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Faculty of Business Management and Economics
Chair of Information Systems,
esp. IS in Manufacturing and Commerce

*AN ANALYSIS OF IT SOURCING PRACTICES –
IDENTIFICATION AND EXPLORATION OF
CULTURAL DISTANCE AS A KEY FACTOR IN
IT OUTSOURCING ENGAGEMENTS*

by

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Master of Science in Information Systems (M.Sc.)

DOCTORAL DISSERTATION

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Contents Part 1: Synopsis of the Doctoral Dissertation

SYNOPSIS[1] OF THE DOCTORAL DISSERTATION

1   Motivation

Information technology outsourcing (ITO) can be defined as "the commissioning of a third party (or a number of third parties) to manage a client organization's IT assets, people, and/or activities […] to required results" (Fitzgerald and Willcocks, 1994). It has been a pivotal topic on Chief Information Officers' (CIO) agendas ever since Eastman Kodak's decision to hand over their information systems function to IBM, DEC, Anderson Consulting, and Businessland in 1989. Never before had such a well-known company that considered IT as a strategic asset handed over responsibility for it to an external partner (Applegate, 1992). The deal showed that ITO can constitute an alternative to managing complex Information Technology (IT) systems in-house (Kern and Willcocks, 2000) and subsequently led executives across different industries to follow suit and sign large contracts worth multiple hundred million dollars. The "Kodak effect" served as a starting point to what would become an important strategic matter for IT managers to consider (Caldwell, 1994).

30 years later, ITO has developed into a common practice for organizations of all sizes, industries, and geographies (Qi and Chau, 2013). Over the course of three decades, practitioners have come to appreciate ITO especially for its advantages in terms of cost, flexibility, and the possibility to capitalize on external capabilities (Martins *et al.*, 2015; Schneider and Sunyaev, 2016). Today, virtually every Fortune 500 company[2] and many large public institutions outsource a significant portion of their IT services (Patil and Wongsurawat, 2015). As a consequence, an entire global industry has evolved around ITO, with annual growth rates of around 10% and an estimated market size of around 320 billion US dollars in 2015 (Faisal and Raza, 2016).

The increasing relevance of ITO in practice has also attracted considerable research that has explored various aspects of outsourcing, including common motivations, outcomes, success factors, benefits, and risks (Dibbern *et al.*, 2004; Gonzalez *et al.*, 2006; Lacity *et al.*, 2009; Lacity *et al.*, 2010; Lacity *et al.*, 2016; Liang *et al.*, 2015).

Notwithstanding its three decades of existence, however, ITO remains a dynamic phenomenon that is subject to the ongoing rapid developments in the economic and societal environment in which it is embedded. Major developments in the field of IT, particularly the ever-progressing digitalization and the rise of IT-centered and -enabled business models (Bughin *et al.*, 2019; Harvey Nash/KPMG, 2018; Legner *et al.*, 2017), require adequate consideration in IT sourcing decision-making.

Against the backdrop of the increasing size of the ITO industry, its imperative relevance for companies of all kinds, its dynamic nature as well as the recent economic, societal, and technological developments, this dissertation assesses and analyzes recent developments in ITO. In doing so, it aims to answer three overarching research questions: RQ1 aims to illustrate the current state of the art in ITO research and provide an overview over the most recent academic developments in this field. In the context of this dissertation, it serves as the theoretical underpinning and lays the foundation for the remainder of our work. We formulate it as follows:

RQ1: *What are recent research findings regarding ITO?*

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[1] This synopsis corresponds with the 'gesonderte Abhandlung' according to §10(3) PromO 2018.

[2] The Fortune 500 (also Fortune Global 500) is an annual ranking of the top 500 companies worldwide as measured by revenue.

In recognition of its practical relevance, RQ2 then approaches ITO from a more practice-oriented perspective as we seek to analyze and make sense of recent developments in practice:

RQ2: What are recent developments in ITO practice?

Combining our analyses from both theoretical and practical lenses, we identified several themes with increasing relevance. Among them is the theme of culture and its effect on ITO success: We found that the cultural compatibility of two organizations plays an influential yet commonly underestimated role for ITO that requires additional research attention. Departing from the more general RQ1 and RQ2, our third RQ therefore focuses on the effect of culture on ITO. We formulate it as follows:

RQ3: How does the cultural compatibility of two organizations influence ITO success?

The remainder of this synopsis is structured in the following way: Section 2 describes the research design. In this section we clarify our epistemological stances and present research objectives and research methods. It is followed by an overview of the seven research papers that were created in the course of our research before the main results of each paper are briefly summarized. We conclude the synopsis with section 4 in which we summarize main contributions for research and practice as well as limitations and potential avenues for future research.

2 Research Design

Because of its origin in the fields of economics and computer sciences, research in Information Systems (IS) is multidisciplinary by nature and comprises a multitude of different methods. Hence, Becker *et al.* (2003a) argue that research in IS should always involve the disclosure of the underlying basic scientific assumptions and procedures it is built on. To this end, they developed a framework that systematizes the researcher's epistemological position as well as the research objectives and research methods that are used in the course of a research project (see Figure 1). We employ their framework to describe the research design of this dissertation along these three parameters.
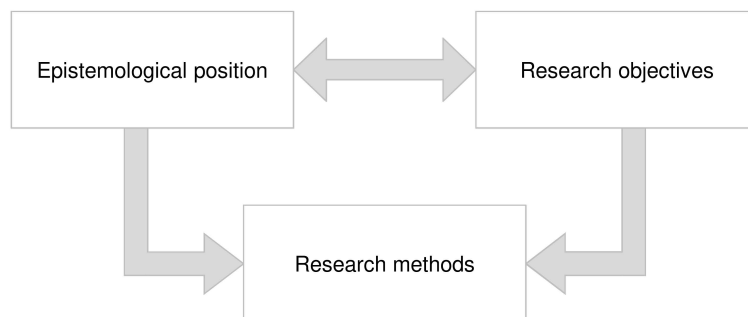
Figure 1: Decision parameters for research design (Becker et al. 2003, p. 5)

2.1 Epistemological Position

According to Becker and Niehaves (2007), the epistemological position can be defined by answering the following five questions: (*1) What is the object of cognition (ontological aspect)?; (2) What is the relationship between cognition and the object of cognition?; (3) What is true cognition (concept of truth)?; (4) Where does cognition originate?; (5) By which means can cognition be achieved (methodological aspect)?*

Regarding its underlying ontology (1), this work assumes the existence of a real world, independent of human cognition, thought, and speech processes (ontological realism). In terms of the relationship between cognition and the object of cognition (2), it recognizes that an objective reality exists but is perceived and interpreted subjectively (constructivism). With regard to the understanding of truth (3), the dissertation primarily follows the *correspondence theory of truth* which requires true statements to correspond with the objective reality. In the tradition of Kantianism, this work assumes both experience and intellect as origins of cognition (4). In terms of the methodological aspect (5), this dissertation applies inductivism, i.e., it achieves cognition from the generalization of individual cases.

2.2   Research Objectives

Departing from the three overarching research questions described above, this dissertation seeks to fulfill several research objectives. Pursuant to Hevner *et al.* (2004), research objectives in IS can be categorized into two fields: *behavioral science* and *design science*. The goal of *behavioral science* is to develop and verify theories that explain or predict individual or organizational behavior. In contrast, objectives in the field of *design science* look to extend the boundaries of individual and organizational capabilities by creating new and innovative artifacts, more specifically methods and technologies for IS design or IS reference models. The duality of these paradigms that collectively build the foundation of the IS discipline is also widely accepted among European IS scholars (Becker *et al.*, 2003b).

Our research falls into the category of *behavioral science* as we explore, analyze, and explain aspects of individual and organizational behavior in IT sourcing. In answering our three overarching research questions, we fulfill various research objectives by means of several research steps and make use of three different data sources: academic literature, quantitative data, and qualitative data (see Table 1).

Research question	Research objective	Research steps	Data source
RQ1: What are recent research findings regarding ITO?	Understanding of the current state of empirical ITO research	- Conceptualization of the research topic - Summary of previous literature reviews along sample characteristics and main findings - Identification of recent empirical ITO literature - Synthesis of the research field by description of emerging phenomena, contradictory findings, and fields of matured research in two meta categories - Presentation of research gaps	Academic literature
RQ2: What are recent developments in ITO practice?	Presentation of the current state as well as recent trends and developments in ITO practice	- Descriptive analysis of a rich dataset of selected ITO contract data - Assessment of the current state of the ITO market in Austria, Switzerland, and Germany (the ASG region) by means of an analysis of pivotal contract characteristics	Quantitative data

		• Assessment of the current state of the global ITO market by means of an analysis of pivotal contract characteristics • Identification and explication of current market developments	
	Identification of influence factors on ITO contract characteristics	• Explanatory analysis to identify variables with a statistically significant influence on pivotal ITO contract characteristics	Quantitative data
	Description of culture-induced differences in ITO	• Conceptualization of seven regions based on academic literature • Analysis of the influence of regional differences on ITO contract characteristics	Academic literature Quantitative data
RQ3: How does culture influence ITO success?	Theory-based conceptualization of the influence of culture on ITO success	• Identification of previous academic literature on culture, cultural distance, and its effect on ITO success • Advancement of extant conceptualizations and research findings towards a consolidated, multi-level research model	Academic literature
	Exploratory, theory-guided research on the influence of culture on ITO success	• Identification of a suitable research approach and case study • Development of a semi-structured interview guide, identification of relevant interviewees, and realization of interviews • Exploratory research on the influence of cultural distance on ITO success • Identification and conceptualization of moderators of the relationship between cultural distance and ITO success • Identification of effective mitigation measures for ITO managers	Qualitative data
Based upon RQ1, RQ2, RQ3	Illustration of main characteristics and fundamentals of ITO decision-making, stimulation of IS students' interest in ITO, and contribution of an appealing case study for IS studies	• Reflection on the most critical and insightful learnings from our research • Consolidation of main characteristics of ITO, fundamentals of ITO decision-making, and the importance of culture for ITO by means of a consistent case study • Development and description of learning goals and teaching strategy, including exemplary questions, assignments, and discussion items	Qualitative data

Table 1: Overview of research objectives of this dissertation

2.3   Research Methods

In accordance with its three overarching research questions, three different research methods were employed in the course of this dissertation: To synthesize the state of the art in ITO research for RQ1, we conducted a *descriptive literature review* (Paré *et al.*, 2015). To this end, we used the systematic approach suggested by Webster and Watson (2002) and vom Brocke *et al.* (2009) to identify relevant academic contributions. To facilitate comparability with previous literature reviews, we then employed the methodology developed by Lacity *et al.* (2016) and extended their comprehensive framework.

In order to study recent developments in ITO practice on a broad scale (RQ2), we then employed a quantitative approach: More specifically, we triangulated and then examined rich datasets that contained pivotal characteristics of a large number of ITO contracts. We analyzed our data by means of *three statistical approaches*: First, we followed a *descriptive-interpretive approach* to quantitatively analyze key characteristics of ITO contracts and their development over time. In line with Shmueli and Koppius (2011), we then designed an *explanatory model* to determine main influence factors for those key characteristics. More specifically, we developed and then tested causal hypothesis on our ITO dataset using statistical inference in a generalized linear model (GLM) (Fahrmeir and Tutz, 2001; McCullagh, 1984). Third, we sought to create *models with high predictive power* to conclude certain ITO contract characteristics from previous sourcing decisions in comparative contexts. To this end, we used algorithms from the field of machine learning and assessed their predictive power via common metrics like the mean absolute error (MAE) and the root mean squared error (RMSE) (Chai and Draxler, 2014). We also applied an equal-height discretization method (Alfred, 2009) which we assessed using another metric that measured the area under a receiver operating characteristics curve (AUC) (Fawcett, 2006).

Having explored developments in ITO practice on a broad scale by means of quantitative analyses, we then focused on exploring the influence of culture on ITO in detail. To this end, we chose a qualitative approach: We derived a comprehensive research model from both theoretical and empirical academic literature on ITO and culture. We then employed an *explorative research design based on an in-depth single-case study* (Eisenhardt, 1989; Walsham, 1995, 2006). Furthermore, we chose an *embedded design* (Yin, 2014) to control for selected ITO project variables and focus our analysis on the sole effect of culturally divergent sourcing configurations on ITO success. For data collection, we built on our research model to develop a semi-structured interview guide which we then applied in conducting ten interviews with managers from three case companies. The interviews were recorded, transcribed, and analyzed using an open coding approach (Yin, 2014) that linked participants' statements back to the research model. To ensure internal validity, the codings were reviewed and cross-checked by two additional researchers. For external validity and data triangulation, we also evaluated internal documents and conducted and coded two additional interviews with two experienced experts from a leading international top-management consultancy.

