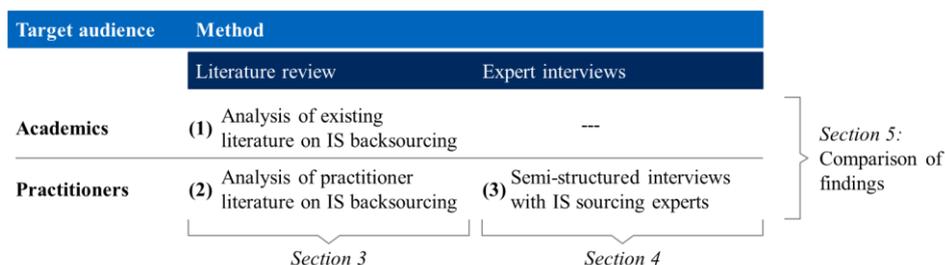


Fig. 1: Visualization of research approach

(1) Academic literature: Academic writing aims to develop theories or concepts to explain complex circumstances for a group of scholarly experts [17, 18]. Therefore, academic literature focuses on the justification of arguments, placing a special emphasis on rigor and completeness [19]. Academic contributions are precise, impersonal, and objective pieces of research, aiming to create a balanced discussion of different standpoints [17]. Also, academic literature builds upon the work of previous scholars and provides incremental knowledge within its field of research [20]. The paper at hand also falls in this type of publications.

(2) Practitioner literature: This type of literature aims at providing information to professionals working in the respective field [21]. Practitioner literature is influencing actions of its audience [22] and supports individuals and organizations to evaluate the relevance and applicability of different trends and corporate practices [23]. Literature focused on practitioners reflects their interests and standpoints [23], since in general, media is supporting the beliefs of its target audience [24]. Therefore, the analysis of practitioner literature is considered as well suited for IS researchers to identify and understand topics of relevance to practitioners [9]. Additionally, to increase the relevance of IS research for practitioners, Marrone and Hammerle [10] suggest to intensify the connections with practitioners, for example by identifying topics of relevance for them and by generating discussions on core research issues.

(3) Expert interviews: Conducting qualitative interviews can function as an additional source to gather data about a research topic [25]. We are focusing on interviewing selected experts, who can be considered as gatekeepers to relevant knowledge and insights for our research topic. Due to their exposure to different organizations within their professional career, we are able to discuss our research topic without having access to the members of the organizations themselves. Different types of techniques for conducting qualitative interviews exist, for example, structured interviews, unstructured, semi-structured, or group interviews [26]. Qualitative interviews are a widely used research method within IS research [25]. In the paper at hand, the expert interviews can complement the written practitioner publications by adding another perspective, for example when experts state opinions more openly than they would do in written articles.

By combining and triangulating these three sources of data, we aim to answer two research questions (RQ) within the field of IS backsourcing:

(RQ1) To what extent do the perceptions of sourcing experts on IS backsourcing and the existing academic and practitioner literature match?

RQ1 is of special interest, since it increases the connection between academic literature and the community of IS practitioners. Several academics have raised the topic of limited relevance of IS research for practitioners, and thus this research can provide insights into the perceptions from experts to the academic community [9]. Further, RQ1 addresses the potential research limitation identified by von Bary et al. [27], who only relied on published literature to determine the topics of relevance for practitioners without conducting additional interviews.

If triangulation of these three sources of data results in either consistent or complementary views, the potential for aggregating the findings from academic literature and practitioners into a coherent framework might be given.

(RQ2) How can a comprehensive IS back-sourcing framework look like, spanning from the original (out-)sourcing decision to the successful repatriation of the services?

RQ2 is of special interest to extend the existing research stream by a comprehensive overview of all elements connected to the IS back-sourcing transition. In particular, we aim to include elements like the influence of the original (out-)sourcing decision, influencing factors during the sourcing relationship, the decision to back-source, and subsequent elements like success factors. This overview can provide future researchers with suggestions to identify suitable research topics. Additionally, it can serve as a structuring element to categorize further research and complement previously introduced back-sourcing process frameworks.

3. Literature analysis

3.1 Methodology

Within this paper, we draw upon two literature reviews, in which we have previously examined both academic [8] and practitioner literature [27] on IS back-sourcing. We will first introduce the methodology applied in the literature reviews in this section and present our results in the subsequent section. Both literature reviews follow a systematic, reproducible method to first search and select the available literature, followed by a synthesis of the outcomes and key statements of each identified publication [28].

For the *academic literature* review [8], we searched for peer-reviewed journals or conference proceedings published over the last 20 years (1997 – 2017), written in German or English, which contained one of the following keywords; backsourc*, backshor*, resourci*, reshori*, insourc*, inshori*, relocati*, re-outsourc*; and in addition either the term information systems or information technology [8]. The search terms were applied to title, abstract, and keywords in all commonly used databases for IS literature, for example Business Source Complete, ProQuest – ABI/INFORM Complete and Science direct (Elsevier) for journals or AIS Electronic Library and Digital Library at IEEE for conference proceedings [29]. To achieve exhaustiveness, a forward and backward reference search and author search using Google Scholar was performed [29, 30]. Over the literature search and analysis process, over 100 academic literature items were studied [8]. Altogether, we identified 31 relevant publications on the topic of IS back-sourcing, most of them published in journals (22 publications; 73%), which were quite evenly distributed over the search period [8].

