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INFORMATION SYSTEMS BACKSOURCING: A LITERATURE REVIEW

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ABSTRACT

Information systems backsourcing describes the transfer of previously outsourced activities, assets, or personnel back to the originating company to regain ownership and control. While there is much research on information systems outsourcing, the topic of backsourcing information systems is still an emerging research area. Therefore, our paper aims to explore and synthesize the existing literature on information systems backsourcing, since there is no exhaustive literature review of the state of the research to our knowledge available yet. In this paper, we create a framework to structure the existing research along the overall backsourcing process. We identify different motivators, such as expectation gaps, or internal and external organizational changes, leading towards a backsourcing decision, and factors positively or negatively influencing this decision. Additionally, we derive implementation success factors based on the existing literature to guide companies through the backsourcing process. We also differentiate the term backsourcing from related, sometimes synonymously used terms, by emphasizing the change of ownership back to the company of origin as the main criterion. Additionally, we discuss opportunities for future research in the field of information systems backsourcing.

Keywords: backsourcing, back in-house, backshoring, reshoring, insourcing, re-outsourcing, information systems, information technology, literature review

INTRODUCTION

The term backsourcing describes the process of transferring previously outsourced activities, assets, or personnel back in-house to resume ownership and operations (Hirschheim and Lacity [25]). With the increasing digitalization of business models, the trend towards stronger interlock between business and information technology departments, and the steadily increasing speed of development and adoption of new technologies, the role of IT departments is changing (Heltzel [23]). Companies are starting to challenge their currently applied organizational structures to ensure that they are successfully sustaining in a changing business environment.

In contrast to the more mature trend of outsourcing, information systems backsourcing is still a relatively new trend and was first observed 2004, when JP Morgan Chase, after merging with Bank One, decided to prematurely terminate its two year old outsourcing contract with IBM in favor of performing the tasks in-house (Overby [41]). The young age of backsourcing observations might also explain the fact that information systems backsourcing is still an emerging research area.

This motivated us to conduct a structured literature review to determine the state of the research, with the goal to synthesize the existing publications and to derive emerging themes and future research opportunities (Vom Brocke et al. [52]). In this paper, we develop a framework to describe the backsourcing process after the initial decision to outsource and to map the identified motivators, decision factors, and implementation success factors discussed in the existing literature. Additionally, we highlight future research opportunities in the field of information systems backsourcing.

The remaining paper is structured as follows. We will first discuss related work, then describe our methodology and differentiate the applied terminology. The subsequent section provides a descriptive overview of the literature search results, followed by a discussion of the identified research themes. The final section summarizes the key findings and limitations, and discusses future research opportunities.

RELATED WORK

Within the existing literature on information systems backsourcing, some authors have included literature reviews as part of their work to determine the state of the research. For example, McLaughlin and Peppard [35] review parts of the existing outsourcing and backsourcing literature and present backsourcing as a strategic option. Additionally, they refer to several publications in practitioner magazines about frequency and examples of backsourcing cases. Butler et al. [9] discuss the existing backsourcing literature to compare the information systems sourcing cycle between the outsourcing and the backsourcing case to identify differences between the transition from client to the vendor and vice versa. Martens and Teuteberg [34] and Nagpal [37] identify reasons and motivations behind backsourcing decisions. While Martens and Teuteberg [34] develop a model to evaluate backsourcing decision within the context of cloud computing, Nagpal [37] focuses on the IT architecture and its influence on the ability to backsource. However, to our current knowledge there is no rigorous (Vom Brocke et al. [51]), exhaustive review on the existing information systems backsourcing literature, yet. More so, multiple authors highlighted the deviation between the large number of outsourcing literature, and limited amount of research focusing on information systems backsourcing, and therefore called for further research in this area (e.g., Al-Ahmad and Al-Oqaili [2], Barney et al. [4], Bhagwatwar et al. [8], Benaroch et al. [6], McLaughlin and Peppard [35]). This motivated the authors of the paper at hand to conduct a systematic literature review, identifying and analyzing all existing literature on the topic of information systems backsourcing.

In addition to our focus on backsourcing research alone, we also reviewed major information systems outsourcing publications to determine their perspective on backsourcing. For example, in their comprehensive and frequently cited literature review, Dibbern et al. [15] introduce backsourcing as a potential trend in the outsourcing industry due to the high amount of outsourcing contracts to be renegotiated or terminated. Lacity et al. [29] mention backsourcing as an option for the "second generation outsourcing decision", after the initial outsourcing contract has ended. In their recently published review, Liang et al. [33] introduce backsourcing as part of the "re-outsourcing decision" after (early) termination of an existing outsourcing contract which is influenced for example by switching costs or previous experience. However, none of the major information systems outsourcing literature reviews have included a comprehensive review of all available backsourcing literature. With this paper, we aim to close this gap and thus contribute to the existing literature.

Keeping the focus on backsourcing, but shifting the focus away from information systems to other functional areas, we also identified related work. For example, Wiesmann et al. [58] conducted a literature review concentrating on manufacturing reshoring, discussing the applied theoretical perspectives within the existing research, and identifying main drivers and barriers based on previous publications. Albertoni et al. [3] examine the reshoring of business services, which they consider as the voluntary relocation of partial or entire activities to a new location closer to the main company location. They examine whether it is rather motivated by unsatisfactory performance of the previously offshored services, or by a strategy shift of the company.

METHODOLOGY

We conducted a systematic literature review to first search and select the available academic literature in a reproducible method, and then to critically evaluate and synthesize it with regard to the research approaches, research outcomes and key statements (Fink [20]). We follow the approach introduced by Levy and Ellis [32] to achieve our goal to identify and review all relevant publications on the topic. Therefore, in this section, we focus on the discussion of the methodology underlying the literature search, and then show a descriptive overview of the search results and the synthesis of the findings in separate, subsequent sections of this paper.