Last, we reflected on the most critical and insightful learnings from our case study and consolidated them in form of a *teaching case* for IS bachelor and master students. Its main objectives are to stimulate students' interest in IT sourcing, confront them with potentials and challenges of different modes of IT sourcing, and allow them rare insights into practical ITO decision-making in large corporations.

3 Structure of the Doctoral Dissertation

This dissertation consists of seven consecutive research papers which are already published or under review in leading IS conferences and academic journals (see Table 2): Departing from a systematic review of the empirical academic literature on ITO (Paper 1), we developed three publications that "go broad" and use quantitative methods to describe recent developments and regional differences in ITO by analyzing selected contract features as observable manifestations of sourcing strategy (Papers 2-4). The results motivated the following three papers which "go deep" and employ qualitative methods to provide an in-depth analysis of the influence on culture on ITO and ITO decision-making in practice by means of a single case study (Papers 5, 6) and a teaching case (Paper 7). Figure 2 depicts the structure of this dissertation and the connection between its seven individual papers.

ID	Section	Publication	Outlet	Ranking[3]
1	3.1	**Könning, Michael**; Westner, Markus; Strahringer, Susanne. *A Systematic Review of Recent Developments in IT Outsourcing Research*	Information Systems Management, Vol. 36 (2019), No. 1	B/B/C
2	3.2.1	**Könning, Michael**; Westner, Markus; Strahringer, Susanne. *Multisourcing on the Rise – Results from an Analysis of More Than 1,000 IT Outsourcing Deals in the ASG Region*	Multikonferenz Wirtschaftsinformatik (MKWI) 2018, Lüneburg, Germany	-/C/D
3	3.2.2	**Könning, Michael**; Heinrich, Kai; Zschech, Patrick; Leyh, Christian. *Analyzing Influences on Pivotal ITO Contract Features: A Quantitative Multi-Study Design with Evidence from Western Europe*	Americas Conference on Information Systems (AMCIS) 2018, New Orleans, USA	A/B/D
4	3.2.3	**Könning, Michael**; Heinrich, Kai; Leyh, Christian; Westner, Markus. *A Quantitative Analysis of Culture-Induced Differences in Pivotal IT Outsourcing Contract Features*	European Conference on Information Systems (ECIS) 2019, Stockholm, Sweden	A/A/B
5	3.3.1	**Könning, Michael**. *Conceptualizing the Effect of Cultural Distance on IT Outsourcing Success*	Australasian Conference on Information Systems (ACIS) 2018, Sydney, Australia	-/C/-
6	3.3.2	**Könning, Michael**; Westner, Markus; Strahringer, Susanne. *Unraveling the Impact of Cultural Distance on IT Outsourcing Success – Insights from Three Major Sourcing Reconfigurations*	Journal of Enterprise Information Management (2020, forthcoming)	C/-/C
7	3.3.3	**Könning, Michael**; Chasin, Friedrich. *There and Back Again: Reconfiguring IT Sourcing at ProSiebenSat.1*	International Conference on Information Systems (ICIS) 2018, San Francisco, USA	A*/A/A

Table 2: Overview of publications

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[3] CORE 2018 ranking as per http://portal.core.edu.au/jnl-ranks/, http://portal.core.edu.au/conf-ranks/; accessed 27 June 2019.
WKWI ranking as per http://wi.vhbonline.org/zeitschriftenrankings/; accessed 27 June 2019.
VHB-JOURQUAL3 ranking as per http://vhbonline.org/vhb4you/jourqual/vhb-jourqual-3/teilrating-wi/; accessed 27 June 2019.
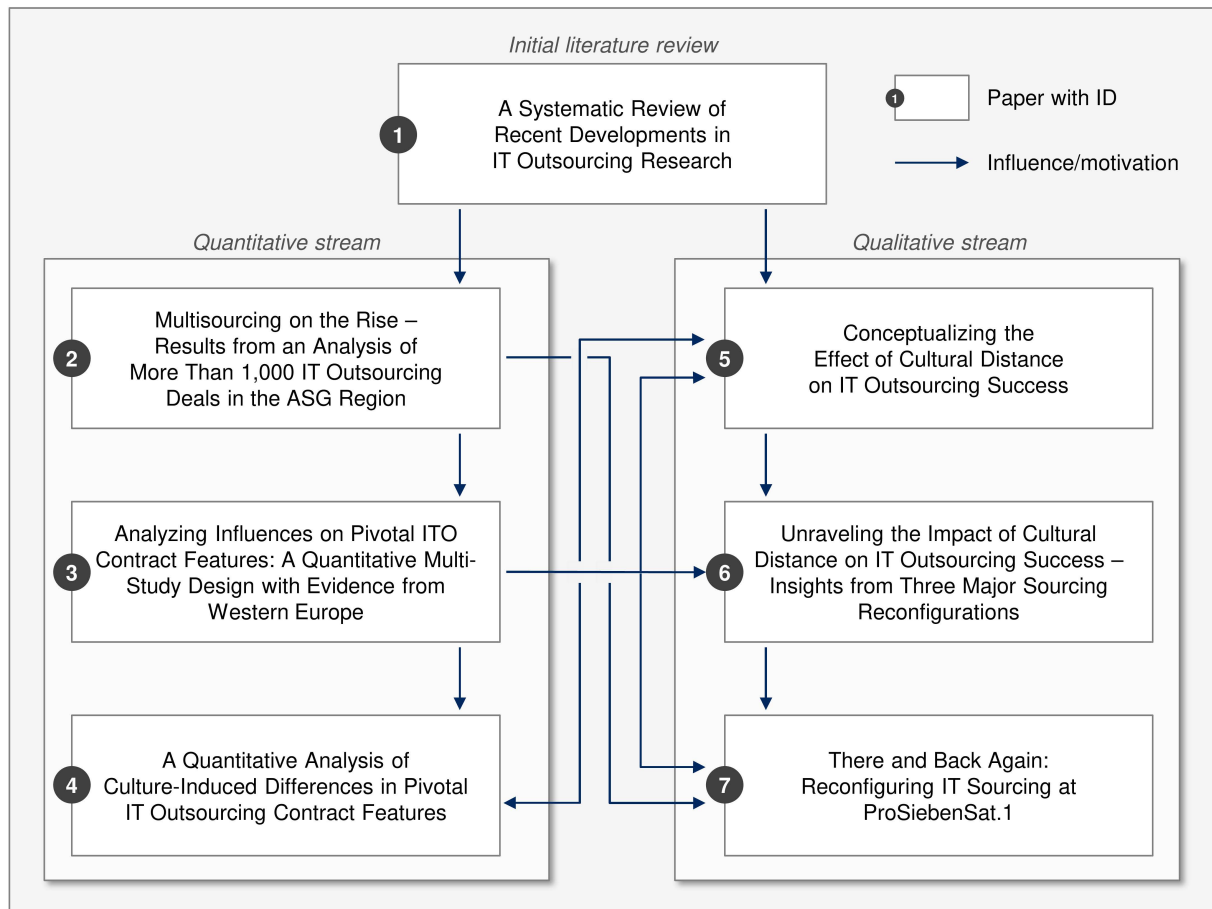
Figure 2: Structure of the doctoral dissertation

In the following sections, each of the papers is briefly described in terms of its research focus, applied methodology, and research results. For this, excerpts of the respective publication are used.[4] According to their nature and research focus, we first summarize the literature review, then describe the three quantitative papers in Section 3.2, followed by the three qualitative papers in Section 3.3.

3.1 A Systematic Review of Recent Developments in IT Outsourcing Research

Research focus: The goal of the initial paper of this dissertation is a reflection on the empirical academic research on ITO, including the identification of both new and recurring themes as well as opportunities for future research. To this end, we employed a literature review of 63 recent publications on ITO that had been published in leading IS journals and conference proceedings.

Methodology: Since previous literature reviews had already summarized articles until end of 2014, we decided to build on their findings and analyze all relevant empirical publications on ITO between January 2015 and June 2017. Following Paré *et al.* (2015), our contribution can be characterized as "descriptive review" that indents to "extract certain characteristics of interest from each study such as the publication year, research methods, data collection techniques, and direction or strength of the final outcomes […] with the goal to reveal any interpretable patterns or trends with respect to pre-existing

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[4] In order to maintain readability, we disregard quoting from a publication again in its respective sub-section.

propositions, theories, methodologies or findings." (p. 4). To this end, we followed the systematic approach by Webster and Watson (2002) and vom Brocke *et al.* (2009) to identify relevant material for our literature review.

We decided to search leading IS journals, including the IS Senior Scholars' Basket of Eight (Association for Information Systems, 2016b), as well as top-ranked IS journals listed by the "Association for Information Systems (AIS) toplist" (Association for Information Systems, 2016a) and leading international IS conferences. Recognizing the risk of omitting relevant articles from other outlets, we followed the recommendation of Bandara *et al.* (2011) and also included sources from adjacent disciplines in which ITO was the focus of research. In total, our list of considered outlets included 115 journals and 24 conference proceedings that we accessed by means of the databases AISeL, EBSCOhost, Google Scholar, IEEE Xplore, Science Direct, Scopus, Springer Link, and Web of Science. We queried the databases for articles published in the time frame from 1st January 2015 to 30st June 2017 using the following search string:

(IT OR IS OR "information technology" OR "information system") AND (outsourc* or offshor*)*

Results: Our search resulted in 246 unique publications. We also performed forward and backward searches (Webster and Watson, 2002) that revealed no additional papers within the analyzed time frame. We then read the abstracts of all publications and excluded those with no relevance for ITO or that were not empirical in nature. 63 publications resulted from this filtering process. 32 papers had been published in 2015, 28 in 2016, and 3 in 2017. We identified 11 papers from Basket journals, 10 from other AIS top-list journals, 6 from other IS journals, 8 from other non-IS journals, and 28 published in the proceedings of leading IS conferences. Methodically, 28 papers employed a qualitative approach, 24 a quantitative approach, and 11 used a mixed-method design. The majority of papers analyzed ITO from the perspective of the client company. Figure 3 provides an overview over the characteristics of the publications included in our review.
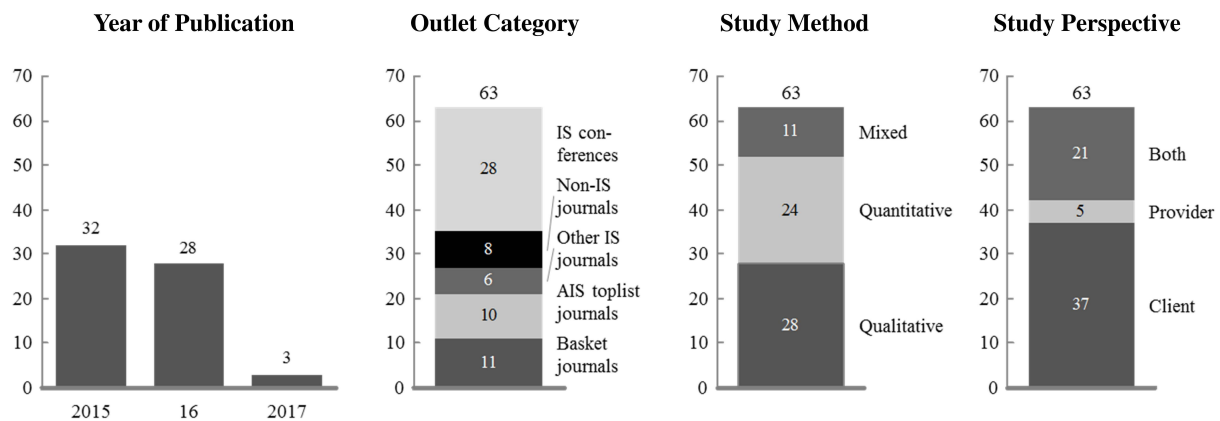
Figure 3: Characteristics of empirical ITO publications included in the literature review

To facilitate comparability with previous literature reviews, we decided not to develop a new coding framework but to build upon the methodology developed in the three publications by Lacity *et al.* (Lacity *et al.*, 2009; Lacity *et al.*, 2010; Lacity *et al.*, 2016). More specifically, we used and extended their coding scheme with 16 meta categories of independent variables (e.g., "client firm characteristics") and five meta categories of dependent variables (e.g., "sourcing outcomes") to categorize papers along the independent and dependent variables they investigated and the relationship they identified.

Content-wise, our results provide an overview over recent empirical findings and opportunities for future research regarding IT sourcing outcomes and IT sourcing decisions. In terms of sourcing outcomes, we identified a high number of new independent variables from six meta categories, which suggests continued development of the field. More specifically, we found additional empirical support for the effect of relationship characteristics (especially communication, knowledge sharing, and trust) and culture on ITO success and emerging research on success factors for innovation through ITO.