Following a similar approach to retrieve relevant *practitioner literature* on IS back-sourcing [27], we searched for English and German publications containing one of the keywords back-sourcing, insourcing, or back in-house, and filtered for information technology, information systems, and/or IT as subject [27]. To retrieve German publications, we additionally searched for the three German keywords “Eingliederung” (integration), “Zurückholen” (bringing back), and “Rückverlagerung” (back-sourcing). The search was conducted for publications over the last 20 years (1997 – 2017). Following recommendations by [10], this literature review has chosen Factiva, one of the leading databases for news sources, and additionally EBSCO to increase coverage of trade publications and business journals. For German literature, the search was extended to the German-focused press databases WISO and GENIOS. Over the literature search and analysis process, over 650 practitioner literature items were studied [27]. In the subsequent step, a practical screening was performed to identify all non-relevant publications [31]. After removal of duplicates within the retrieved articles, we have identified a total of 148 English and 25 German practitioner-focused publications [27].

3.2 Findings from the literature reviews

Academic literature

Looking at the research type of the analyzed academic publications, we observed that almost half of the publications are formulative and thus aim to develop a model, guideline, or similar artefact [32], followed by explanatory-interpretive and confirmatory publications [8]. Further, when analyzing the applied reference theories, we identified two main

theories to interpret back-sourcing decisions, namely Transaction Cost Economics and Agency Theory [8]. Other theories included Organizational Learning, the Knowledge-Based View of the firm, and Intellectual Capital [8].

Since there was no exhaustive literature review of the state of the research available yet, the aim of the academic literature review [8] was to explore and synthesize the existing literature on IS back-sourcing. Therefore, we identified three major research themes which were frequently discussed within the retrieved academic literature, namely (1) motivators for back-sourcing, (2) decision factors, and (3) implementation success factors [8]. Those research themes can be located along the different steps of the back-sourcing process. Based on the findings from the literature analysis and by adapting previous contributions by McLaughlin and Peppard [33] and Veltri et al. [4], we introduced a back-sourcing process which is displayed in Fig. 2 [8]. In the following, we want to discuss the elements of the research themes in more detail.

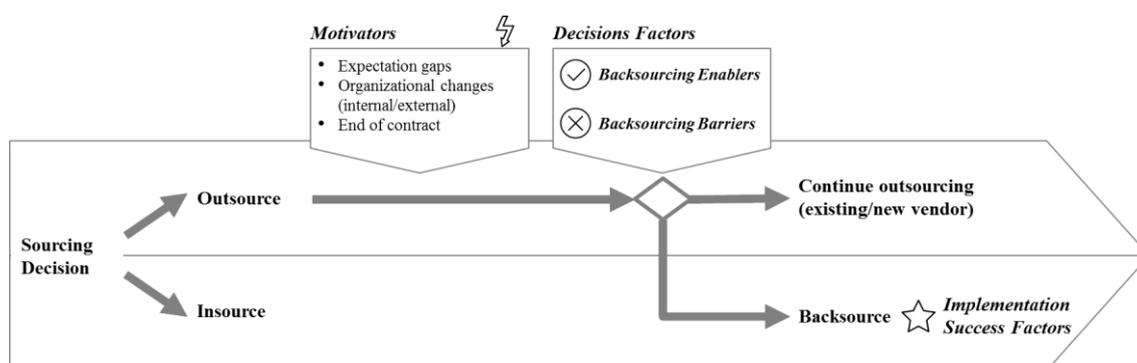


Fig. 2 Back-sourcing process introduced in our academic literature review [8]

Following the categorization presented by Veltri et al. [4] and Wong [34], the motivators for back-sourcing decisions can be classified into (1) expectations gaps, (2) internal organizational changes, and (3) external organizational changes. For completeness, (4) end of contract can be added as an additional motivator [8]. The first category, expectation gaps, contains the most frequently discussed reasons why companies are considering a back-sourcing decision, for example, dissatisfaction with the service quality, higher than expected costs, loss of control, missing access to latest technology, or general contract problems [8]. The second category contains reasons like changes in management or a new, more strategic role for IS [8]. External organizational changes can be represented, for example, by changes in the vendor organization or structural changes [8].

If one or more of the introduced motivators triggered a re-consideration of the outsourcing relationship, several decision factors can influence the decision. Back-sourcing enablers support a decision to back-source, while back-sourcing barriers lead to a continuation of outsourcing with the existing or a new vendor [8]. Identified examples for back-sourcing enablers are, for example, incorporated reversibility to facilitate a back-sourcing transition, the availability of internal IS capabilities, or the presence of an organizational crisis within the company [8]. In contrast, barriers for back-sourcing can be represented by lock-in and switching costs and IS knowledge and resource gaps within the company [8].

Lastly, in our previously conducted academic literature review [8], we subsumed six implementation success factors based on the existing academic literature: (1) project management, e.g., existence of a dedicated project team and project plan; (2) employee (re-)hiring strategy to ensure resource availability; (3) communication between all stakeholders; (4) strategic orientation, e.g., a clear fit into the overall IS strategy for the company; (5) continuity of operations without interruption of day-to-day operations; and (6) knowledge transfer to successfully re-integrate the previously outsourced knowledge back into the company again.

Practitioner literature

During the analysis of practitioner literature on IS back-sourcing, we followed an inductive approach towards literature coding to identify the topics of relevance to practitioners without testing predetermined themes [10, 27, 35]. Additionally, we classified each publication based on its topic, article type, publication type, and further information. Table 1 displays the dimensions within each category which were used to analyze practitioner literature [27].