To position the scope of this literature review, we refer to the taxonomy of literature reviews developed by Cooper [12] and later adapted by Vom Brocke et al. [51]. We focused on research outcomes, research methods, and theories. Our goal was to integrate past literature and also to determine the central issues within this field of research. We have organized the review conceptually by clustering the main research themes. We maintain a neutral perspective, and our work is focused towards general scholars. We want our literature to cover all existing literature on the topic of backsourcing, and thus aim for exhaustive coverage.

Table 1 displays an overview of the orientation of the literature review as previously explained.

Table 1: Classification Along the Taxonomy of Literature Reviews (Vom Brocke et al. [51])

Characteristics	Categories			
Focus	Research outcomes	Research methods	Theories	Applications
Goal	Integration	Criticism	Central Issues	
Organization	Historical	Conceptual	Methodological	
Perspective	Neutral Representation	Espousal of position		
Audience	Specialized Scholars	General Scholars	Practitioners/Politicians	General Public
Coverage	Exhaustive	Exhaustive and Selective	Representative	Central/pivotal

During the literature retrieval, we searched for publications containing 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. The asterisk symbol (*) was used to include all words with the respective root of the keyword, for example, backsour* will return results for both backsource and backsourcing. We selected a broad range of keywords based on the related works discussed in the previous section to ensure exhaustiveness even if authors did not employ the term backsourcing to describe the same phenomenon. The identified search terms were applied to title, abstract, and keywords. We restricted the search results to peer-reviewed journals or conference proceedings published over the last 20 years (1997 – 2017), written in German or English. The research window also matches the introduction of the term backsourcing by Hirschheim and Lacity [25] in 1998. We conducted our literature research in all commonly used databases for information systems literature, listed in Table 2 (Levy and Ellis [32]). Since we have included a broad range of search terms sometimes used to describe the backsourcing phenomenon, we performed a practical screening (Schryen [44]) to separate all non-relevant publications by reading the title, keywords, and abstract of each identified research item.

To ensure exhaustiveness of our literature review (Okoli and Schabram [40]), we then performed a forward and backward reference and author search using Google Scholar (Levy and Ellis [32], Webster and Watson [53]) to identify additional relevant publications. The full overview of the total and as relevant identified results for each database and literature search step is displayed in Table 2.

Table 2: Results of the Literature Search

Source Type	Database	Results	Relevant	Applied Keywords
Journals	Business Source Complete (EBSCO)	24	7	backsourc* OR backshori* OR resourci* OR reshori* OR insourc* OR inshori* OR relocat* OR re-outsourc* AND Information systems OR information technology *For title, abstract, and keywords*
	Emerald Insight	4	0	
	IEEE Xplore / Electronic Library Online	5	0	
	ProQuest – ABI/INFORM Complete	14	3	
	Science direct (Elsevier)	19	2	
Conference	AIS Electronic Library (ACIS, AMCIS, ECIS, ICIS, PACIS)	18	4	**Applied Filters**
	Digital Library at IEEE: HICSS	4	0	• Journals or conferences (depending on database) • Peer reviewed • English or German • Publication date after Jan' 1997
N/A	Backward reference search	n/a	4	
	Forward reference search	n/a	11	
	Backward/forward author search	n/a	2	
		Total	**31**[1]	

1 After correcting for 2 duplicates, which have been found in multiple databases

In total, we have identified 31 relevant publications after conducting the described literature search steps. Interestingly, despite the broad range of permitted keywords, one third of the relevant publications (11; 35%) was discovered via forward reference search based on leading, frequently cited publications (e.g., McLaughlin and Peppard [35]; Veltri et al. [49]). The majority of the publications (22; 73%) were published in journals. The publication dates of the retrieved research items are quite evenly distributed with no underlying trend, with a peak in 2010 (5 publications), and 4 publications in 2006, 2008, and 2015.

Figure 1 shows the distribution of both conference and journal publication over the search period.

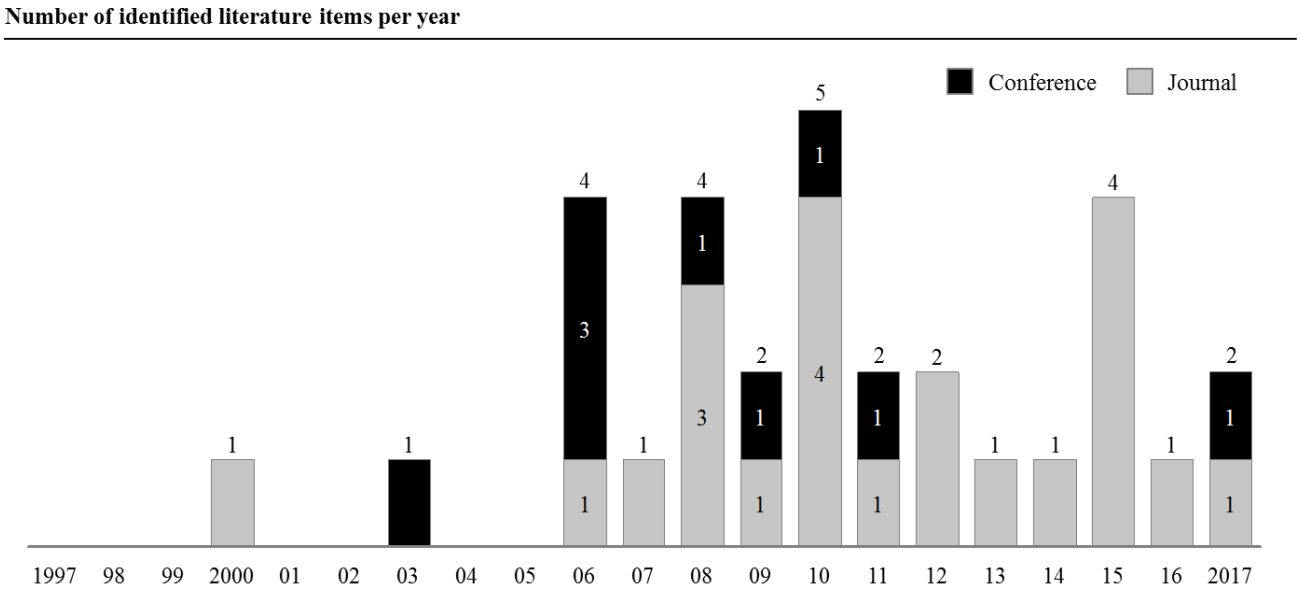

Figure 1: Publication Years of the Relevant Literature Items

TERMINOLOGY

Before we continue with the descriptive overview of the identified research items, we summarize the existing terminology applied in the literature. Hirschheim and Lacity [25] and Lacity and Willcocks [30] are amongst the first academics to define information systems *backsourcing* generally as taking those assets, activities, and skills required to perform information systems operations back in-house, which have been previously outsourced to information systems services providers.