With regard to sourcing decisions, our impression of the research field was that the focus in recent years had been on an extension of previous research and provision of additional empirical evidence for known relationships rather than the identification of new relationships. More specifically, our analysis showed that research had yielded additional empirical evidence for the most frequent motivations for ITO, including cost reduction, access to expertise, quality improvement, and focus on core capabilities. We furthermore noticed increased research attention towards desired provider characteristics and capabilities, e.g., technical and methodological capabilities, domain understanding, delivery capabilities, and employee performance. Combining the research gaps described in our 63 papers with our own impression of the research field, we determined opportunities for further research around motivators and success factors for multisourcing and backsourcing, success factors of innovation through ITO, and success factors for beneficial advisory or consulting support in ITO decision-making.

3.2 Quantitative Research Stream

3.2.1 Multisourcing on the Rise – Results from an Analysis of More Than 1,000 IT Outsourcing Deals in the ASG Region

Research focus: Having gained an overview over the most recent developments in empirical ITO research, we decided to investigate the phenomenon of multi-provider sourcing ("multisourcing") that our literature review had revealed as promising area for further research. More specifically, recent literature described multisourcing as increasingly advantageous and popular for client companies, primarily because of the ability to implement a "best of breed" strategy in provider selection and realize cost advantages through increased levels of provider competition, as well as and increased flexibility due to reduced vendor lock-in (Bapna *et al.*, 2010; Cohen and Young, 2006; Wiener and Saunders, 2014). The goal of our research was to analyze whether and how recent practical developments in the ITO market in Austria, Switzerland, and Germany (the ASG region) mirrored this trend, particularly regarding multisourcing.

Methodology: To answer our research question, we analyzed a dataset of 1,016 ITO contracts that were closed in the timespan of 11.5 years (January 2006 – August 2017). Our dataset is a subset of IDC's "BuyerPulse Deals Database" which in total contains information on the key characteristics of more than 32,000 ITO and Business Process Outsourcing (BPO) contracts worldwide.[5]

We examined ITO deals in German-speaking countries, i.e., all observed ITO contracts that were closed between Austrian, Swiss, or German client firms and both national and international service providers. In doing so, we employed an empirical descriptive-interpretive approach to quantitatively analyze key

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[5] International Data Corporation (IDC) is a "global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets." International Data Corporation (2018) Founded in 1964 and headquartered in Framingham, Massachusetts, USA, IDC is a wholly owned subsidiary of the International Data Group (IDG), a leading media, data, and marketing services company. IDG's brands include renowned publications such as CIO, Computerworld, PCWorld, and Macworld.

characteristics of ITO contracts as manifestations of IT sourcing strategy. We triangulated the data in our dataset by manually searching the web for publicly available information on ITO deals. While IDC's dataset is missing some of the smaller deals, we found that the dataset contained almost every large publicly announced agreement with contract values of at least EUR 100 million that we identified. Moreover, it also included information on commercial terms raised from interviews and industry analyses. This data is rarely published since the contract details are commonly kept confidential and are hard to obtain. A quantitative empirical study of such data represents a major challenge and thus highlights the value of our contribution.

An initial descriptive analysis illustrated the diversity of our dataset in terms of client companies and contracts characteristics. Regarding the former, we looked at client country, client industry sector, number of employees, and client revenue (see Figure 4).
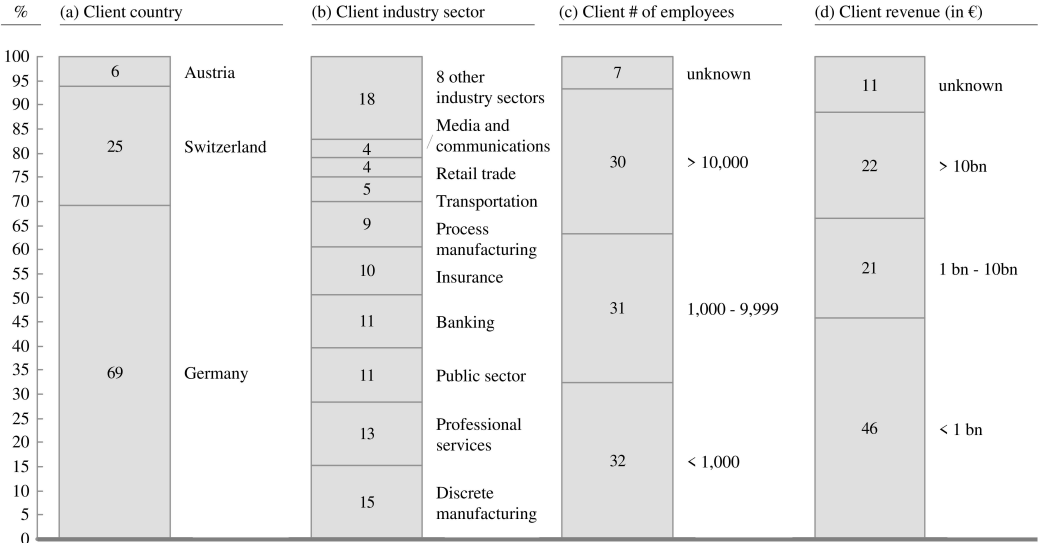
Figure 4: Description of data sample by client characteristics

In terms of contract characteristics, the deals were diverse regarding engagement type (e.g., "network and endpoint outsourcing" or "application outsourcing"), contract type (e.g., new contracts or contract extensions), price methodology (e.g., fixed or variable pricing), and bid type (i.e., competitive tenders or non-competitive). Figure 5 illustrates the distribution of contracts along these four characteristics.
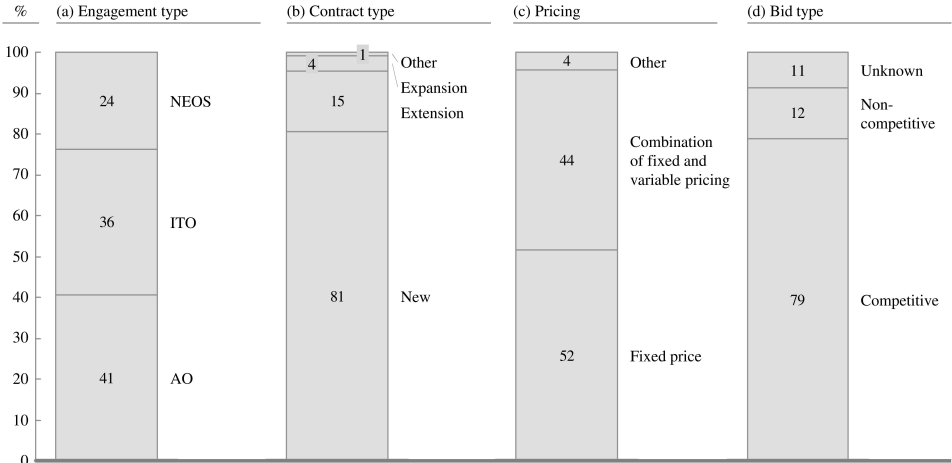
Figure 5: Description of data sample by contract characteristics

Results: Our analyses provided an insight into the state of the ITO market in the ASG region and the underlying developments of IT sourcing strategy. Four important developments stood out:

First, we found that the contract length had declined from a 3-year average of 52.3 months for contracts closed between 2006-08 to an average 50.6 months between 2015-17 (after winsorizing at the 5th and 95th percentile). Second, clients also seemed to move to less extensive ITO contracts. This was apparent from the average run rate, i.e., the total contract value divided by contract length in years, which has been in decline for the major part of the observed period, from an absolute high of EUR 19.3 million in 2007 to EUR 9 million in 2017 (excluding so-called mega deals with a value of more than EUR 1 billion). Figure 6 illustrates these two findings.

Development of average contract length over time (in months)   Development of average services run rate over time (in € million)
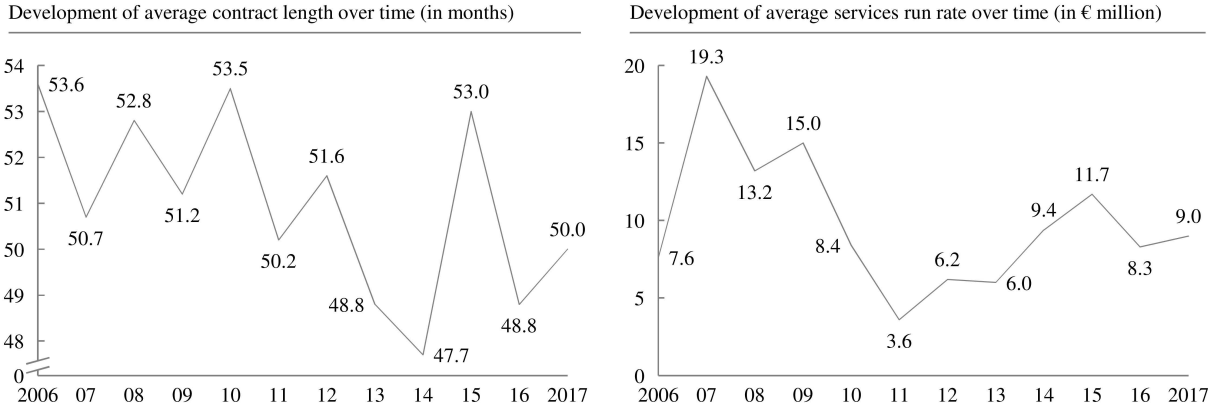
Figure 6: Developments of average contract length and services run rate over time

Third, we observed an increase in market competitiveness and diversification: In this regard, the share of contracts closed after competitive tenders grew from around 75% between 2008 and 2010 to over 90% in 2017. Similarly, the share of ITO projects that the top 10 providers of each respective year were able to capture declined from around 75% between 2006 and 2009 to around 50% between 2013 and 2017. Figure 7 offers an illustration of these developments.

	2006	07	08	09	10	11	12	13	14	15	16	2017
☐ Total number of ITO deals	48	69	83	77	94	145	155	127	87	61	38	30
■ Deals captured by top 10	40	53	61	55	61	83	66	61	41	33	21	15
— Share of top 10 providers	83%	77%	73%	71%	65%	57%	43%	48%	47%	54%	55%	50%
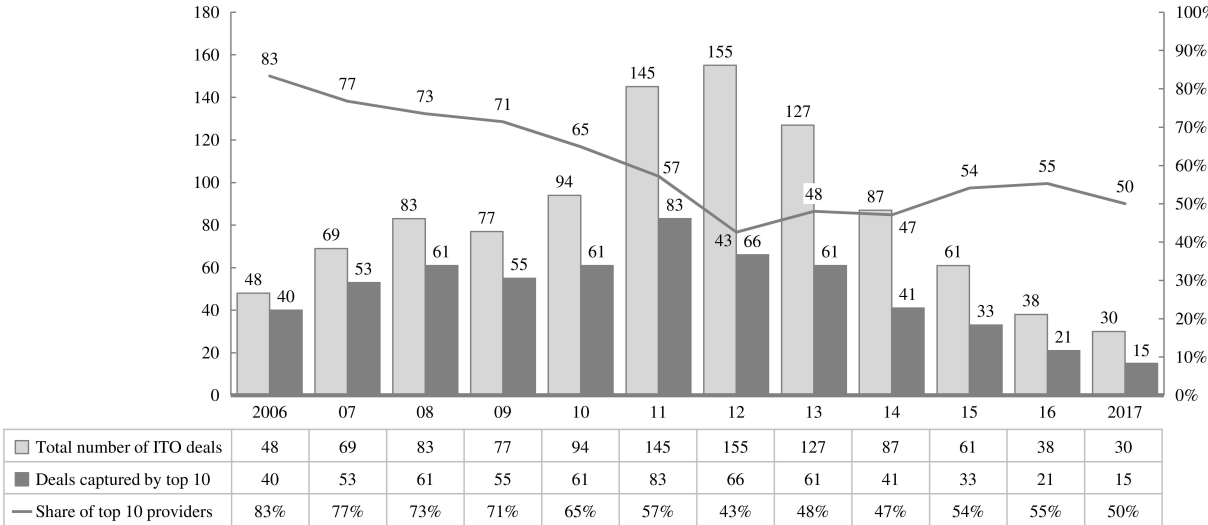
Figure 7: Absolute number and relative share of ITO contracts closed with top 10 providers

Fourth, we found that client companies contracted with more different service providers concurrently than they did ten years ago. Our dataset contained an average of 1.34 service providers that any given client company had an ongoing contract with in 2017, up from 1.02 different concurrent providers per client in 2006. (see Figure 8). While the real number clearly lied above this rate and the dataset did not allow more insights about the specific setup and division of work within the multisourcing arrangements, it still gave an indication of the market's direction.