Table 1: Applied categories for structuring the practitioner literature analysis [27]

Category	Dimensions					
(1) Topic of the Article	Discussion of individual back-sourcing case	Discussion of industry trend	Presentation of survey results	Report on individual back-sourcing case	Vendor perspective	N/A
(2) Article Type	Editorial/comment	Feature/background article	News article	Press release	Recommendations/practitioner guide	Other
(3) Publication Type	National newspaper	News agency	Periodical	Regional newspaper	Trade journals	Other
(4) Applied Terminology	Back in-house	Backsourcing	Insourcing	Eingliederung ¹	Rückverlagerung ¹	Zurückholen ¹
(5) Additional Information	Company name (if applicable)	Country	Journal name	Publication year	N/A	N/A

¹ German publications only

Most of the analyzed publications are either news articles or feature/background articles (83%), followed by editorials/comments [27]. The majority of publications were released in trade journals (80%). Regarding the year of publication, there is a peak around the year 2005 in both English and German publications triggered by prominent back-sourcing cases (e.g., JP Morgan Chase, Sainsbury's), and afterwards a relatively constant number of publications per year [27]. When analyzing the applied terminology, we observed that most practitioner publications utilize the term back in-house, followed by the term insourcing [27]. At the same time, the word back-sourcing is used occasionally. This leads to the interesting observation that the terminology applied in practitioner literature does not correspond to the terminology applied in academic literature. We concluded that this could limit the relevance of each group's contribution for each other [9], since it potentially leads to confusion or ambiguity in the communication between both groups [27].

Looking at the topics of the publications while conducting the literature review, we observed that most publications take a descriptive approach by either discussing or reporting about cases of IS back-sourcing [27]. Other publications complement by either presenting survey results or discussing back-sourcing as a larger industry trend. Within these practitioner-focused publications, four general themes could be identified, namely (1) reasons for back-sourcing, (2) presentation of survey results, (3) discussion of industry trends, and (4) back-sourcing success stories [27].

Of those four themes, the discussion of reasons why companies have back-sourced is by far the most prominent theme. Within the analyzed practitioner literature, over 50% of all publications and over 60% of the publications presenting individual back-sourcing cases are stating reasons behind a back-sourcing decision [27]. Especially, three major reasons could be identified: cost savings, quality improvements, and increase in control or flexibility [27].

4. Expert interviews

4.1 Methodology

Our objective behind conducting expert interviews was to gain deeper insights into the practical relevance and current trends linked to the topic of IS back-sourcing. Before presenting the interview findings, we will first discuss the applied methodology. The selection of participants was carried out via the professional career networks LinkedIn and Xing. While the first shows a more global coverage, the latter focuses on German-speaking countries [36]. In the first step, we searched for keywords like back-sourcing, sourcing, and insourcing in combination with IT or information technology to identify relevant candidates. We then reviewed candidates' profiles to determine their experience in the respective field, for example, based on the current and previous roles, realized projects, and professional tenure. Thus, we compiled a list of 60 potential interviewees. The identified experts represent a broad spectrum of geographies (e.g., North America, multiple European countries) and job profiles (e.g., consultants at IS consulting companies, independent IS advisors, or employees responsible for IS sourcing at large companies). Conducting multiple interviews with different experts allows us to cover a broad spectrum of different experiences and perspective on the research topic. Subsequently, we contacted all candidates via the integrated mail function from LinkedIn/Xing, and asked them to participate in a telephone interview on the topic of IS back-sourcing.

Following our aim to gain deeper understanding into the perspective from practitioners on the topic of IS back-sourcing, we selected a qualitative research approach without testing predetermined themes [9, 10, 37]. Therefore, we used semi-structured interviews with open questions, giving the participants the flexibility to express their opinions and to share their experiences in the field of IS back-sourcing [25, 37]. To increase the acceptance of the selected candidates to participate in the interviews, we chose to ask for interview slots of 20 minutes. The questions focused on 1) discussing the participants' perceptions and experiences with IS back-sourcing, 2) identifying reasons for and against IS back-sourcing; and 3) revealing trends and topics of relevance pertinent to the topic of IS back-sourcing. For additional follow-up questions while discussing the pre-defined topics, we used listening methods and improvisation as recommended by Myers and Newman [25]. Due to the differences in terminology applied in practice [27], we defined the term back-sourcing at the beginning of each interview. This approach reduces the risk associated with the ambiguity of terms in order to avoid that the interview partner might not completely understand the questions or used terminology [25]. For every interview the interviewer created detailed minutes and analyzed subsequently to summarize key arguments and opinions.

4.2 Findings

To structure the findings from the interviews, we applied the same set of three categories used to conduct the interviews. Of the identified and contacted participants, 16 (27%) accepted to participate in an interview, which were scheduled between February and April 2018. Most of the participants were consultants, either employed at IS consulting companies or working as independent advisors. The sample of participating experts underlies a certain bias based on the individual's interest to participate in the interviews. This might partially explain the high share of consultants within the participants, and potentially also the Europe-focused selection of experts. Table 2 shows the geographic background, field of work, and job profile of the interview participants.