Hirschheim and Lacity [24] define *outsourcing* as transferring information systems management and provision to one or more third party vendors which represent over 80% of the IS budget. In contrast, they define *insourcing* as the decision to retain 80% of the IS budget internally, after evaluating the IS service market for a potential outsourcing solutions. Some literature or practitioner magazines use *insourcing* as general term for performing activities in-house, and thus do not differentiate between *in-* and *backsourcing* (e.g., Salge [43]).

Looking beyond the field of information systems into other research areas, for example, manufacturing or business process outsourcing, we observe that researchers use synonyms for the word *backsourcing*, 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 (e.g., Dachs and Kinkel [13], Di Mauro et al. [14], Ellram [17]). However, Nujen et al. [39] highlight one important differentiation between *backsourcing* and the sometimes synonymously used terms: while most terms imply a change of location (closer) to the country of the mother organization, *backsourcing* is the only term implying a change in ownership back to the organization. Therefore, we apply the term *backsourcing* as defined by Hirschheim and Lacity [25] and Lacity and Willcocks [30], focusing on the change of ownership.

DESCRIPTIVE OVERVIEW

To analyze the research setup of the identified body of existing literature, we apply a framework introduced by Dibbern et al. [15] and adapted by Westner [54] to categorize each publication according to its reference theory, research approach, research type, and data gathering. The attributes within each category are shown in Table 3.

Table 3: Dimensions of the Literature Categorization Framework (Dibbern et al. [15], Westner [53])

Reference Theories	Research Type	Research Approach	Data Gathering
• Transaction Cost Economics • Agency Theory • Other • Unspecified / N/A	• Confirmatory • Exploratory-Interpretive • Descriptive • Formulative	• Empirical Qualitative • Empirical Quantitative • Non-Empirical	• Survey • Interview • Case Study • Press Research • Other • N/A

Regarding the applied reference theories, we identified two main theories that were applied frequently to explain backsourcing decisions: Transaction Cost Economics (TCE) and Agency Theory (AT). Besides these, additional reference theories used are, amongst others, Organizational Learning (e.g., Moe et al. [36]), Intellectual Capital (e.g., Moe et al. [36], Willcocks et al. [59]), Knowledge-Based View of the firm (Qu et al. [42]), the Social Exchange Theory (e.g., Whitten and Leidner [57]), and the Path Dependence Concept (e.g., Law [31]).

TCE is widely used in information systems sourcing literature to identify reasons why companies perform activities in-house or source it externally (Whitten [55]). Most important in the context of sourcing decisions is TCE's holistic perspective on all occurring costs, not production costs alone (Salge [43]). It also includes other costs like negotiating, monitoring the vendor, and enforcing a contract, which are subsumed as transaction costs (Tiwana and Bush [48]). Therefore TCE helps to identify an optimal sourcing decision by considering important project characteristics like uncertainty, transaction frequency, or asset specificity (Salge [43]).

AT looks at the relationship between the outsourcing company (principal) and its vendor (agent), assuming the existence of asymmetric information and divergent perceptions of risk between the two parties (Jensen and Meckling [27]). This causes two problems relevant for the sourcing decision, hidden characteristics and hidden action (Gorla and Lau [22]). Since the

company which is deciding to outsource is limited in verifying the quality of the vendor before entering the contract and cannot fully observe and control all actions taken during the relationship, there is a risk which can potentially cause the company to terminate the contract and backsource its activities.

Looking at the research type, almost half (13; 42%) of the publications are formulative, meaning that their goal is the development of a model, guideline, concept, or similar (Vessey et al. [50]). The second largest category are explanatory-interpretive publications (10; 32%), followed by confirmatory research (7; 23%). For the research approach, the majority of the authors applied a non-empirical approach (21; 68%). Methods of data gathering include press research (8; 26%), surveys (7; 23%), case studies (7; 23%), and interviews (5; 16%).

Figure 2 displays the research setup of the relevant literature items.