	2006	07	08	09	10	11	12	13	14	15	16	2017
Number of distinct providers	45	111	189	259	330	445	536	588	581	548	478	365
Number of clients	44	97	157	206	258	352	416	447	438	408	363	273
Distinct providers / client	1.02	1.14	1.20	1.26	1.28	1.26	1.29	1.32	1.33	1.34	1.32	1.34
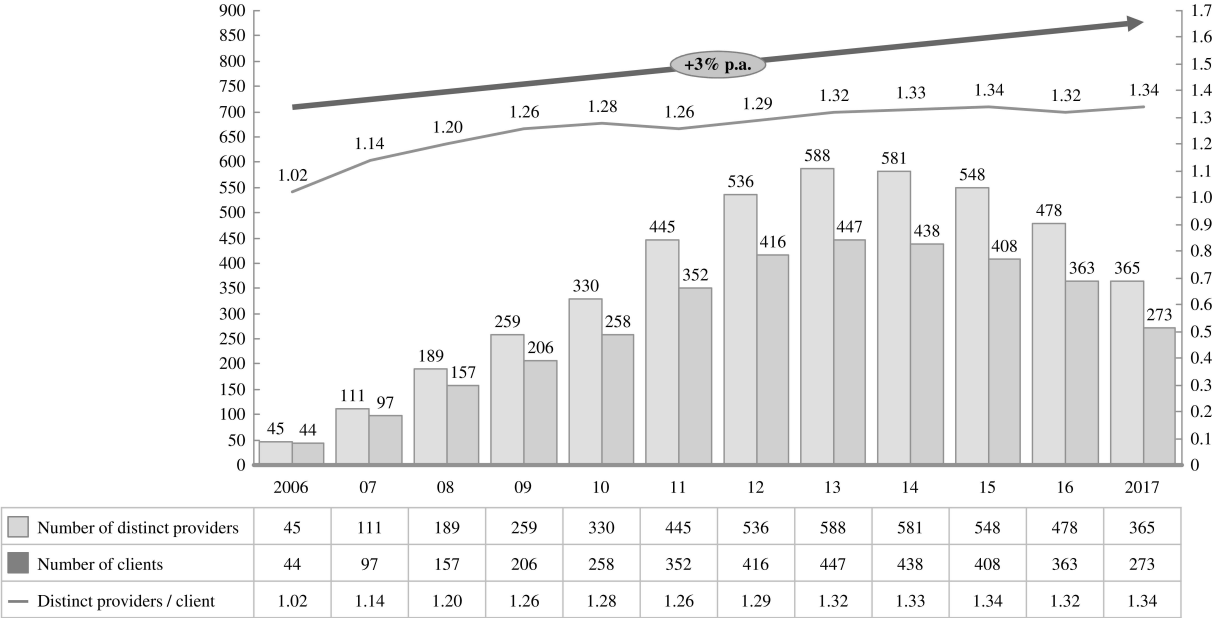
Figure 8: Number of distinct concurrent providers per client over time

Taken together, our findings provided empirical evidence for the continuing development towards shorter and smaller ITO projects which are divided among a growing number of service providers. Moreover, our contribution provides empirical support for the increasing popularity of multisourcing strategies: Client firms seemed to contract with more service providers simultaneously, including not only top 10 providers, but also smaller and medium-sized companies.

3.2.2 Analyzing Influences on Pivotal ITO Contract Features: A Quantitative Multi-Study Design with Evidence from Western Europe

Research focus: For our next publication, we built on our results from the descriptive analyses of the previous paper and extended our methodology to employ a quantitative multi-study design. The goal of this research was to investigate potential influence factors on contract length (CL), contract value (CV), and pricing method (PM) as three pivotal characteristics of ITO contracts. To this end, we made use of three quantitative research approaches with different data analysis tasks in terms of theory-driven research in IS as suggested by Gregor (2006) and applied them to our IDC dataset with characteristics of 1,016 ITO deals.

Methodology: We employed three different statistical approaches to analyze the dataset. First, we used a descriptive-interpretive approach to quantitatively analyze contract duration, contract value, and pricing method as important aspects of IT sourcing strategy, and their development over time. Second, we designed an explanatory model to determine the main factors influencing those key characteristics.

Third, we created predictive models designed to predict the characteristics of upcoming ITO deals based on previous sourcing decisions in comparable settings. This allowed us to satisfy two higher-level research goals: Contextually, we sought to uncover latent or rarely-documented relationships between ITO variables. Methodically, we aimed at evaluating the applicability of empirical models with high predictive power to test causal hypotheses and build theory in IS.

Results: In accordance with our three empirical lenses, our results consisted of three parts:

(a) Descriptive-interpretive analysis: Empirical development of ITO contract characteristics

The results of our descriptive-interpretive approach were congruent with our previous research in that we found declines in CL and CV. In terms of PM, we found that 52% of contracts were set up with fixed pricing, while 44% employed a combination of fixed and variable pricing.

(b) Explanatory study: Testing for influences on ITO contract characteristics

Following suggestions put forward by Shmueli and Koppius (2011), our second approach consisted in testing causal hypotheses on the ITO dataset using statistical inference in a generalized linear model (GLM) (Fahrmeir and Tutz, 2001; Liang and Zeger, 1986; McCullagh, 1984). As a first step, we described our variables in terms of their statistical characteristics (see Table 3): CV and CL were ratio-scale attributes measured in dollar and months, respectively. PM was described by means of a nominal (binary) scale, as contracts are either fixed-price or mixed pricing.

Variable	Measurement	Mean / mode	Std Dev.	Min	Max
CV	Ratio Scale	$103,798,600	$563,407	$75,000	$11,657,096,54
CL	Ratio Scale	54.33 months	20 months	2 months	180 months
PM	Nominal Scale	Fixed (0.54)	-	Combination (0.46)	Fixed (0.54)

Table 3: Overview of dependent variables

Second, we pre-processed our dataset to facilitate statistical inference and hypothesis testing. Our pre-processing consisted of multiple steps, including dealing with missing values through imputation or deletion, removing several nominal attributes with low variation in level frequencies or in high-level count, and removing highly correlated features. After pre-processing, each of the three resulting models (one for CV, CL, and PM each) consisted of 17 explanatory variables.

For modeling purposes, we used Gaussian-based GLMs for the ratio-scaled dependent variables (CV, CL), and a Bernoulli-based GLM for the binary dependent variable (PM). We implemented an iterative Reweighted Least Squares Method (IRLSM), with a collinearity check for parameter estimation (Daubechies *et al.*, 2010; Holland and Welsch, 1977).

Table 4 summarizes our results. For reasons of clarity and comprehensibility, the table only contains variables that were statistically significant for at least one of the three models (CV, CL, PM). Fields denoted by *x* indicate that a certain explanatory variable was not significant for a particular dependent variable. R^2 denotes the exploratory power of our model. For a complete explanation of the variables' prefixes, please refer to the original research paper.

The results showed that most of the significant influence factors reflect contract details (prefix CD: 7 variables), client characteristics (C: 5 variables), market attributes (M: 2 variables), sourcing geography (SG: 2 variables), client-provider relationship (REL: 1 variable), and geographic scope (GS: 1 variable).

Explanatory variable	Dependent variable		
	CV (R^2=0.26)	CL (R^2=0.18)	PM (R^2=0.35)
C_Number of Employees	$1.85*10^9$***	x	x
CD_Contract Length (CL)	$1.12*10^9$***	x	x
CD_Contract Value (CV)	x	4.13***	x
CD_AwardType = Master Service Agreement[6]	$12.72*10^9$***	31.21**	x
CD_Contract Status = Contract cancelled[7]	$9.35*10^9$***	23.18*	x
M_Number of submarkets	$0.64*10^9$*	2.58*	-0.67***
CD_Bid Type = Non-competitive	$1.80*10^9$*	x	x
CD_Bid Type = Competitive	x	x	-1.77***
C_Revenue	x	-2.29***	x
M_Discrete/Bundled = Discrete[7]	$1.42*10^9$*	x	x
CD_Contract Type[7]	x	-47.88***	x
SG_Global Sourcing = Offshore / Nearshore[7]	x	6.94**	x
GS_Geographic Scope = Latin America[7]	x	50.00*	x
C_Macro Industry = Government[7]	x	-9.55*	-0.88**
C_Market = Hosted Application Management[7]	x	11.81*	-2.88***
SG_Global Sourcing = Onshore[7]	x	x	1.55***
REL_Existing Relationship = No[7]	x	x	1.18*
C_Macro Industry = Other[7]	x	x	-0.87*

Table 4: GLM results of the explanatory study (sig. level: *=0.05; **=0.01; ***=0.001)

More specifically for CV, we found that multiple services agreements (MSA) with a high number of submarkets (i.e., more complex contracts including multiple different services), discrete deals, and contracts with competitive bids exhibited significantly greater CVs. Furthermore, contract cancellations seemed to happen more often with higher-value contracts. In terms of client or provider characteristics, only the number of client employees had a significant influence on CV.

For CL, we again found an expectable positive influence of MSA contracts with a high number of submarkets. In addition, offshore outsourcing contracts were significantly longer, especially with service provision from Latin America. Contracts closed with public institutions were significantly shorter. As could be expected, CV and CL were also highly correlated.

The results for PM showed that onshore sourcing has a significant positive influence on the probability for combined pricing. In contrast, government-issued contracts significantly tend towards a fixed-price mechanism. Another important finding was that contracts built upon existing client-vendor relationships had a significantly higher probability of mixed pricing.

(c) Predictive study: Measuring predictive power of feature space

The goal of our last study in this publication was to design empirical models that were able to predict the value of a dependent variable (CV, CL, PM) using a combination of independent prediction variables

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[6] Table entry only reflects the significant level of nominal variables, e.g., the variable *award type* only has an effect on *CV* if the *award type* is *MSA*, other award types are not significant.

[7] Average effect over all levels (only if all levels are significant with the same direction of influence).

with high predictive power. We sought to achieve this goal by using the high dimensionality of our dataset and apply algorithms that are capable of identifying complex relationships in the data. To this end, we applied different algorithms from the field of machine learning, including decision trees and neural networks, and then compared their accuracy.

For our first approach, we modified our pre-processing and kept variables with unbalanced distributions, small explanatory power, and large number of levels. This resulted in 32 prediction variables, including 3 numeric and 14 categorical variables with more than five levels. Furthermore, we split our data into training and test data in a ratio of 70:30 to avoid overfitting and evaluate generalizability. For prediction of the numeric-scaled CL and CV variables, we applied four different regression algorithms, including a simple linear regression (LIN-R), a boosted decision tree regression (BDT-R), a decision forest regression (DF-R), and a neural network regression (NN-R). The predictive power was assessed via two commonly-used metrics that express the average model prediction error: the mean absolute error (MAE) and the root mean squared error (RMSE) (Chai and Draxler, 2014). As can be seen from Table 5, all models performed rather poorly. For example, they under- or overestimated CL on average by 1 to 1.5 years. The performance of LIN-R was even worse because the algorithm is unable to capture non-linearities within the data.

Regression	LIN-R	BDT-R	DF-R	NN-R
MAE (CL)	34.97 months	13.18 months	12.56 months	14.62 months
RMSE (CL)	46.10 months	18.44 months	18.19 months	20.70 months
MAE (CV)	$407,402,205	$109,124,622	$111,999,329	$193,032,730
RMSE (CV)	$833,444,361	$602,920,453	$684,233,613	$728,631,033

Table 5: Regression results for CL and CV prediction

From the result of our first approach, it was apparent that the low number of metric predictors in our models was unable to estimate a numeric outcome. To achieve higher predictive power, we therefore transformed the CV prediction into a classification task by converting the target variable to a nominal scale with three classes: small contracts (CV<$10mn), medium-sized contracts ($10mn≤CV<$100mn), and big contracts (CV≥$100mn). For model development, we applied four multi-class classifiers, namely a logistic regression (MC-LGR), a decision forest (MC-DF), a decision jungle (MC-DJ), and a neural network (MC-NN). The predictive power was assessed via overall accuracy, i.e., the proportion of correctly classified contracts among the total number of contracts. The results showed that both tree-based classifiers (DF, DJ) achieve best model performance, but lacked discriminatory power. This is also apparent from the confusion matrix of the DF classifier that showed that around one third of big contracts were classified as medium ones, and one third of medium deals as small ones (see Table 6).

MC classification	Overall accuracy (CV)
MC-LGR	55.74%
MC-DF	66.23%
MC-DJ	64.59%
MC-NN	56.39%

MC-DF	Predicted		
Actual	small	medium	big
small	78.5%	20.0%	1.5%
medium	34.8%	55.3%	9.8%
big	4.7%	32.6%	62.8%

Table 6: MC classification results for CV prediction (left) and confusion matrix for MC DF (right)

For our final approach, we applied an equal-height discretization method and reformulated the problem as binary classification, using the CV median as threshold: CV<$13.9mn and CV≥$13.9mn. We used

four two-class classifiers, namely Logistic Regression (TC-LGR), a Binary Decision Tree (TC-BDT), a Decision Forest (TC-DF), and a Neural Network (TC-NN), and measured model quality via accuracy and another common metric called AUC (Fawcett, 2006). A similar design was applied to build a prediction model for PM. The results are summarized in Table 7 and show that acceptable prediction performances could be achieved for both models. However, due to its nature as binary classification problem, the models only feature very limited explanatory power.