Table 2. Interview participants and their background

ID	Region	Country	Field of work	Job profile
P01	Europe	Germany	Consultant	Leading position at IS consulting company
P02	Europe	United Kingdom	Consultant	Leading position at IS consulting company
P03	NAFTA	Canada	Consultant	Independent IS sourcing advisor

ID	Region	Country	Field of work	Job profile
P04	Europe	Germany	Consultant	Leading position at IS consulting company
P05	Europe	United Kingdom	Consultant	Independent IS sourcing advisor
P06	Europe	Germany	Consultant	Leading position at large consulting company, focusing on IS
P07	Europe	Netherlands	Industry company	IS sourcing manager at industry company
P08	Europe	Italy	Consultant	Independent IS sourcing advisor
P09	Europe	Germany	Consultant	Independent IS sourcing advisor
P10	Europe	Austria	Consultant	Independent IS sourcing advisor
P11	Europe	Germany	Consultant	IS sourcing manager at industry company
P12	Europe	Netherlands	Consultant	Independent IS sourcing advisor
P13	Europe	Germany	Consultant	Senior manager at large consulting company, focusing on IS
P14	Europe	Netherlands	Consultant	Freelance IS sourcing project manager
P15	Europe	Germany	Consultant	Independent IS sourcing advisor
P16	Europe	Germany	Consultant	Leading position at IS consulting company

Perceptions on IS back sourcing

Participants' personnel perceptions of IS back sourcing were either based on individual experiences from supporting back sourcing projects in various industries, e.g., banking, retail, or automotive sector, or from closely following industry discussions and trends. While conducting the interviews, we observed clear differences between the experts' opinions, from strong supporters of back sourcing ("if you are big enough, you should be good enough to do it inhouse") to sceptics ("back sourcing is backward-looking"; "rather fix the problems of your outsourcing relationship").

To contextualize a potential back sourcing trend, the interviewed experts often referred to first generation outsourcing contracts, when companies outsourced large parts or their entire IS operations to IS vendors, often within joint-ventures or in separate organizations. These transitions often came with shortcomings, for example, badly designed contracts, the reduction of internal control and governance structures, and unrealistic business case expectations [4, 34]. This led to some large back sourcing events (e.g., JP Morgan Chase and Sainsbury's in 2005), and correspondingly an increase in public attention about this topic [38, 39]. According to the interview participants, the general trend towards outsourcing of IS services however was not changed by these lighthouse cases.

Based on the experts' perceptions, many companies have learned from their initial mistakes, and have subsequently created more robust outsourcing relationships, e.g., with termination clauses, shorter contract durations, and stricter and more clearly defined SLAs (Service Level Agreements). Also, they created more realistic business cases and at the same time improved their internal governance, for example, with an efficient retained organization to manage and control their IS vendors.

According to the experience of the interviewees who have supported or implemented back sourcing transitions, many companies decide to first repatriate the previously outsourced services after terminating the outsourcing contract, often accompanied by much press attention. Then, they selectively outsource parts of the back sourced services afterwards to other IS vendors. Especially generic functions, for example, datacenter or network operations, are often outsourced again afterwards, while more strategic, business-critical functions are kept in-house. This also connects to arguments stated by the experts which emphasized the conscious differentiation between services suitable to be outsourced and services to perform in-house.

Reasons for and against IS back sourcing

All interviewed experts had their clear perspective on reasons why companies decide for or against back sourcing their IS services. Depending on their general attitude towards the topic, either the reasons for or against dominated in the answers. Fig. 3 provides an overview of the stated arguments, which will be discussed in the following. The numbers in brackets indicate the number of experts who mentioned the respective reasons based on their general experience from supporting back sourcing decision processes during their professional career. Corresponding to the aim of our research to gain a better understanding into the general perspective from practitioners on the topic of IS back sourcing, at this stage of our research we did not focus on specific projects, but rather on the overall perception of the research topic.

(1) Reasons for back sourcing	(2) Reasons against back sourcing
<ul style="list-style-type: none"> ▪ Cost savings (12) ▪ Better quality (12) ▪ Improved collaboration (10) ▪ Personal preferences (7) ▪ Compliance with regulatory requirements (5) 	<ul style="list-style-type: none"> ▪ Missing staff (internal/external) (12) ▪ Lack of relevant IS knowledge (12) ▪ High switching costs (5) ▪ Missing support from the provider (5)

Fig. 3: Reasons for and against back sourcing as mentioned by interviewed experts

(1) Reasons for back sourcing: Based on the conducted interviews, we could identify five key reasons why companies decide in favor of back sourcing. First, companies aim to achieve *cost savings*, which are justified for example by possibilities to increase efficiency and automation when performing the services in-house. Also, experts stated the high costs associated with change requests, e.g., for software maintenance and development, leading to higher than expected costs within the outsourcing setting. Additionally, companies could avoid paying for the additional profit margin obtained by the IS vendor. A second reason is the aspiration to *increase quality* or performance of the IS services, which is often based on a dissatisfaction with the status quo. Third, companies are trying to *improve the collaboration* between IS and business departments, for example, the service orientation, or the control over the IS processes. Fourthly, the interviewed experts highlighted the importance of decision makers' *personal preferences* in the decision. According to their experience from supporting back sourcing projects, decisions are often motivated by previous experience, personal attitudes, or also a perceived need from the management to demonstrate change within the organization. This reason was stressed by many experts as very important, since it might bias decision makers' perception of the significance of other reasons. Lastly, *regulatory requirements* can drive companies towards bringing their IS back in-house, for example to comply with stricter data privacy laws.