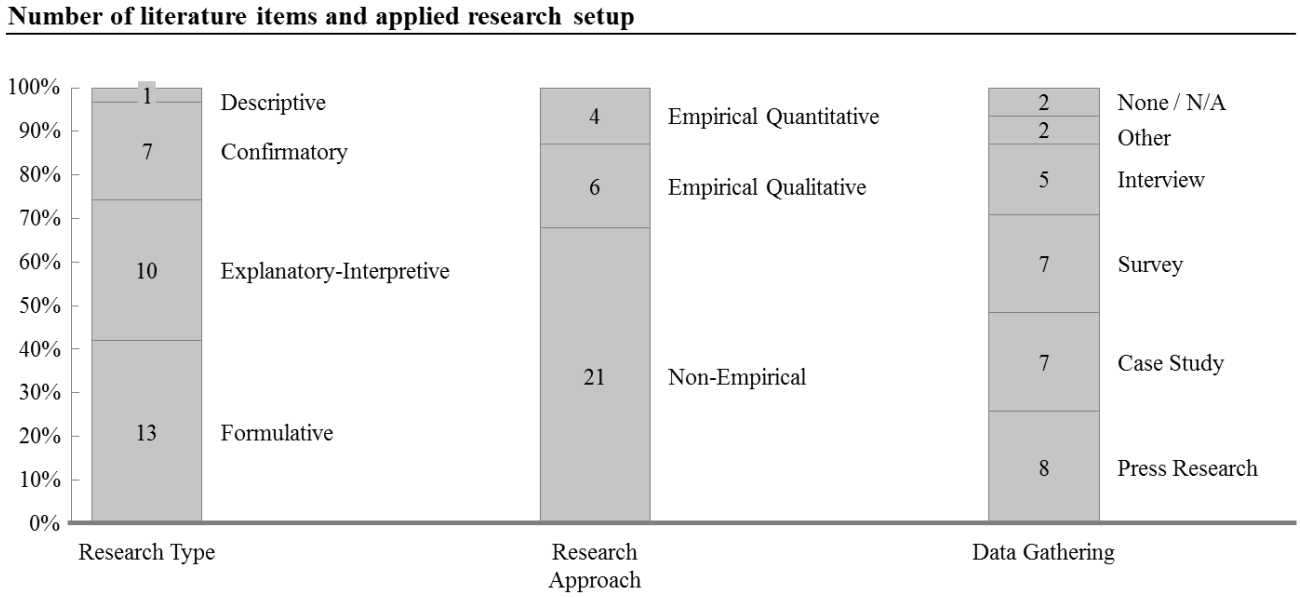

Figure 2: Research Setup of the Relevant Literature Items

Besides analyzing the research setup and the applied reference theories, we focused on identifying the main research themes within the backsourcing literature stream. We synthesized three major themes, namely "Motivators", "Decision Factors", and "Implementation Success Factors". Following the recommendation of Webster and Watson [53], we compiled a concept matrix mapping the literature to the identified research themes, which is displayed in Table 4. The themes and their respective sub-aspects will be discussed in more detail in the following sections.

Table 4: Backsourcing Concept Matrix

	Research Themes																			Theories				Research Setup			
	Motivators				Decision Factors							Implementation Success Factors															
					Enablers				Barriers																		
Reference	Expectation Gaps	Internal Org. Changes	External Org. Changes	End of Contract	Incorporated Reversibility	Internal IT Capabilities	Organizational Crisis	Other	Lock-In/Switching Costs	IT Knowledge/Resoruce Gaps	Other	Project Management	Employee (Re-)Hiring Strategy	Communication	Strategic Orientation	Continuity of Operations	Knowledge Transfer	Transaction Cost Economics	Agency Cost	Other	Unspecified / N/A	Research Type	Research Approach	Data Gathering	# of Cases/Examples
Akoka and Comyn-Wattiau 2006 [1]	X	X																		X		F	NE	P	13
Al-Ahmad and Al-Oqaili 2013 [2]					X							X		X	X						X	F	NE	I	1
Barney et al. 2009 [4]								X		X								X				F	NE	P	1
Barney et al. 2008 [5]								X	X	X								X				F	NE	C	1
Benaroch et al. 2010 [6]									X											X		F	NE	O	N/A
Benaroch et al 2012 [7]						X			X											X		F	NE	O	N/A
Bhagwatwar et al. 2011 [8]	X	X	X								X	X	X	X		X	X				X	EI	NE	P	2
Butler et al. 2011 [9]	X	X	X									X				X					X	EI	NE	I	1
Cha et al. 2008 [10]										X							X			X		F	QL	C	1
Ejodame and Oshri 2016 [16]										X		X					X				X	EI	NE	I	7
Falaleeva 2003 [18]	X																	X	X	X		F	QL	S	N/A
Goo et al. 2007 [21]	X									X								X	X	X		F	QN	S	N/A
Gorla and Lau 2010 [22]	X								X	X									X			F	QN	S	N/A
Hirscheim and Lacity 2000 [26]	X																				X	EI	NE	I	14
Kotlarsky and Bognar 2012 [28]	X	X	X							X											X	D	NE	C	2
Law 2017 [31]	X	X	X				X		X											X		EI	NE	C	4
Martens and Teuteberg 2010 [34]	X	X	X																		X	F	QL	I	N/A
McLaughlin and Peppard 2006 [35]	X	X	X	X				X													X	EI	NE	P	9
Moe et al. 2014 [36]	X						X													X		C	NE	C	4
Nagpal 2015 [37]						X														X		F	NE	N/A	N/A
Nicholas-Donald and Osei-Bryson 2017 [38]		X	X																	X		C	QN	P	35
Nujen et al. 2015 [35]			X							X							X					EI	NE	C	1
Qu et al. 2010 [42]	X														X			X		X		C	QN	P	14
Salge 2015 [43]	X								X									X				F	NE	N/A	N/A
Solli-Saether and Gottschalk 2015 [45]	X	X	X												X			X		X		C	NE	S	N/A
Veltri et al. 2008 [48]	X	X	X		X						X		X	X								EI	NE	P	33
Whitten 2009 [54]							X		X									X				C	QL	S	N/A
Whitten et al. 2010 [55]									X									X		X		C	QL	S	N/A
Whitten and Leidner 2006 [56]	X	X						X										X		X		C	QL	S	N/A
Wong 2006 [59]	X	X	X			X	X			X		X	X		X					X		EI	NE	C	1
Wong 2008 [60]	X	X	X				X															EI	NE	P	13
Total **31**	19	13	12	1	2	3	5	4	8	9	2	5	3	3	4	2	4	10	3	15	8				

Research Type	**Research Approach**	**Data Gathering**	
C: Confirmatory	QL: Empirical Qualitative	S: Survey	P: Press Reserach
EI: Explanatory-Interpretive	QN: Empirical Quantitative	I: Interview	O: Other
D: Descriptive	NE: Non-Empirical	C: Case Study	N/A: Not Applicable
F: Formulative			

RESEARCH THEMES

Reviewing the existing literature, we aimed to identify the emerging research themes across the available literature. As introduced in the previous section, we identified three major themes, namely (1) motivators for backsourcing, (2) decision factors, and (3) implementation success factors. Theme (2) can be further divided into backsourcing enablers and backsourcing barriers. We developed a backsourcing process focusing on the potential decision to backsource after entering the initial outsourcing contract by adapting the existing research by Veltri et al. [49] and McLaughlin and Peppard [35].