TC classification	TC-LGR	TC-BDT	TC-DF	TC-NN
Accuracy (CV)	79.9%	77.0%	79.7%	78.3%
AUC (CV)	0.874	0.873	0.867	0.847
Accuracy (PM)	75.6%	78.0%	75.6%	76.3%
AUC (PM)	0.836	0.859	0.821	0.838

Table 7: TC classification results for CV and PM prediction

Taken together, our findings were twofold: Contextually, we provided empirical evidence for declining CL and CV, identified statistically significant influence factors on CV, CL, and PM, and demonstrated prediction rates of up to 80% in binary classification of CV and PM. Methodically, our work serves as entry point for building theory in IS by applying quantitative multi-study designs to large datasets.

3.2.3 A Quantitative Analysis of Culture-Induced Differences in Pivotal IT Outsourcing Contract Features

Research focus: Building on the results of the previous two papers about pivotal ITO contract features in the ASG region, in this contribution we investigated ITO contracts on a global scale. Our goal was to validate our regional findings regarding CV and CL globally and investigate regional differences in sourcing behavior. In doing so, we wanted to raise further awareness for the existence and importance of regional differences in times of globalization in general, and global sourcing in particular. Second, our contribution aimed at providing an empirical basis that future studies could build on to explore the root causes behind these regional differences.

Methodology: We analyzed a subset of IDC's BuyerPulse Deals Database with details on 14,917 ITO contracts from around the world that were closed between January 2007 and August 2017. Several lenses can be employed to subdivide the world into regions. We chose to draw on culture as one of the most common lenses from social sciences and built on Hofstede (1983) to partition the world into seven cultural regions, namely Asia Pacific (AP), Central & Eastern Europe (CE), Latin America (LA), Japan, Middle East & Africa (MEA), North America (NA), and Western Europe (WE). We then analyzed global trends and regional differences in ITO contracts.

For our analysis of global trends, we conducted a descriptive analysis on pivotal contract characteristics as well as covariates that we assumed to influence those features. We then performed two further analyses A and B to assess how regional differences influence CV and CL. Analysis A consisted of an ANOVA and post-hoc testing procedures with pairwise comparisons for CL and CV that aimed to identify pair-wise inter-cultural differences in ITO contract data. For Analysis B, we chose to model CL and CV as dependent variables and analyze the influences of other contract details in the dataset. We repeated this procedure for specific regions to identify regional differences in covariate influence strength and significance.

Results: The results of our descriptive analysis of global developments showed decreasing values for CV, CL, and the annual run rate over time (see Figure 9): The average CV decreased from a three-year average of $66.8 million between 2007 and 2009 to $38.6 million between 2015 and 2017 (-5% per year). Similarly, the average CL declined by around 10 months, from 54.4 months between 2007 and 2009 to 44.7 months between 2015 and 2017 (-2% per year). Consequently, the average annual run rate fell from $13 million (2007-2009) to $7.9 million (2015-2017), an average annual decline of 5%. This finding was in line with our previous research on contract data from the ASG region.
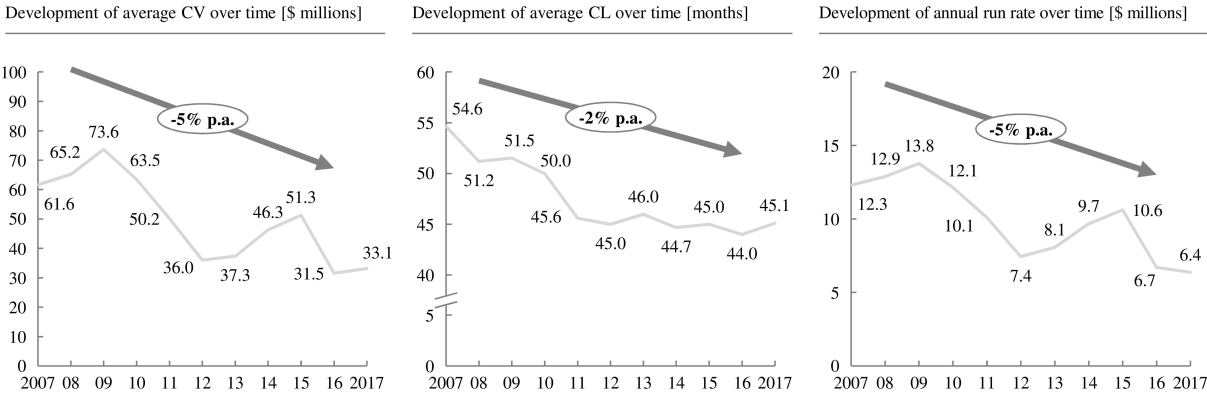
Figure 9: Development of average CV, CL, and annual run rate over time

Next, we characterized CV, CL, and PM per cultural regions. We found that contracts in WE had the highest average CV and the longest average CL, both with high variability. In contrast, the LA region featured the lowest CV and CL values, both with relatively small deviations. While fixed pricing was the most common PM across all regions, the frequency of its implementations differed (see Table 8).

Cultural region	CV (in $)				CL (in months)				PM
	Average	*Standard deviation*	*Min*	*Max*	*Avg.*	*Std. dev.*	*Min*	*Max*	*Mode (freq.)*
WE (n=6,380)	**$67.07*10^6$**	**$241.11*10^6$**	1,940	**$73.44*10^8$**	**51.8**	23.6	2	**444**	FP (0.73)
NA (n=5,006)	**$41.87*10^6$**	$198.99*10^6$	**1,035**	$70.00*10^8$	46.2	18.7	**1**	216	FP (0.52)
AP (n=1,380)	$54.75*10^6$	$196.24*10^6$	5,375	$45.00*10^8$	49.5	**26.5**	3	416	FP (0.78)
LA (n=1,316)	$18.28*10^6$	$86.60*10^6$	1,959	$15.43*10^8$	40.9	18.8	**1**	240	**FP (0.91)**
MEA (n=404)	$55.93*10^6$	$154.03*10^6$	12,576	$20.00*10^8$	48.7	21.9	6	120	FP (0.81)
CEE (n=375)	$23.02*10^6$	$134.66*10^6$	18,190	$23.14*10^8$	44.5	20.2	5	156	FP (0.66)
Japan (n=259)	$38.19*10^6$	**$83.57*10^6$**	20,000	$8.20*10^8$	43.7	16.7	12	120	**FP (0.46)**
Total (n=14,917)	$51.25*10^6$		1,035	$73.44*10^8$	47.3		1	444	FP (0.67)

Table 8: Descriptive statistics by cultural regions

The significance of the regional influence on CL and CV was again tested by means of an ANOVA. We found that the regional effects were significant at the level of 0.05. To gain a deeper understanding of exactly between which regions these differences existed, we performed post-hoc testing with pairwise comparisons using independent t-tests (Armstrong and Hilton, 2010). Figure 10 shows the result by means of an ordered-differences report of the cultural differences regarding CL (left) and CV (right). The difference between Region 1 and Region 2 is provided as number as well as in a bar chart with lower and upper confidence levels based on standard error estimation of the differences.
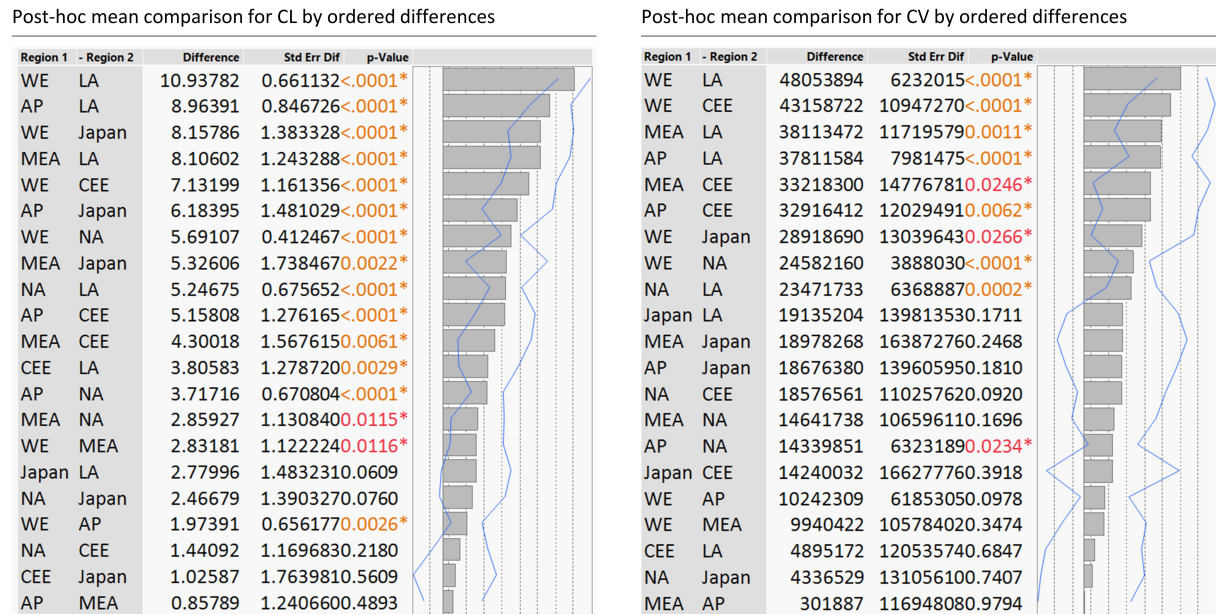
Post-hoc mean comparison for CL by ordered differences

Region 1	- Region 2	Difference	Std Err Dif	p-Value
WE	LA	10.93782	0.661132	<.0001*
AP	LA	8.96391	0.846726	<.0001*
WE	Japan	8.15786	1.383328	<.0001*
MEA	LA	8.10602	1.243288	<.0001*
WE	CEE	7.13199	1.161356	<.0001*
AP	Japan	6.18395	1.481029	<.0001*
WE	NA	5.69107	0.412467	<.0001*
MEA	Japan	5.32606	1.738467	0.0022*
NA	LA	5.24675	0.675652	<.0001*
AP	CEE	5.15808	1.276165	<.0001*
MEA	CEE	4.30018	1.567615	0.0061*
CEE	LA	3.80583	1.278720	0.0029*
AP	NA	3.71716	0.670804	<.0001*
MEA	NA	2.85927	1.130840	0.0115*
WE	MEA	2.83181	1.122224	0.0116*
Japan	LA	2.77996	1.483231	0.0609
NA	Japan	2.46679	1.390327	0.0760
WE	AP	1.97391	0.656177	0.0026*
NA	CEE	1.44092	1.169683	0.2180
CEE	Japan	1.02587	1.763981	0.5609
AP	MEA	0.85789	1.240660	0.4893

Post-hoc mean comparison for CV by ordered differences

Region 1	- Region 2	Difference	Std Err Dif	p-Value
WE	LA	48053894	6232015	<.0001*
WE	CEE	43158722	10947270	<.0001*
MEA	LA	38113472	11719579	0.0011*
AP	LA	37811584	7981475	<.0001*
MEA	CEE	33218300	14776781	0.0246*
AP	CEE	32916412	12029491	0.0062*
WE	Japan	28918690	13039643	0.0266*
WE	NA	24582160	3888030	<.0001*
NA	LA	23471733	6368887	0.0002*
Japan	LA	19135204	13981353	0.1711
MEA	Japan	18978268	16387276	0.2468
AP	Japan	18676380	13960595	0.1810
NA	CEE	18576561	11025762	0.0920
MEA	NA	14641738	10659611	0.1696
AP	NA	14339851	6323189	0.0234*
Japan	CEE	14240032	16627776	0.3918
WE	AP	10242309	6185305	0.0978
WE	MEA	9940422	10578402	0.3474
CEE	LA	4895172	12053574	0.6847
NA	Japan	4336529	13105610	0.7407
MEA	AP	301887	11694808	0.9794

Figure 10: Post-hoc mean comparison for CL and CV, displayed by ordered differences

For CL we encountered large significant differences between the regions WE, AP, MEA, and LA. The special role of Japan within the AP region was observable by its considerable differences to WE, MEA, and especially AP. We also found that Japan was leaning more towards NA. While the absolute regional deviations of around 5 to 11 months for the 10 most divergent comparisons seem rather small, they correspond to significant relative differences of around 10-14%. The differences for CV were less significant: LA showed significant differences to WE, AP, and MEA, and CEE was significantly different from WE, MEA, and AP, confirming differences in outsourcing culture between eastern and western Europe. Once again, Japan was found to be very similar to NA, while WE in this case showed no significant differences from AP and MEA.