(2) Reasons against back sourcing: From the interviews, we synthesized four reasons often preventing companies from back sourcing. First, *missing staff* often forms a large obstacle for companies, since they do not have the required staff inside their organization, and since they also have difficulties in recruiting the required resources on the labor market. Often, companies already struggle to replace retiring employees and are thus reluctant to aim for further growth of their IS workforce. Second, companies *lack relevant IS knowledge*, and thus are not able to properly define their future IS sourcing strategy or have troubles in managing the transition. A third reason are *high switching costs* related with the back sourcing decision, for example, to build up own infrastructure, or to cover arising contract penalties. Lastly, *missing support from the provider* can prevent companies from back sourcing, for example due to a lack of documentation, or a non-cooperative behavior regarding the know-how transfer.

Adjacent trends and topics

To expand our focus and to identify links with adjacent research fields, we additionally asked the interviewed experts about current trends and topics pertinent to the sourcing of IS. Based on the responses in the interviews, we could identify five emerging themes which we will introduce in the following. While conducting the interviews, we observed a high concordance of the experts' answers towards these five themes. While those trends do not create a holistic overview of all trends within the IS sourcing landscape, we argue that they provide a helpful overview for other researchers.

Selective sourcing: Companies are more frequently sourcing smaller IS work packages from an increasing number of IS vendors. This is often driven by business departments, which aim for specialized vendors for each functionality, and are less concerned about the overall IS supplier landscape of the company. This trend consequently reduces the incidents of large outsourcing contracts with one vendor responsible for provisioning the majority of IS related services, which can be observed in the practice [40].

Challenge of service integration: Connected to the growth in selective sourcing, companies are facing an increased challenge of successful service integration. Due to the multitude of interfaces between IS vendors, applications, and involved business departments, companies must carefully manage the integration of all services. In the past, when the company had one or few large outsourcing vendors, this role often was fulfilled by them as part of their contractual scope. Therefore, the experts observe that many companies are building up their service integration capabilities in-house to cope with this challenge and facilitate a more selective sourcing strategy.

Standardization/move towards the cloud: The interviewed experts all stated an increase in standardization of software products, often accompanied by a move towards the cloud. This leads to a fundamental change of the application landscape at large companies. Experts observe an increased implementation of standardized software solutions developed by large software companies (e.g., Salesforce, Oracle) often delivered from a cloud infrastructure, and a further decrease in special software applications developed to the requirements from individual companies. For companies, this approach usually offers faster roll-out times and facilitates access to best-in-class technology.

Choice of location: During the interviews, many experts indicated that companies who had outsourced their IS provisioning to offshore locations, for example India, are often reconsidering their choice of sourcing location in subsequent sourcing decisions. Unsatisfying experiences, for example, due to cultural differences or large time differences, often combined with unrealistic expectations from the outsourcing companies lead to preferences to sourcing in nearshore countries, or even onsite locations [41]. In many cases, nearshore countries still offer advantages like lower labor costs than those in the home country, but overcome potential disadvantages of the offshore locations. This also matches arguments seen in the academic literature [42].

Increase in agile development: Experts also discussed IS sourcing in the context of the continuing increase in implementing agile software development methods. Since this requires a closer collaboration between the business departments as product owners or sponsors and developers, some companies are repatriating their IS to allow for more agile development, especially in strategically important functions. However, the experts stated that in practice, agile development was also successfully implemented in outsourcing settings, when companies avoid common pitfalls like a mismatch between the commissioned scope of the outsourcer and needed capabilities on the project, or missing interfaces with the business departments.

5. Comparison of findings

After separately introducing the findings from each source of data, namely academic literature, practitioner literature, and expert interviews, we will now compare the findings. We will especially focus on three main categories, (1) scope of (back-)sourcing, (2) reasons for back-sourcing, and (3) reasons against back-sourcing. Table 3 displays the three categories and main aspects which we will discuss in the following paragraphs.

Table 3. Comparison of findings from literature analysis and expert interviews

	Expert interviews	Academic literature	Practitioner literature
(1) Scope of back-sourcing	<ul style="list-style-type: none"> ▪ Differentiation between services suited for <ul style="list-style-type: none"> ○ Outsourcing: e.g., maintenance, datacenter, etc. ○ In-house/back-sourcing: e.g., architecture, service integration, etc. ▪ Conscious sourcing decisions 	<ul style="list-style-type: none"> ▪ Mostly "in or out"-view ▪ Limited consideration of scope/differentiation between services 	<ul style="list-style-type: none"> ▪ Limited discussion in purely back-sourcing focused literature, but addressed in general IS outsourcing articles
(2) Reasons for back-sourcing	<ul style="list-style-type: none"> ▪ Cost savings ▪ Better quality ▪ Improved collaboration ▪ Personal preferences ▪ Compliance with regulatory requirements 	<ul style="list-style-type: none"> ▪ High concordance with the category expectation gaps ▪ No/less mentioning of personal preferences and regulatory requirements 	<ul style="list-style-type: none"> ▪ High concordance of key reasons; mainly cost, quality and control ▪ Personal preferences less cited in literature
(3) Reasons against back-sourcing	<ul style="list-style-type: none"> ▪ Missing staff (internal/external) ▪ Lack of relevant IS knowledge ▪ High switching costs ▪ Missing support from provider 	<ul style="list-style-type: none"> ▪ Good match with identified back-sourcing barriers, e.g., lock-in and knowledge/resource gaps 	<ul style="list-style-type: none"> ▪ No/very limited discussion within the practitioner literature

(1) Scope of (back-)sourcing: Within the expert interviews, we observed that most experts stressed a required differentiation regarding the scope of the sourced IS services. Instead of arguing for a general out- or insourcing of IS services, the experts emphasized the importance of distinguishing between services suited for outsourcing, for example, maintenance or operation of datacenters, and services which should be performed in-house, for example architecture or service integration. Consequently, these services are suited for back-sourcing if currently outsourced to an external IS vendor. Further, we can conclude that the experts are reflecting many aspects connected to the sourcing decision and call for more conscious sourcing decisions for each separate function.