Figure 3 displays this process. The three research themes can be allocated to the different phases of the backsourcing process: at the beginning, there is the initial sourcing decision. If the company decided to outsource, during the contract duration, different motivators could arise to trigger a re-consideration of the outsourcing relationship. Decision factors influence this decision, either supporting a decision to backsource (enablers), or to continue outsourcing with the existing or a new vendor (barriers). If the company decided in favor of backsourcing, following the implementation success factors increases the likelihood of a successful transition. While we concentrated on backsourcing-specific literature identified during the literature review, we also referred to academic publications discussing information systems outsourcing and potential problems to detect additional motivators triggering a decision to backsource.

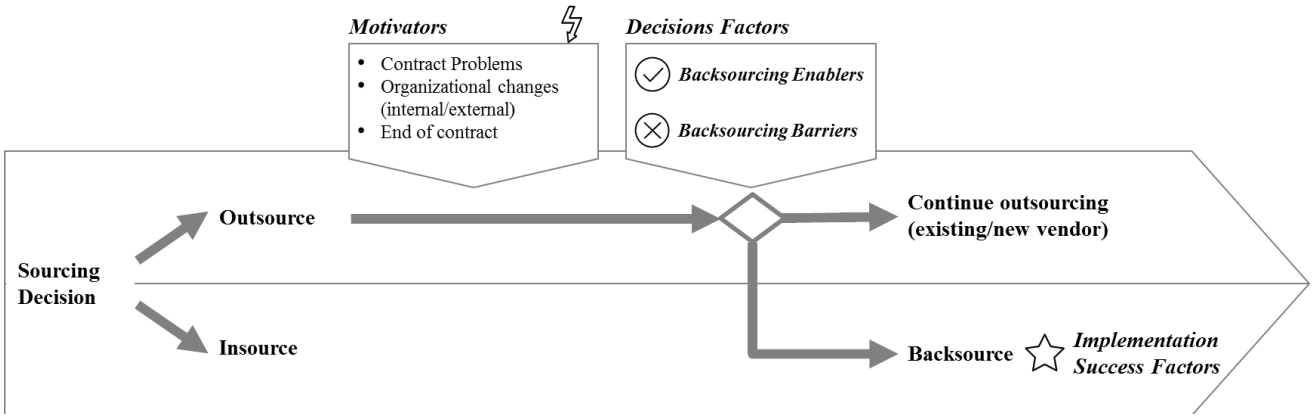

Figure 3: Backsourcing Process (Adaptation of McLaughlin and Peppard [35], Veltri et al. [49])

Motivators

We follow the categorization introduced by Veltri et al. [49] and Wong [61] to classify the motivators for backsourcing decisions into (1) expectations gaps, (2) internal organizational changes, and (3) external organizational changes. For completeness, we added (4) end of contract as an additional motivator. We summarized the main aspects of each category in Table 5, and will discuss them in detail in the following. The numbers in brackets refer to the number of literature items discussing the listed aspects. Generally, companies do not tend to backsource because of one single motivator only, but rather based on a combination of different reasons (Veltri et al. [49]).

Table 5: Overview of Backsourcing Motivators (based on Veltri et al. [48] and Wong [60])

(1) Expectation Gaps	(2) Internal Org. Changes	(3) External Org. Changes	(4) End of Contract
• Service quality (9) • Cost (8) • Loss of control (6) • Missing access to latest technology (4) • Contract problems (3)	• Changes in management (5) • New role for IT (2) • Strategic changes (2)	• Changes in vendor organization (3) • External business changes (2) • Pressure from outside (2) • Technological shifts/ breakthroughs (1)	• Maturity date reached (1) • Termination by vendor (1)

(1) Expectation Gaps: Companies entering an outsourcing relationship usually place great hopes and expectations in the new delivery model (Hirschheim and Lacity [26]), which are not always met. Most researchers state problems with the outsourcing contract and the underlying expectations as main reasons to backsource and discuss several constituting aspects. One important factor is the dissatisfaction with the service quality

delivered by the vendor (e.g., Akoka and Comyn-Wattiau [1], Moe et al. [36], Veltri et al. [49]). Potential reasons for a low service quality are lack of communication between client and vendor (e.g., Akoka and Comyn-Wattiau [1], Moe et al. [36]), high employee turnover within the vendor organization (e.g., Moe et al. [36], Whitten and Leidner [57]), opportunistic behavior by the vendor (e.g., Falaleeva [18], Gorla and Lau [22], Whitten and Leidner [57]), cultural differences between client and vendor staff (e.g., Akoka and Comyn-Wattiau [1], Moe et al. [36]), missing mutual trust (e.g., Silva et al. [45], Whitten and Leidner [57]), and a know-how mismatch compared to the needs of the company (e.g., Veltri et al. [49], Wong [60], Moe et al. [36]).

A second important aspect are the actual costs occurring with outsourcing. Many companies observe higher than expected costs, mainly due to transaction and coordination costs within the outsourcing relationship (e.g., Akoka and Comyn-Wattiau [1], Kotlarsky and Bognar [28], Moe et al. [36], Veltri et al. [49], Wong [60]), due to staff turnover and rising wages in the outsourcing destination countries (e.g., Salge [43]), or due to underestimating the agency costs (e.g., Falaleeva [18], Whitten and Leidner [57]).

A third argument to explain outsourcing expectation gaps is the loss of control over the outsourced activities and therefore limited ability to manage the delivery (e.g., McLaughlin and Peppard [35], Solli-Saether and Gottschalk [46], Veltri et al. [49], Wong [60]). Related to this is the risk of losing control over corporate security and intellectual property, for example, due to opportunistic behavior of the vendor by not complying with pre-defined, but potentially cumbersome security protocols (e.g., Akoka and Comyn-Wattiau [1], Gorla and Lau [22]). Less control also leads to limited flexibility for the outsourcing company compared to in-house operations (Wong [61]).