Taken together, the results of our ANOVA showed significant regional differences in CL and CV. However, this significant effect is only true for certain pair-wise comparisons between regions, as our post-hoc test showed.

3.3 Qualitative Research Stream

3.3.1 Conceptualizing the Effect of Cultural Distance on IT Outsourcing Success

Research focus: During our literature review and the work on the previous quantitative papers, we found numerous studies that suggest that at least 25% of ITO projects fail in meeting their targets (Goles and Chin, 2005; St. John *et al.*, 2016). There is also consensus among researchers that the quality of the relationship between client and provider organizations is one of the most significant influence factors for ITO success (Gonzalez *et al.*, 2015; Grover *et al.*, 1996; Kern, 1997; Kishore *et al.*, 2003; Lee and Kim, 1999; Oshri *et al.*, 2015). In parallel, extant research has identified culture as one of the most powerful, yet often overlooked factors in relationships of any kind (Leidner and Kayworth, 2006). In this context, a high degree of dissimilarity between cultural values of two or more organizations ("cultural distance") frequently leads to considerable challenges in establishing and maintaining good-quality relationships which, in turn, hamper ITO success.

Despite this complication, we found that research on cultural distance and its effects is still scarce (Jin Kim *et al.*, 2013; Lacity *et al.*, 2016; Xu and Yao, 2014). Empirical evidence on what exactly "goes wrong" in culturally challenging ITO projects is scarce. It remains unclear where exactly these challenges stem from, how they can be explained, and what are suitable measures to mitigate or avoid them. The fifth paper of this dissertation sought to address this gap.

Methodology: The goal of this paper was to develop a research model that conceptualized the effect of culture on ITO success. To this end, we analyzed the academic literature on culture and previous studies on relationship quality and ITO success, and combined our findings into an integrated research model.

Results: We developed our research model from various research streams in culture and ITO. We describe its constituent elements below.

(a) The concept and influence of culture

The concept of culture is complex and multi-faceted. Hofstede *et al.* (2010) define it as "the collective programming of the mind that distinguishes the members of one group or category of people from another" (p. 6). Departing from this definition, we use the term *cultural distance* to express the degree of dissimilarity between the cultural values of two or more groups or categories. *Cultural distance* manifests in differing beliefs about what values, behaviors, goals, or policies are considered important or unimportant, appropriate or inappropriate, and right or wrong. Due to its complexity and the difficulty to comprehend it in its entirety, we followed the suggestion by Leidner and Kayworth (2006) to conceptualize culture in three levels: *national*, *organizational*, and on the *team-level*.

We built on the widely accepted conceptualization of *national culture* by Hofstede *et al.* (2010) who described it along the following six dimensions: *individualism vs. collectivism*, *masculinity vs. femininity*, *power distance*, *uncertainty avoidance*, *long-term vs. short-term orientation*, and *indulgence vs. restraint*. We complemented the six dimensions with three additional aspects by other researchers, namely *activity vs. passivity* (Lytle *et al.*, 1995), *language and communication* (ibid.), and *conflict resolution* (Koh *et al.*, 2009). For a brief description of each dimension, we refer to our original paper.

Analogous to how each nation is characterized by its specific national culture, each organization within a society possesses its own *organizational culture*. In this context, *organizational culture* is defined as "the pattern of shared values and beliefs that help individuals understand organizational functioning and provide norms for behavior in the organizations" (Deshpande and Webster, 1989). We again drew on Hofstede *et al.* (2010) to conceptualize organizational culture in six dimensions: *process-oriented vs.*

result-oriented, *employee-oriented vs. job-oriented*, *parochial vs. professional*, *open system vs. closed system*, *loose control vs. tight control*, and *normative vs. pragmatic*. We again refer to our original paper for the description of each dimension.

Every organization is influenced by the superordinate national culture of the nation it is embedded in. Similarly, each team or department within an organization is subject to its organizational culture such that different teams within the same organization share a set of similar values. However, they also partly differ from each other in terms of how they organize their work. Our research model reflects this aspect as *team-level or sub-team-level cultural distance*.

(b) ITO success and relationship quality

Since our research investigated the impact of culture on *ITO success*, it is imperative to define what constitutes success in an ITO project. Extant literature suggests that organizations outsource primarily to access *external expertise or skills*, realize *cost advantages*, increase their *flexibility*, and reach and ensure high *service quality* (Lacity *et al.*, 2010). The better these targets are met, the higher the client satisfaction (Grover *et al.*, 1996; Lee and Kim, 1999). We therefore integrate these goals as indicators to measure *ITO success*.

Various studies have found a strong influence of *relationship quality* on *ITO success* and identified several attributes that determine relationship quality. Among them are *communication*, *cooperation*, *trust*, *provider performance*, and *conflict* (Dibbern *et al.*, 2004; Grover *et al.*, 1996; Könning *et al.*, 2019; Lacity *et al.*, 2016; Lee and Kim, 1999; Westner and Strahringer, 2010).

(c) Integration into our research model

For our research model we combined the concept of *cultural distance* with its influence on *relationship quality* and *ITO success*. Unlike most previous studies, we conceptualized *cultural distance* and its effects in three layers (national, organizational, and team level). Building on earlier research by Winkler *et al.* (2008), we argue that cultural distance on every level leads to *behavioral differences in service delivery* (i.e., how a certain service is provided within the ITO engagement). These behavioral differences, in turn, affect *communication*, *cooperation*, *trust* and *provider* performance, and lead to increased levels of *conflict*. They thereby directly reduce *relationship quality*. Reductions in *relationship quality* then affect *ITO success*.

Finally, we argue that the relationship between *behavioral differences in service delivery* and *relationship quality* is moderated by two factors: First, *interaction necessity* as the amount of interaction between client and provider in delivering the service. We hypothesized that it depends on the specific *service type* and is higher for very interaction-intensive creative tasks such as application development and maintenance (ADM) than for less complex tasks in infrastructure operations or IT help desk. Second, we integrated results from previous research that found *leadership and management of culture* to be able to reduce negative effects of *cultural distance* on *relationship quality*. These *leadership and management* techniques include formal and informal control mechanisms as evaluated by Kirsch *et al.* (2002), Wiener *et al.* (2015), and Winkler *et al.* (2008). As Winkler *et al.* (2008) argue, their effective promotion requires *cultural awareness and intelligence*. Figure 11 shows our complete research model.
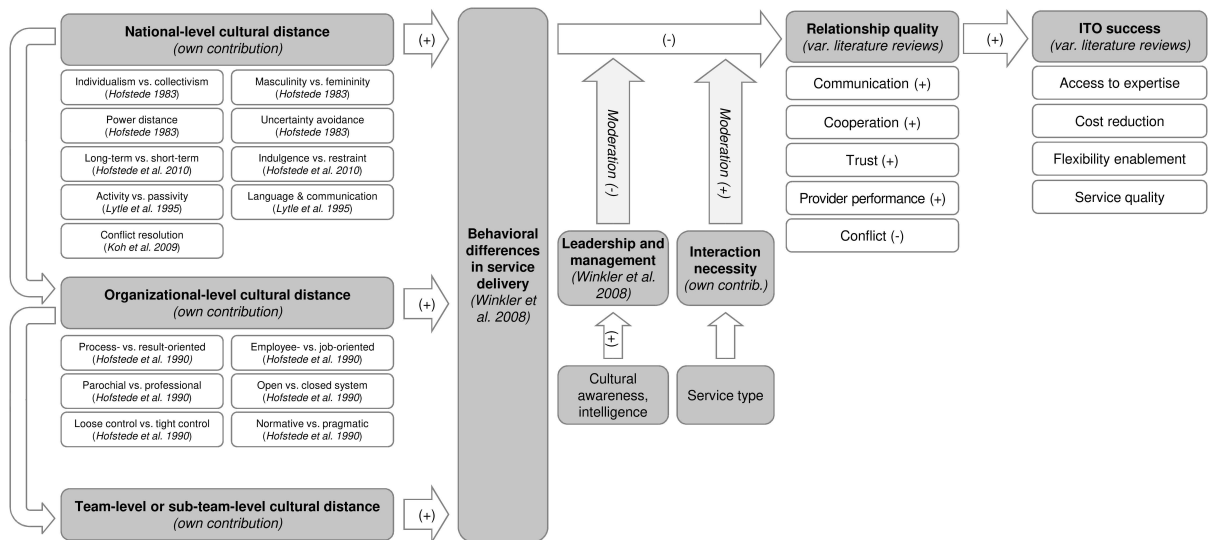
National-level cultural distance
(own contribution)

Individualism vs. collectivism *(Hofstede 1983)*	Masculinity vs. femininity *(Hofstede 1983)*
Power distance *(Hofstede 1983)*	Uncertainty avoidance *(Hofstede 1983)*
Long-term vs. short-term *(Hofstede et al. 2010)*	Indulgence vs. restraint *(Hofstede et al. 2010)*
Activity vs. passivity *(Lytle et al. 1995)*	Language & communication *(Lytle et al. 1995)*
Conflict resolution *(Koh et al. 2009)*	

(+)

Organizational-level cultural distance
(own contribution)

Process- vs. result-oriented *(Hofstede et al. 1990)*	Employee- vs. job-oriented *(Hofstede et al. 1990)*
Parochial vs. professional *(Hofstede et al. 1990)*	Open vs. closed system *(Hofstede et al. 1990)*
Loose control vs. tight control *(Hofstede et al. 1990)*	Normative vs. pragmatic *(Hofstede et al. 1990)*

(+)

Team-level or sub-team-level cultural distance
(own contribution)

(+)

Behavioral differences in service delivery *(Winkler et al. 2008)*

(-)

Moderation (-)

Moderation (+)

Leadership and management *(Winkler et al. 2008)*

Interaction necessity *(own contrib.)*

(+)

Cultural awareness, intelligence

Service type

Relationship quality *(var. literature reviews)*

- Communication (+)
- Cooperation (+)
- Trust (+)
- Provider performance (+)
- Conflict (-)

(+)

ITO success *(var. literature reviews)*

- Access to expertise
- Cost reduction
- Flexibility enablement
- Service quality

Figure 11: Integrated research model for the effect of cultural distance on ITO success

3.3.2 Unraveling the Impact of Cultural Distance on IT Outsourcing Success – Insights from Three Major Sourcing Reconfigurations

Research focus: The goal of our sixth paper was to empirically explore the complex nature of cultural distance and its multi-faceted effect on ITO success. To this end, we employed our previously developed integrated research model to guide our research. Beyond empirical validation of our model, we aimed for a theoretical contribution by employing a semi-structured interview guide with open questions and open coding to allow for validation, corrections, and extensions of our model.

Methodology: We chose an interpretive qualitative research design based on an in-depth single-case study as it has been described as especially applicable for theory building (Eisenhardt, 1989; Walsham, 1995, 2006). We deliberately chose a single-case design since it allowed for a deep analysis of our client organization that went through three different outsourcing configurations over the course of ten years. By concentrating on this one client and its three changing sourcing configurations, we inherently controlled for all client or project characteristics that influence relationship quality and ITO success and typically change from one case to another. By choosing this embedded design (Yin, 2014) we had a "clean view" on the pure effect of the three alternative configurations.

The case company for our research was ProSiebenSat.1 Media SE ("P7S1"), a leading European media organization with more than 6,500 employees, a diverse portfolio of activities in TV and digital businesses, and annual revenues of EUR 4 billion.[8] P7S1 is heavily reliant on a well-functioning IT landscape to store and process TV shows, movies, and commercials, produce and distribute its own original content, and compile and broadcast more than 100,000 hours of TV programming per year across its 14 free- and pay-TV stations. The increasing importance of P7S1's online businesses as well online as distribution, communication, and sales channel has even increased the role of IT.

Until 2007, P7S1 provided its IT infrastructure operations and a large share of ADM-related activities internally with around 300 IT employees. In early 2007, the company decided to change its IT sourcing strategy and went through three phases of ITO between 2008 and 2018: (1) A single-provider full

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[8] For more information on the case context of P7S1, please refer to our original paper.

outsourcing and offshoring to a large international IT service provider (Provider A) with service delivery from India (2008-2010), (2) a single-provider outsourcing with the same partner in a mixed offshore/ onshore delivery model (2011-2017, with adjustments in ADM in 2015), and (3) a multi-provider model with two local mid-sized providers onshore (Provider B and Provider C), accompanied by an increased share of insourcing (since 2018). Figure 12 provides an overview of P7S1's three IT sourcing phases.