In contrast, when analyzing the academic literature on IS back-sourcing, we mostly found publications discussing an in-or-out view, and therefore no differentiation between the suitability of individual services for back-sourcing. Therefore, we conclude that the back-sourcing-focused academic literature has shortcomings in considering the functional scope of back-sourced services, since most authors do not address the differentiation between services as emphasized by the interviewed experts.

Similarly, in the reviewed practitioner literature on IS back-sourcing, there are only limited discussions regarding the scope of (back-)sourcing. However, when looking beyond on practitioner literature considering IS sourcing in general, we do observe similar arguments as collected in the expert interviews.

(2) Reasons for back-sourcing: Comparing the reasons for back-sourcing, we generally notice a high concordance between all three sources of data. Especially the most important and most discussed reasons around costs, quality, and control/collaboration could be observed in each source. While practitioner literature mostly discusses those key reasons, academic literature aims to identify a broader range of all potential reasons, for example, changes within the internal organization or consequences from mergers and acquisitions [27]. This matches the academic aspiration towards exhaustiveness and accuracy [18] while practitioners rather put focus on the topics of largest relevance to them.

Within the expert interviews, we also observe a concentration of fewer, and more essential reasons, matching those from the practitioner literature. However, we observed two reasons less cited in the academic and practitioner literature,

namely decision makers' personal preferences and the compliance with regulatory requirements as driving force for back-sourcing. Especially the great importance of personal preferences of the decision makers, e.g., based on previous experience, personal attitudes, or the perceived need to demonstrate change within the organization was a new result from the expert interviews. Even though personal preferences are currently not frequently mentioned in the academic literature on IS back-sourcing, some researchers have previously discussed this topic. For example, McLaughlin and Peppard [33] argue that personal experience could bias decision makers in future sourcing decisions. Those preferences could be, for example, based on past experience with back-sourcing, insourcing, or outsourcing [43]. The increasing importance of regulatory requirements as a driver of back-sourcing decisions can be explained by stricter standards introduced by regulatory bodies, e.g., the Basel regulations for the banking sector in Europe [44, 45].

(3) Reasons against back-sourcing: The high concordance between the three sources changes when looking at the reasons against back-sourcing. Especially within the practitioner literature, we could find only very few discussions regarding potential reasons against back-sourcing. This could be attributed to the fact that most of the practitioner publications can be characterized by their descriptive type. Therefore, they report on cases where companies decided in favor of back-sourcing and thus do not discuss reasons against back-sourcing [27]. Comparing academic literature and expert interviews, we generally observe a good match between reasons stated by the experts and the identified back-sourcing barriers within academic publications, for example lock-in effects and knowledge and resource gaps.

6. Discussion

Reflecting on RQ1, which discussed the concordance between the perceptions of sourcing experts on IS back-sourcing and the available literature, we can conclude that in general, there is a good match between all sources of data. This supports previous academic contributions in the field of IS back-sourcing. At the same time, there are some noteworthy differences, for example, the importance to differentiate between services suited for out- or insourcing, which was emphasized by the interviewed experts. In addition, we observed certain differences among the reasons for and against back-sourcing, for example, the significance of personal preferences of the decision makers.

Generally, we conclude that the topic of IS back-sourcing is relevant to companies. However, a certain degree of outsourcing will most likely always remain. In addition, companies as well as individuals have gained substantial sourcing experience over the last decades. Thus, they are continuously improving their sourcing setup and strategy, for example by strengthening their vendor management organization or by increasing internal know-how which might lead to less back-sourcing based on dissatisfaction or wrong expectations. An additional option could be to set up shared service centers in on- or offshore locations with internal resources, but with the possibility to achieve benefits like efficiency, cost savings, or better access to labor [46]. Also, the discussed trend towards more conscious, and – with respect to scope and volume – smaller outsourcing decisions could reduce large back-sourcing transitions in the future. However, due to the increasing strategic importance of IS [8], we are still expecting that companies will back-source certain functions to increase control and flexibility.

After the detailed discussion and comparison of the utilized sources of data, we can draw conclusions regarding the overall IS back-sourcing process. Consistent with RQ2, we have created a comprehensive framework to display all elements of a back-sourcing transition, shown in Fig. 4. Our objective was to connect all elements which are part of a back-sourcing process and which we have identified by reviewing the existing literature on IS back-sourcing and by additionally consolidating opinions from sourcing experts. By doing so, we extend previous academic contributions, for example by McLaughlin and Peppard [33], Veltri et al. [4], and Wong [34], who already presented different back-sourcing frameworks in their works. Based on our research findings, we can enhance those contributions with additional aspects connected to back-sourcing transitions.

At this point, we will briefly introduce the main elements of the framework, and then discuss three topics more detailed as potential future research opportunities. In the middle of the illustration, we displayed the temporal sequence of different sourcing decisions. Initiating from the first sourcing decision on the left, typically characterized by outsourcing large volumes to one or few vendors, follows the second sourcing decision. At this point, a company takes the decision

to backsource or not, which is influenced by organizational factors and individual factors. Here, especially individual factors like sourcing experience and external influence extend previous academic publications, whereas organizational factors are mostly a result from analyzing the existing literature. Further, the framework in Fig. 4 considers the importance of differentiating between back sourcing entirely, back sourcing parts of the outsourced IS services, and continuing to outsource. This aspect also enhances the existing research cited above. The second sourcing decision can then be followed by n further, maybe less significant sourcing decisions, often characterized by sourcing of selective IS services triggered by business departments.