A fourth aspect is the unmet expectation to gain access to the latest technology. For example, when the vendor does not react to technological changes (e.g., Falaleeva [18], McLaughlin and Peppard [35]), or generally does not employ state-of-the art technologies to ensure the best possible outcome for the client company (e.g., Falaleeva [18], Martens and Teuteberg [34], Wong [60]).

Fifthly, general problems with the contract can also lead to dissatisfaction with the outsourcing relationship and thus trigger a backsourcing decision. Potential situations would be, for example, a failure to meet important business targets (e.g., Falaleeva [18], McLaughlin and Peppard [35]) or too loosely defined contracts or service levels (e.g., McLaughlin and Peppard [35]).

(2) Internal Organizational Changes: Besides motivators stemming from unmet expectations, the reasons to backsource can also come from within the organization. A desired shift in the role of the IT from a commodity to a more strategically used resource can trigger a backsourcing decision (Veltri et al. [49], Wong [61]). For example, a company increasing its global e-commerce activities heavily relies on the capacity of its IT delivery and roll-out capabilities, and therefore might prefer a strong internal IT offering. In addition, McLaughlin and Peppard [35] and Veltri et al. [49] discuss the effect of a change in executive management because of their previous outsourcing experience or their stronger support for an internal IT department, which could lead towards a backsourcing decision. Furthermore, strategic changes within the company, as for example a new business strategy or organizational setup and additionally changes in internal management power distribution could favor a backsourcing decision (Akoka and Comyn-Wattiau [1], Veltri et al. [49], Wong [60]). Akoka and Comyn-Wattiau [1] argue that backsourcing can also be seen as organizational innovation in answer to dissatisfaction with the outsourcing situation.

(3) External Organizational Changes: Veltri et al. [49] identify structural changes, for example, mergers or acquisitions as reasons to change the sourcing strategy, for example based on newly acquired skills or resources. This was the case in the previously discussed example when JP Morgan Chase terminated its outsourcing contract after merging with Bank One, which had built up an efficient in-house delivery of information systems services after a dissatisfying outsourcing relationship (Barney et al. [4]). Additionally, Veltri et al. [49] argue that outside pressure, for example, from the government or trade groups can yield towards backsourcing. Nicholas-Donald and Osei-Bryson [38] show that the decision to backsource leads to positive reaction from stock markets, which could represent another external influence factor, if companies want to increase their market capitalization. Also, changes on the vendor side, for example, a new organizational setup, a redefined strategy or a stronger shift towards other clients could trigger backsourcing decisions (Silva et al. [45], Wong [60]). Besides that, McLaughlin and Peppard [35] discuss major technical breakthroughs or technology shifts as additional external reasons for backsourcing.

(4) End of Contract: Reaching the maturity date of the original outsourcing contract forces the company to decide whether to re-new the existing contract or to consider other options (McLaughlin and Peppard [35]). Therefore, contract maturity can also serve as backsourcing motivator. In addition, companies can also be forced into a re-outsourcing decision when the vendor

terminates the contract on his initiative (Suang et al. [47]). This might occur, for example, due to strategic reasons like delayed client payments, or a limited reusability of the acquired knowledge.

Decision Factors

Backsourcing Enablers

We utilize the term enabler to describe factors positively influencing the decision to backsource. Whereas the previously introduced backsourcing motivators serve as a trigger towards discussing a change in the existing outsourcing setting, companies in which one or more backsourcing enablers are present will be more inclined to backsource their previously outsourced IT activities. Table 6 displays the identified enablers and their constituting aspects which we will discuss in the following. As in the previous table, the numbers in brackets refer to the number of literature items discussing the listed aspects.

Table 6: Overview of Enablers of Backsourcing Decisions

(1) Incorporated Reversibility	(2) Internal IT Capabilities	(3) Organizational Crisis	(4) Other
• At the outsourcing decision (2) • During outsourcing period (1)	• Availability of internal IT knowledge (3) • Availability of internal staff (2)	• Presence of organizational crisis to overcome lock-in (2)	• Negative experience / Psychological bias (3) • Low relationship quality with vendor (1)

(1) Incorporated Reversibility: Since the decision to backsource necessarily follows the original decision to outsource IT activities or assets, companies should already consider reversibility during the initial outsourcing process and during the outsourcing period to avoid lock-ins (Al-Ahmad and Al-Oqaili [2]). For example, companies that have a termination clause in their outsourcing contract detailing the steps for early termination, and companies that required a detailed documentation from the vendor during the outsourcing relationship will find it easier to backsource and will thus rather decide in favor of backsourcing (Veltri et al. [49]). This can also serve as recommendation for companies that are at the stage of outsourcing their information systems activities to avoid later complications when re-considering the outsourcing situation.

(2) Internal IT Capabilities: Nagpal [37] argues that backsourcing is facilitated through high levels of company-internal IT knowledge. For example, backsourcing attempts from companies with a modular IT architecture and in-house system integration capabilities are predicted to be more successful than those from companies with limited internal IT capabilities. Benaroch et al. [7] highlight the need to retain qualified staff within the company to both monitor and benchmark the quality of the vendor, and to continue to build-up internal knowledge during the outsourcing period to facilitate a backsourcing process. Similarly, Wong [60] emphasizes the availability for internal IT capabilities to operate the backsourced activities in-house as an important aspect for consideration when deciding about backsourcing.

(3) Organizational Crisis: Taking the decision to backsource previously outsourced IT activities can be seen as admitting a mistake and thus the management might be reluctant to do so (Moe et al. [36], Wong [60]). This, and a general lock-in into the outsourcing setting can prevent companies from backsourcing (Whitten [55]). Law [31] argues that it requires an organizational crisis, for example, a serious situation threatening the company's existence, to realize the need for change to leave the outsourcing path and decide in favor of backsourcing. The author calls this "emergency backsourcing", reflecting the limited availability of alternatives due to major problems with the outsourcing setting.