Area	Main activities	Main responsibility (simplified)				
		INSOURCING	PHASE 1	PHASE 2		PHASE 3
		until 2008	2008 - 2010	2011 - 2014	2015 - 2017	since 2018
IT Management	• IT Strategy • Enterprise Architecture • IT Security • Service & Provider Management	P7S1 n/a	P7S1 / Provider A P7S1	P7S1 / Provider A P7S1	P7S1	P7S1 n/a
Application Development and Maintenance (ADM)	• Project Management • Requirements Engineering • Solution Architecture • Development & Testing • Application and Middleware Operations	P7S1	Provider A	P7S1 Provider A	P7S1 Prov A / various P7S1	P7S1 P7S1 / various Prov B / P7S1
Infrastructure Operations	• Workplace/Office IT and Service Desk • Server, OS, Virtualization, and Database Mgmt. • Storage, Archive, and Backup Management • Datacenter Mgmt., incl. Hardware Provisioning • Network, Security, and Communication Services	P7S1	Provider A Telco provider	Prov B Prov A P7S1	Prov B Prov A / P7S1 P7S1	Prov B Prov C / P7S1 P7S1

Figure 12: P7S1's three IT sourcing phases (2008-2018)

P7S1's journey through three different sourcing phases allowed for a comprehensive evaluation of our research model as the three phases represented three different configurations of cultural distance: High levels of national, organizational, and team-level cultural distance with their first provider between 2008 and 2010, a strong reduction of national cultural distance but still high organizational and team-level cultural distance between 2011 and 2017, and minimized distance on all three levels since 2018. Taken together, this case history promised interesting insights into effects of all three levels of cultural distance.

For data collection, we conducted seven interviews with top executives and members of the middle management in P7S1, including two previous employees of Provider A, and three interviews with managers of P7S1's new mid-sized providers, Provider B and Provider C. The interviews were conducted in German using a semi-structured interview guide with open questions. They lasted about one hour and were face-to-face, except for three conversations that were conducted via telephone. To support the generalizability and external validity of our study beyond this specific case, we also interviewed a partner and a junior partner of a leading international top-management consultancy.

All interviews were tape-recorded, transcribed, coded and interpreted. The goal was to identify consistent themes across multiple interviews. For internal validity, the first author coded the interviews before the second and third authors reviewed and cross-validated the codings. For data triangulation, we also examined internal documents on P7S1's sourcing strategy from executive board and IT leadership meetings to validate participants' statements and complement our understanding of the case.

Results: Our paper provided two major contributions to the academic literature: First, it combined extant research on culture, antecedents of ITO success, and the influence of cultural distance on relationship quality and ITO success to develop a research model for the effects of culture on ITO success in three

layers. It then empirically investigated the model by means of an exploratory single-case study. Unlike most previous research that investigated culture on one or two particular levels (Schmidt *et al.*, 2016; Winkler *et al.*, 2008), our research utilizes the idiosyncrasy of our case study to develop one of the first fully integrated views on cultural effects.

All our participants emphasized the high effect of culture on ITO success. They described it as the most influential root cause for issues in the collaboration between P7S1 and their first ITO provider, Provider A, and admitted that they had underestimated the impact of cultural distance. Having learned from this experience, they reworked their provider selection process and made culture a major selection criterion.

We then went into detail on all three levels of cultural distance to make sense of where exactly the cultural differences had originated. On the level of *national culture*, our analysis identified culture-induced challenges mainly in language and communication, conflict resolution, and power distance. In terms of language and communication, our interviewees noted that difficulties arose because communication between client and provider employees had to take place in English – neither party's native language. It was further complicated by the high complexity of topics – most notably questions around the development and maintenance of custom-made media-specific applications and IT infrastructure – that had to be discussed in conference calls involving employees from multiple different backgrounds and locations. The communication was described to be highly inefficient and prone to frequent misunderstandings. This finding is largely in line with extant literature on cultural difficulties around language and communication (Aubert *et al.*, 2011; Khan and Azeem, 2014).

Our participants also described diverging conflict resolution patterns and error cultures between P7S1's German team and the Asian culture of a provider. Statements revolved around Indian and Malayan employees' difficulties in saying no, flagging insufficient knowledge, requesting assistance, and making P7S1 aware of problems early enough to allow for a timely reaction. In the field of power distance, differences emerged between the low power distance, non-hierarchical culture of P7S1, and the higher power distance in Malaysia and India. They made problem-solving sessions even more inefficient and led to additional frustration on both sides.

On the level of *organizational culture*, our contribution provided further empirical evidence, adding to previous research from Goles and Chin (2005) and Swar *et al.* (2012). More specifically, it exemplifies the effects of differences in normative vs. pragmatic behavior and process vs. results orientation as P7S1 and its first large international IT provider were on opposite ends of the spectrum with high levels of organizational-level cultural distance between them: P7S1 employees described their organizational as very agile, results-driven, and informal, with pragmatic decision-making and frequent changes in plans. Their provider, on the other hand, was perceived as very process-oriented, professional, and with a much higher degree of formality. This combination led to frequent misunderstandings, loss of trust and eventual loss of the willingness to cooperate. In addition, we also identified differences in the level of employees' identification with their employer and their client which can be traced back to specific characteristics of a company like size and its organizational design.

Finally, for *team-level cultural distance*, we found that managing two different teams within the same organization is not necessarily less complex or effortful than managing two different providers. To the contrary, just because two teams belong to the same organization, they can still be very diverse, prefer different working styles, and have a low incentive to coordinate with one another. These differences and their separate incentivization in terms of performance or financial targets can lead to most of the coordination effort not being handled between them but falling to the client organization.

Our contribution also hypothesized and empirically validated the existence of two factors that moderate the effects of cultural distance on ITO success, namely the *complexity of the outsourced service* and the *interaction* and several *leadership and management techniques*. We argue that the more complex the service, and the more creative thinking and complex interaction it requires, the stronger the effects of cultural difference. For example, complex tasks like the creation of a differentiating, business model-centric, customer-facing platform require both organizations to interact frequently on very complex matters. In this context, effective communication and frictionless collaboration are more success-critical than in non-differentiating, very transactional tasks like the operations of an internal IT helpdesk.

Second, we identified several *leadership and management* techniques that managers can implement to mitigate or offset cultural distance. They include operationalizing the ITO collaboration as partnership on an eye-to-eye level rather than an unequal transactional relationship as well as promoting informal relationship-building between client and provider teams. This finding is largely consistent with extant literature that has identified the effective promotion of informal control mechanisms like socialization strategies and social events as "positively and significantly associated with IS offshore project performance" (Wiener *et al.*, 2015, p. 580). In this context, managers also profit from previous experience in different cultural regions as it helps them increases their cultural sensitivity, identify issues early, and initiate effective countermeasures to avoid permanent damage of the relationship.

Last, for practitioners who consider entering a new ITO project, our case study highlights the importance of culture and outlines means of avoiding relationships with high cultural distance, for example in the form of a culture-aware provider selection. It is operationalized by including cultural fit as provider selection criterion and conducting an outside-in assessment of the anticipated cultural distance. In this regard, our participants also described how organizations go through a learning process and become more mature with time and experience: While they seem to underestimate the effect of culture for their first ITO project, they continuously learn about what signs to look for in subsequent engagements. We also found that managers should lay particular attention on certain project and contract characteristics like the share that the client has of the provider's revenue ("share of wallet") and the contract duration: The more complex the work package, the higher the cost for re-sourcing it to another provider, the higher the initial setup cost that the provider has to incur, and the longer the recommendable contract duration. However, it should not be too long to ensure high degrees of provider incentive to perform and avoid lock-in effects. We integrated our findings into a refined research model that is depicted in Figure 13.
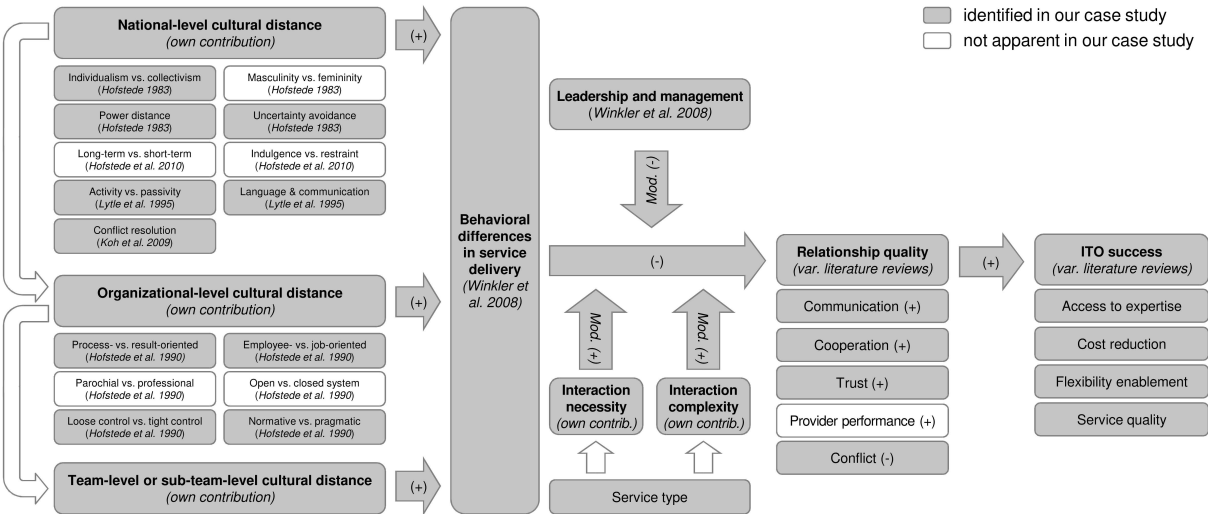

Figure 13: Refined research model

3.3.3 There and Back Again: Reconfiguring IT Sourcing at ProSiebenSat.1

Research focus: The third and final publication that resulted from this case study and the final constituent paper of this doctoral dissertation was written in form of a teaching case. The goal of this paper was to introduce undergraduate and graduate students in IS to the general topic of IT sourcing and its fundamental characteristics. More specifically, we familiarize them with its main design parameters and modes of operation such as insourcing, outsourcing, and backsourcing, onshoring, nearshoring, and offshoring, or single- and multi-vendor sourcing, and sensitize them for their respective advantages, disadvantages, benefits and risks. We designed it in such a way that it can be embedded into a discussion on business strategy, digital business, digital transformation, IT management, or business-IT alignment.

Methodology: We chose to utilize the P7S1 case study for this teaching case because we considered it especially suitable to offer students rare and valuable insights into practical decision-making in large ITO projects, their implementation, and the challenges that emerge from the transition from one mode of IT sourcing to another. In addition, the case goes far beyond providing context for the application of frameworks and instruments to create awareness of the complexity of IT sourcing projects in practice. Therefore, instead of a simplified anecdotal account of how a large company makes decisions, the case offers detailed report of P7S1's top management's response to drivers and challenges of IT sourcing. Combining insights from our quantitative and qualitative research on different ITO matters, it describes the decision processes that led P7S1 to switch from single- to multi-vendor sourcing and the cultural challenges it experienced in offshoring and how it mitigated and eventually solved them.

Similar to the previous paper, we primarily collected the evidence for this contribution in interviews with P7S1's top-management team and IT leadership, including the Chief Information Officer, the Chief Technology Officer, Head of IT Strategy, and various Senior Vice Presidents. We also underpinned our understanding of the case with internal documents from executive board and IT management meetings. The documents describe the three subsequent sourcing configurations that P7S1 went through between 2008 and 2018, from underlying decision processes and motivations, via various reports on provider performance, through to concrete issues and their solutions. We then used this evidence and our impression of the state of the art in ITO research from previous papers to compose this teaching case as an engaging story that takes students through ten years of ITO decision-making.

Structure and teaching strategy: The teaching case consists of three documents: The complete description of the case, i.e., a detailed account of P7S1's sourcing strategy between 2008 and 2018, the teaching note for lecturers that contains various questions, assignments, and discussion items for lecturers to choose from, and an initial student version of the case which only contains the first part of P7S1's outsourcing history, from their complete insourced model that they ran until 2008 to the full, single-provider outsourcing that was implemented in 2008.

Our recommended approach to teach this case is to separate it into two steps. First, students should only be provided with the first part of the case and discuss strategies for P7S1 to address the challenges that the full single-provider outsourcing entailed. Once these questions are answered, we suggest the lecturer confront students with the second part of the case that describes P7S1's moves to multi-provider and eventual backsourcing and discusses them with students.