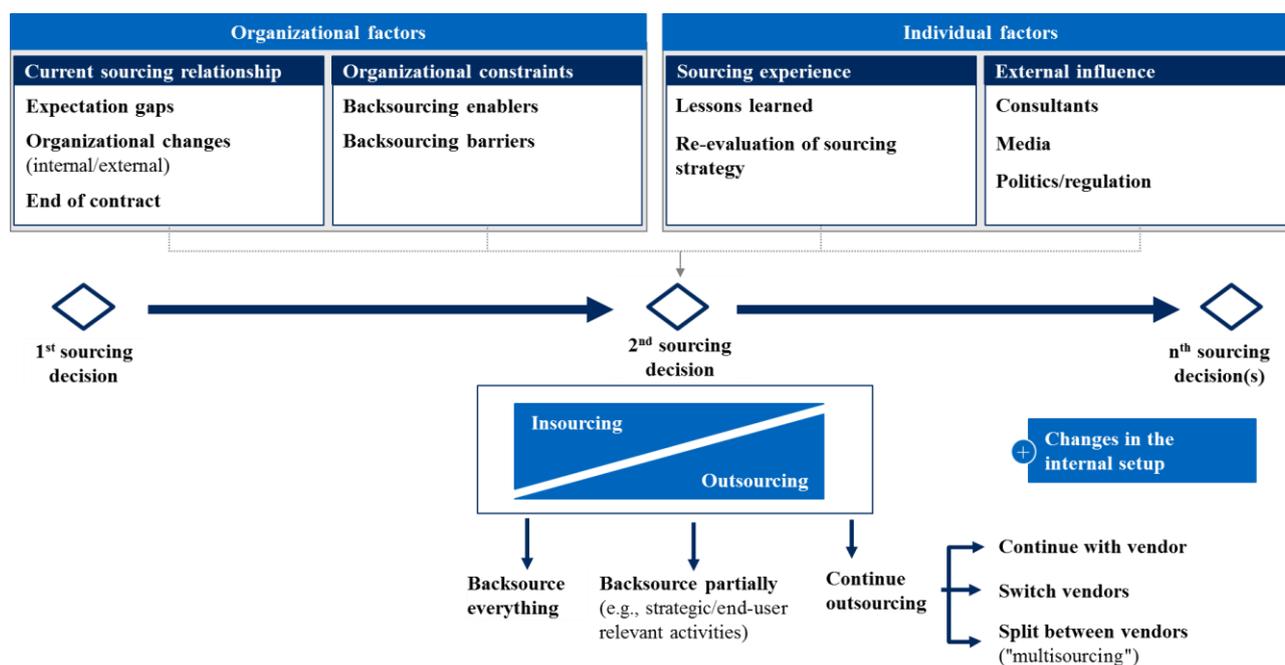


Fig. 4: Comprehensive overview of elements connected to a back sourcing transition

Based on the introduced overview of elements connected to an IS back sourcing transition, we suggest three potential research opportunities to further contribute to the existing research. Drawing upon our review of the existing body of academic literature in this field combined with the connection to IS sourcing practitioners, we introduce those research topics to provide an impulse for future researchers. This approach follows the recommendations by Benbasat and Zmud who suggest to also look at practice to discover topics for future research [19].

(1) Re-evaluation of sourcing decision: A first research topic could be the examination of the decision to backsource with the objective to determine why a company would re-evaluate and change its previous decision to outsource. We argue that this re-evaluation is driven by the sourcing history of the company and the experiences and lessons learned during the outsourcing relationship. Different influencing factors, for example, organizational factors and individual factors, could thus lead to a change in the sourcing strategy. This research topic could possibly extend existing work on IS outsourcing decisions, for example the frequently cited descriptive model by Lacity et al. [47], with back sourcing-specific factors. Also, further research could extend the research from Whitten and Leidner [48], who tested the influence of service quality, product quality, relationship quality, and switching costs on the decision to switch vendors or to backsource amongst top executives in the US. Lastly, we see the opportunity to follow Foerstl et al. [49], who

discussed reshoring in the field of manufacturing, and proposed to further investigate specific drivers of back-sourcing decisions based on Transaction Cost Economics and Organizational Buying Behavior Theory.

(2) Back-sourcing scope: Second, future research could focus on developing decision criteria to decide which services to repatriate as part of a back-sourcing decision, and which services to leave in an outsourcing setting, either at the same vendor or by switching them to a new vendor. Potential influencing factors within the back-sourcing context could be, for example, a different strategic positioning of the IS function or desired changes in the collaboration model. While working on this topic, researchers could build upon existing theoretical foundations on (selective) outsourcing, for example by Grover et al. [50] or Lacity et al. [51].

(3) Back-sourcing transition success factors: A third research topic we are proposing is the derivation of the required steps of a back-sourcing transition after the decision was made, coupled with the identification of success factors companies should consider. This research could extend existing research on outsourcing transitions, for example by Beulen et al. [52] or on the successful switching between vendors, for example, by Chua et al. [53]. Additionally, it could enhance first academic contributions within the IS back-sourcing literature, for example by Butler et al. [54] or Bhagwatwar et al. [55]. Findings could be tested within qualitative case studies with employees from companies that have back-sourced IS services.