(4) Other: Additionally, a negative outsourcing experience could facilitate a decision to backsource (e.g., McLaughlin and Peppard [35], Whitten and Leidner [57]). Barney et al. [5] call this phenomenon a psychological bias towards backsourcing which prevents companies from considering other alternatives, for example, switching vendors. Additionally, Whitten and Leidner [57] analyze the different effects of service, product, and relationship quality on the backsourcing decision. While low product and service quality intuitively increase the likelihood of terminating the existing contract, companies who have additionally experienced a low relationship quality with the vendor are more likely to decide in favor of backsourcing instead of switching vendors. Therefore,

more general, a dissatisfying relationship experience with the vendor can serve as enabler to backsource.

Backsourcing Barriers

In contrast to the previously introduced enablers, the term barriers refers to reasons negatively influencing a company's decision to backsource, and thus provoking the company to continue an outsourcing relationship despite an unsatisfactory experience with the current contract. We created an overview of the identified barriers, which are displayed in Table 7. Again, the numbers in brackets refer to the number of literature items discussing the listed aspects.

Table 7: Overview of Barriers for Backsourcing

(1) Lock-In and Switching Costs	(2) IT Knowledge and Resource Gaps	(3) Other
• High switching costs (2) • High degree of knowledge/asset specificity (3) • Missing contract flexibility (1)	• Missing IT knowledge within the company (4) • Closing knowledge gap economically infeasible (1) • Limited organizational adaptability, e.g., due to resource constraints (2)	• Backsourcing as demanding challenge for the company (1) • Missing backsourcing expertise/ capabilities within the organization (1)

(1) Lock-In and Switching Costs: Switching costs generally can be defined as the relationship-specific investments between client and vendor (Farrell and Shapiro [19]). Whitten et al. [56] identified eight different types of switching costs in outsourcing relations, for example, sunk investment costs, information transfer and setup costs, uncertainty costs of future IT operations, and demonstrated that companies facing high switching costs will more likely continue the outsourcing relationship, and thus decide against backsourcing. This also suggests that, especially in high competition, vendors are incentivized to create a lock-in situation for their clients (Whitten et al. [56]). More general, companies can be locked into an outsourcing relationship due to their entrenched organizational setup or high degree of knowledge or asset specificity unique to the outsourcing context (Gorla and Lau [22], Law [31], Salge [43]). Benaroch et al. [6] apply a model based on real option pricing to demonstrate that companies would favor contract flexibility, for example, the ability to pay a lump sum as penalty, to facilitate backsourcing. However, without that flexibility built in the original outsourcing contract, companies will less likely backsource.

(2) IT Knowledge and Resource Gaps: Short-term limitations, for example, missing IT knowledge, could prevent a company from taking the backsourcing decision (Barney et al. [4], Gorla and Lau [22]). Often, companies focus on managing the outsourcing relationship and potential problems stemming from it, and at the same time miss out on building or maintaining the absorptive capacity to acquire knowledge from the vendor (Chang et al. [11], Ejodame and Oshri [16]). Especially if the occurred loss of internal knowledge during the outsourcing period is too serious, backsourcing is not economically feasible anymore due to the required effort to close the knowledge gap (Cha et al. [10]). This matches Goo et al. [21]'s observation, that outsourcing settings with a high share of IT knowledge acquisition by the vendor are lasting longer due to the internal knowledge gap within the company. Whitten [55] argues that organizational adaptability is required to respond to changes in the market environment, which is increasingly important to companies. If this adaptability is limited within the company in scope, for example, due to resource constraints, the possibility to backsource its IT activities is restricted.

(3) Other: In addition to the mentioned barriers, Bhagwatwar et al. [8] highlight the fact that backsourcing constitutes a significant challenge to the respective company, especially when considering the need to transfer and re-integrate knowledge, capabilities and resources. Similarly, Veltri et al. [49] highlight that backsourcing is not a simple exercise, and thus requires both expertise and expense by the backsourcing organization, which might represent a serious reason preventing companies to backsource.

Implementation Success Factors

As with the decision to outsource, companies place high expectations into backsourcing their information systems activities. While the focus of outsourcing is merely cost-driven, backsourcing is more often motivated by a change in circumstances leading to the discussed backsourcing motivators (Falaleeva [18]). Based on the review of existing literature, we derived six implementation success factors which companies should consider when backsourcing. In contrast to outsourcing,

when the company can rely on the support of an experienced IT vendor, backsourcing usually is a new activity, which requires additional attention (Butler et al. [9], Ejodame and Oshri [16]). Table 8 displays the identified implementation success factors and the respective sub-aspects.

Table 8: Overview of Implementation Success Factors

(1) Project Management	(2) Employee (Re-)Hiring Strategy	(3) Communication	(4) Strategic Orientation	(5) Continuity of Operations	(6) Knowledge Transfer
• Dedicated project team (2) • Detailed project plan (3) • Project management skills and support (2)	• Employee transfer/ (re-)hire concept (3) • Defined resource needs (1) • Consideration of employee sentiments (1)	• Early communication to vendor (1) • Effective client-vendor interaction during transition (1) • Communication with all stakeholders (2)	• Fit into overall IT strategy (2) • Definition of IT service model (1) • Management support (2)	• Day-to-day operations not interrupted (2) • Availability of backup systems (1) • Security processes (1)	• Re-integration of knowledge (3) • Identification of knowledge repositories (3) • Transfer additional, not IT related knowledge (1)

(1) Project Management: Companies should acknowledge the fact that successful backsourcing is a challenging task, and thus establish a project, including a defined project team from all hierarchy levels and a project plan considering all potential risks (Al-Ahmad and Al-Oqaili [2], Bhagwatwar et al. [8]). Stringent project management also increases the likelihood to meet the transfer date (Butler et al. [9]). Similarly, Wong [60] highlights the need for organizations to have the ability for successfully conducting a transition, for example, project management skills. For a company which does not have the required capabilities, it can be beneficial to involve external support, for example, from experienced backsourcing advisors, to lead the transition process (Ejodame and Oshri [16]).