7. Conclusions and limitations

Our objective for this paper was to determine how the perceptions from IS sourcing experts on IS back-sourcing matches the available literature on the same topic. Additionally, we aimed to determine all aspects connected to an IS back-sourcing transition to identify further opportunities for research. At first, we presented the underlying methodology and findings from two previously conducted literature analyses examining both the academic and the practitioner literature on IS back-sourcing. Within the academic literature, three major research themes could be identified, namely motivators for back-sourcing triggering a re-evaluation of the sourcing setup, decision factors which positively or negatively influence the back-sourcing decision, and implementation success factors. For each theme, we presented the constituting aspects found in the academic literature. Similarly, we discussed results from reviewing practitioner literature on IS back-sourcing. Here, the identification of reasons for back-sourcing is the main theme discussed in the retrieved publications. A remarkable fact we observed is the different terminology applied in both literature types: while academic literature mostly uses the term back-sourcing, practitioner literature mostly applies the terms back in-house or insourcing.

In a second step, we presented findings from a series of qualitative interviews with IS sourcing experts. During the interviews, we could observe clear differences between the experts, from back-sourcing sceptics to strong back-sourcing supporters. Based on their perceptions, the first companies which performed back-sourcing were correcting shortcomings often based on missing experience when entering first generation outsourcing contracts. At the same time, companies still rely on outsourcing for many IS functions, and have created more robust, better functioning outsourcing relationships. The experts confirmed that back-sourcing is happening and relevant in practice, and discussed several reasons for and against back-sourcing. Arguments for back-sourcing are, for example, cost savings and improvements of quality or collaboration. Further, personal preferences or regulatory requirements can lead towards a back-sourcing decision. In contrast, stated reasons against back-sourcing were missing staff and IS knowledge, high switching costs, and missing support from the provider. Additionally, we were also able to identify adjacent trends within IS sourcing in general, for example the growth in selective sourcing and thus the increased challenge of service integration, or a more conscious choice of location to balance cultural fit and benefits from lower labor costs.

In a last step, we compared the findings between the three introduced sources of data. We concluded that the experts had a stronger emphasis on the importance to differentiate between services suited for out- or insourcing, whereas the literature mainly took an in-or-out view, without considering the scope of back-sourcing or differentiating between services. When comparing the reasons for back-sourcing, we observed a high concordance between all three sources regarding the main reasons to back-source. The practitioner literature focuses on stating the key reasons, while academic

publications aim for exhaustiveness by identifying all possible reasons. Two new reasons emerged during the expert interviews, which were less found in the literature, namely the importance of managers' personal preferences in the sourcing decision, and the need to comply with regulatory requirements. Comparing the reasons against back-sourcing between the different sources of data, the concordance is reduced. Practitioner literature contains very limited discussions on reasons against back-sourcing. When only looking at the expert interviews and academic literature, we generally see a good match between the stated reasons.

Overall, our contribution is twofold. For the academic community, the main implications stem from the three outlined avenues for further research. By combining academic literature with both practitioner literature and expert interviews, we were able to draw an IS back-sourcing framework, spanning from the original (out-)sourcing decision to the successful repatriation of the services. This approach allowed us to identify opportunities to extend the existing body of research on IS back-sourcing. Second, the implications for practitioners originate from the aggregation and comparison of practitioner-focused literature and practical experiences from sourcing experts, for example, on key reasons to back-source or about connected trends and developments. Additionally, in the future practitioners could benefit from an even more practitioner-oriented academic research based on the recommendations within this contribution.

Our research has several potential limitations, which should be considered. Despite a systematic approach to identify the set of relevant experts for the qualitative interviews, which included a thorough search within the leading career networks and a screening of the candidates' profiles, we might have missed relevant experts in the field. Further, since not all the contacted experts were willing to participate in the interviews, we omitted additional opinions leading to a potential non-response bias. A further bias could stem from the professional experience of the experts, who often advise companies in outsourcing assignments, and thus are potentially inclined to favor outsourcing over insourcing. However, in total we consider the approach of selecting and interviewing experts in our research as appropriate and robust to identify the perceptions of sourcing experts on the topic of IS back-sourcing.

A further limitation could be found in the temporal difference between the literature publication dates and the dates of conducting the interviews. The search period for the analyzed literature were the last 20 years, from 1997 to 2017, whereas the interviews were conducted between February and April 2018. This might lead to new perspectives, for example, regarding the reasons for or against back-sourcing, or the topicality of certain trends. For example, the compliance with regulatory requirements as reasons for back-sourcing identified in the expert interviews might be based on recent regulatory changes, and was thus not reflected in earlier publications. While this fact might be a limitation from one standpoint, we argue that it is justifiable since it also enables us to contribute new arguments relevant to practitioners to IS research. Therefore, it contributes to increase the relevance of academic research for practitioners, which is a frequently named shortcoming of IS research.

Additional limitations could stem from the two previously published literature reviews, which are expanded in this contribution. For example, those literature reviews might not have retrieved all relevant material on the topic of IS back-sourcing within academic and practitioner literature. Further relevant practitioner literature might have only been published as internet articles or as reports from consulting companies, and may have been ignored by the utilized databases. Additionally, we focused on selected databases during the literature retrieval, leaving the possibility to miss further publications only listed in other databases.

Overall, we are convinced that our contribution follows an appropriate and robust research approach and methodology despite the mentioned limitations, and thus provides a benefit to both the academic and the practitioner community.

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