(2) Employee (Re-)Hiring Strategy: After the decision to backsource, companies need to define an employee (re-)hiring concept to ensure sufficient resource availability for the internal IT department, either by re-hiring originally transferred employees, or hiring new employees (Bhagwatwar et al. [8], Veltri et al. [49]). As part of the concept, the backsourcing company should quickly define the total need of required internal IT resources (Bhagwatwar et al. [8]). Depending whether a change in location occurs in parallel to the backsourcing process, the possibility to hire employees form the vendor will be limited. The strategy should also consider employee sentiments, for example, by communicating new employee roles and responsibilities early during the backsourcing process (Bhagwatwar et al. [8]). Especially if companies fully backsource their entire IT department, recruiting sufficient resources with the right capabilities is very challenging and should be considered very early in the transition process (Wong [60]).

(3) Communication: An important part of the backsourcing process is the adequate communication between the client and the vendor (Al-Ahmad and Al-Oqaili [2]). This includes an early communication of the backsourcing decision to the vendor to ensure a co-operative relationship during the backsourcing process (Bhagwatwar et al. [8]). Besides an effective interaction with the vendor, companies should also adequately communicate with all involved stakeholders impacted by the backsourcing decision, for example, potentially influenced customers or other suppliers of the company (Bhagwatwar et al. [8], Veltri et al. [49]).

(4) Strategic Orientation: Another crucial factor to ensure a sustainable backsourcing success is to define the fit of the backsourced department into the overall IT strategy of the company (Qu et al. [42], Wong [60]). One possibility for the positioning of the internal IT would be a vendor-client like service model with the business units, which helps the IT department to show their value and capabilities to internal customers (Wong [60]). The management should show their commitment to the new strategic orientation, and resolve any emerging risks associated with the backsourcing process (Al-Ahmad and Al-Oqaili [2], Bhagwatwar et al. [8]).

(5) Continuity of Operations: For the transition to be considered successful, the day-to-day IT operations of the company must not be interrupted (Butler et al. [9]). The transfer of the IT systems and processes should be planned thoroughly to ensure the consistent functioning of all regular business activities outside of the backsourcing transition (Bhagwatwar et al. [8]). This can be achieved, for example, by employing backup systems to temporarily replace the transferred systems and processes (Bhagwatwar et al. [8]). This includes the definition of strict security procedures to protect all transferred data from third party access, including former vendor employees not re-hired by the company (Bhagwatwar et al. [8]).

(6) Knowledge Transfer: A sixth and very essential success factor is the re-integration of knowledge

from the vendor back to the client (Cha et al. [10], Nujen et al. [39]). The process of knowledge-transfer also includes the re-integration of different forms of skills and expertise back to the client company (Ejodame and Oshri [16]). The backsourcing company must understand the different types of knowledge to be re-integrated, and how the new capabilities fit into the new organizational structure (Nujen et al. [39]). This also relates to Success Factor (2), since some of the important knowledge will be tacit and thus connected to the employees. Consequently, the company should identify those knowledge repositories (Bhagwatwar et al. [8]), and hire or maintain them to re-transfer knowledge to the company structure (Nujen et al. [39], Veltri et al. [49]). Bhagwatwar et al. [8] argue that the process of transferring knowledge exceeds the transfer of IT infrastructure and knowledge, and involves the attached business processes as well as background information of the company and the overall organizational structure. Therefore, a frequent exchange between client and vendor is required to transfer the required knowledge successfully.

SUMMARY AND OUTLOOK

Key Findings and Limitations

In this paper we developed a framework to structure the existing information systems backsourcing research along the entire backsourcing process. We identified the different motivators, for example, expectation gaps, and internal and external organizational changes, leading towards a backsourcing decision, and factors positively or negatively influencing this decision. Additionally, we derived implementation success factors based on the existing literature to guide companies through the backsourcing process. Since a backsourcing transition is, in the most cases, a new task for companies which has to be performed without the support of an experienced vendor, companies should follow those success factors to achieve the aspired goals. In this paper, we also differentiated the term backsourcing from related, sometimes synonymously used terms, by emphasizing the change of ownership back to the company of origin. Most existing research focuses on discovering backsourcing motivators, for example by analyzing case studies or news articles about failed outsourcing approaches or by conducting interviews with practitioners.

Our research is limited in the way that we based it on a review of the existing literature only. Therefore we did not further investigate additional motivators, decision factors, or implementation success factors exceeding the current state of the academic literature. Also, we did not assess the relative importance on the backsourcing decision of the individual aspects, for example, the individual backsourcing motivators or decision factors. Moreover, additional limitations could stem from the literature selection and analysis, in case relevant publications were not retrieved during the literature search process or not interpreted correctly. Despite the long timeframe (1997-2007) and multiple search terms used in the most important academic databases, the risk of missing a publication can never be fully excluded, for example, because of different terminology applied to describe the same phenomenon. During the literature analysis, an extraction bias could also be a potential limitation. To counteract this bias, the authors together defined the classification scheme before the literature analysis, and discussed the categorization and results regularly to ensure validity. In total, we regard our research approach as robust and applicable to determine the state of the information systems backsourcing research.

Future Research Opportunities

Compared to the large amount of existing literature on IT outsourcing, the field of information systems backsourcing is less researched. Future research in this field could further analyze backsourcing motivators by looking at potentially hidden decision motivators. Those hidden motivators are not publicly stated by companies, and therefore not mentioned in news articles, however they could represent additional reasons to backsource. Similarly, future research could also address external influence on the decision to backsource, for example, political pressure due to increasing protectionism, or customers preferring companies with local operations. Research could also provide guidelines on how to re-integrate the backsourced activities by suggesting different organizational structures most suitable to meet the backsourcing expectations. Additionally, since most of the existing research focuses on the perspective of the backsourcing company, taking the vendor perspective to examine potential termination motivators by the vendor, or the influence of a general backsourcing trend on the business model of vendors could help to create a more holistic picture of the backsourcing phenomenon.

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