More granularly, we offer two alternatives on how this case can be integrated into an ongoing class or series of lectures (see Figure 14). In both cases, the case is introduced in class. Afterwards, the initial version is handed out, either in class, or by means of an e-learning platform. Students then work on the questions and assignments related to this first part. Students can either submit their results digitally via

the e-learning platform, and/or present them in class. Upon submission of the first set of assignments, the second part is handed out. The students' suggestions are then discussed and contrasted with P7S1's decision-making. The comparison between students' suggestions and P7S1's actual decisions promises particularly valuable learnings. The lecture is then closed in class using the discussion items provided in the teaching note. Optionally, an outlook on future opportunities and challenges of ITO can be given.
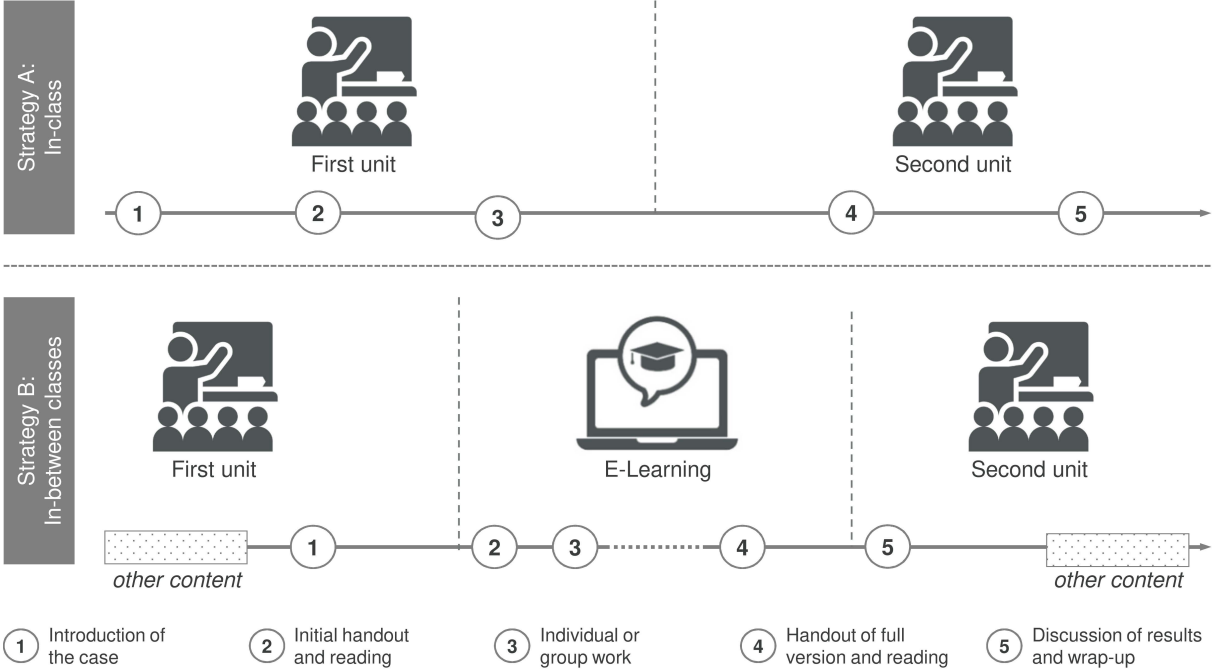

Figure 14: Alternative teaching strategies

4 Summary of Results

After describing the focus, methodology, and results of each of the seven papers in the previous section, this section summarizes the dissertation's overarching contribution to research and practice. In addition, limitations and promising perspectives for further research are discussed.

4.1 Research Contribution

In keeping with its threefold structure with an initial literature review, a quantitative part on developments in pivotal ITO contract features, and a qualitative part on the influence of culture on ITO by means of an in-depth case study, this dissertation advances the body of knowledge in IS in three ways.

First, our contribution provides a multi-faceted overview of the current state of the art in empirical ITO research. In this regard, it offers a systematic overview of the most recent empirical literature, including areas of mature research, contradictory findings, and emerging topics that represent avenues for further research for scholars to embark on, addressing RQ1.

Second, in addressing RQ2, the dissertation contributes a view on recent developments in IT sourcing strategy by providing rare and previously unavailable analyses of ITO contract features in sufficient quantity that allows for generalization. Our analyses in this context particularly point to ongoing decreases in contract length and contract value, while also providing valuable empirical evidence for the increasing prevalence of multi-provider sourcing, both in the ASG region and globally. Future research

can use our analyses as basis and motivation for additional work, e.g., around motivational factors for smaller and shorter contracts or employing multi-provider instead of single-provider sourcing strategies. In addition, our explanatory and predictive models for contract value, contract length, and pricing method offer a first proof of concept for IS theory building by applying quantitative mixed-method approaches to large datasets with a global scope and high-dimensional feature space.

Third and in correspondence with RQ3, the dissertation illustrates culture as significant, yet often underestimated influence factor for the quality of a client-provider relationship and ITO success. Building upon previous work from the fields of culture and ITO, our contribution develops the concept of cultural distance on three levels. It then uses the cultural dimensions on each of these levels to analyze and make sense of the complex sourcing history of P7S1, identify root causes for its main challenges, and outline moderators and the effect of management techniques. It thereby provides valuable insights into the effects of cultural distance in a structured manner and constitutes one of the first case studies that serve as a comprehensive example for the multifaceted influence of culture on three different levels.

4.2 Practice Contribution

This dissertation also offers valuable contributions to practitioners: First, our analyses around recent developments in IT sourcing strategy – particularly regarding pivotal contract features – can stimulate their thinking around how to design and setup ITO projects. More specifically, practitioners may want to question their previous tendency to outsource and offshore their whole IT to one large IT service provider for multiple years, and instead follow the ongoing trend towards shorter, smaller, and more flexible contracts with a best-of-breed selection of multiple providers.

Second, as exemplified by our case study and supported by other similar research efforts, organizations have long followed a tendency to outsource and offshore IT tasks for cost reasons. Provider capabilities or cultural considerations have oftentimes only been considered as secondary selection criteria. Part of the reason behind this was that IT was long considered a commodity function rather than a source of competitive advantage. However, today IT plays an increasingly prominent and business-critical role, is a constituent part of most if not all business models, or even the single most important enabler of completely new business models. Against this background, the motivation for IT outsourcing for many companies is shifting from a mere cost perspective towards a more capability-oriented rationale. ITO providers have spent three decades building cutting-edge IT capabilities in Western countries as well as "offshore" and are in a strong position to provide business-critical IT capabilities that every organization requires. However, the more important and business-critical the IT services, the more influential the cultural compatibility between client and provider organization.

In this context, our findings highlight the importance of conscious and culture-aware IT sourcing and the effects of cultural distance. Practitioners who are considering ITO may find our contribution helpful as a reference for the effects of culture when taking IT sourcing decisions. For practitioners who already find themselves in culturally challenging situations, our contribution offers effective management techniques that are apt to handle or avoid them. Managers can use our insights as a starting point and combine them with similar findings of comparable case studies and their own experience to substantially improve the situation of their current and future ITO engagements.

Taken together, this dissertation provides both researchers and practitioners with a contemporary view on the recent academic and practical developments and challenges in IT sourcing – both on a broad quantitative empirical basis as well as in-depth by means of a detailed qualitative case study.

4.3   Limitations and Directions for Further Research

We acknowledge that there are three sets of limitations to this research. The first concerns our literature review: Despite employing a thorough search process, we cannot claim completeness for our set of considered empirical articles. We also recognize that the process of categorizing and coding our articles is intrinsically subjective. It may therefore contain debatable categorizations of papers or inaccurate reflections of the investigated relationships and results.

The second set of limitations concerns the results of our quantitative contributions, mainly due to the nature of our dataset. While it contains a multitude of data points and despite our rigorous triangulation efforts, it cannot claim to draw a complete picture of all ITO contracts. First, it is built based on publicly available information on ITO deals. However, service providers, client companies, and the media tend to report more on large-scale ITO engagements than smaller deals that, for the most part, remain unannounced. Furthermore, ITO contracts of large institutions are more often made public. In consequence, IDC's database is subject to an unavoidable systematic sampling error and biased towards larger ITO deals. However, our dataset represents the best perspective currently available on the market as our data triangulation efforts showed.

The third and final set of limitations concerns the qualitative case study. We acknowledge that parts of our findings in P7S1's case study may be specific to the idiosyncrasies of the case and only generalizable or transferable to other situations to a limited extent. Furthermore, we realize that by interviewing seven representatives from P7S1 (including two former employees of Provider A) and three employees of Provider B and C, the impression of the overall situation and individual conflicts may be subject to a one-sided bias towards the client organization. To address these two points, we put an early emphasis on data triangulation by verifying participants' statements with internal material. For generalizability we also discussed our findings with two experts from a leading international top-management consultancy with extensive experience in ITO from a multitude of settings in various industry sectors.

Notwithstanding the limitations of this dissertation, our research serves as a valuable contribution to the existing body of knowledge on IS in general, and ITO in particular. It provides an overview of the recent empirical literature, the development of IT sourcing strategy through the lens of selected ITO contract characteristics, and identifies and explores cultural distance as a key factor in ITO engagements.

As this dissertation illustrates, ITO remains a key element of IT strategy for every organization – today, 30 years after its initial implementation, more than ever before. At the same time, it is subject to continuous change: Embedded in a highly dynamic environment where IT exercises an increasing influence on companies of all sizes and sectors, disrupts existing business models and enables the invention of new ones, and even changes aspects of our very society.

In parallel, the existing traditional, cost-motivated business case for ITO is also challenged by various technological advancements, particularly the advent of automation. Automation not only promises to further reduce costs and change the cost type from recurring cost to primarily one-off capital expenditure that is required to automate a process, but also features superior scale effects and potential for new IT-enabled business models. It will be exciting to observe how client organizations and IT providers respond to the challenges, how they adapt their collaboration model, and what role culture will play in this ever-changing environment.

Against this background and despite the myriad of practical and academic studies that have investigated ITO through a multitude of lenses, the future motivation, value proposition, and role of ITO make for at least three promising areas for future research.

5 References

Alfred, R. (2009), "Discretization Numerical Data for Relational Data with One-to-Many Relations", *Journal of Computer Science*, Vol. 5 No. 7, pp. 519–528.

Applegate, L.M. (1992), *Eastman Kodak Co.: Managing Information Systems Through Strategic Alliances: Harvard Business School Teaching Note 193-037*, Boston, MA, USA.

Armstrong, R.A. and Hilton, A.C. (2010), "Post Hoc Tests", *Statistical Analysis in Microbiology: Statnotes*, pp. 39–44.

Association for Information Systems (2016a), "AIS top-list", available at: http://litsonar.com/ (accessed 27 June 2019).

Association for Information Systems (2016b), "Senior Scholars' Basket of Journals", available at: http://aisnet.org/general/custom.asp?page=SeniorScholarBasket (accessed 27 June 2019).

Aubert, B.A., Rivard, S. and Templier, M. (2011), "Information Technology and Distance-Induced Effort to Manage Offshore Activities", *IEEE Transactions on Engineering Management*, Vol. 58 No. 4, pp. 758–771.

Bandara, W., Miskon, S. and Fielt, E. (2011), "A Systematic, Tool-Supported Method for Conducting Literature Reviews in Information Systems", *Proceedings of the 19th European Conference on Information Systems*.

Bapna, R., Barua, A., Mani, D. and Mehra, A. (2010), "Research Commentary - Cooperation, Coordination, and Governance in Multisourcing. An Agenda for Analytical and Empirical Research", *Information Systems Research*, Vol. 21 No. 4, pp. 785–795.

Becker, J., Grob, H.L., Klein, S., Kuchen, H., Müller-Funk, U. and Vossen, G. (2003a), *Arbeitsberichte des Instituts für Wirtschaftsinformatik*, Münster.

Becker, J., Holten, R., Knackstedt, R. and Niehaves, B. (2003b), "Forschungsmethodische Positionierung in der Wirtschaftsinformatik - epistemologische, ontologische und linguistische Leitfragen", in Becker, J., Grob, H.L., Klein, S., Kuchen, H., Müller-Funk, U. and Vossen, G. (Eds.), *Arbeitsberichte des Instituts für Wirtschaftsinformatik*, Vol. 93, Münster.

Becker, J. and Niehaves, B. (2007), "Epistemological Perspectives on IS Research: A Framework for Analysing and Systematizing Epistemological Assumptions", *Information Systems Journal*, Vol. 17 No. 2, pp. 197–214.

Bughin, J., Manyika, J. and Catlin, T. (2019), *Twenty-Five Years of Digitization: Ten Insights into How to Play It Right, McKinsey Global Institute*, Madrid, Spain.

Caldwell, B. (1994), "Special Counsel - Outsourcing Lawyers can Help Corporate Clients Avoid Nasty Pitfalls when Signing Billion-Dollar Deals", *Information Week*, Vol. 499 No. October 31.

Chai, T. and Draxler, R.R. (2014), "Root Mean Square Error (RMSE) or Mean Absolute Error (MAE)? Arguments Against Avoiding RMSE in the Literature", *Geoscientific Model Development*, Vol. 7 No. 3, pp. 1247–1250.

Cohen, L. and Young, A. (2006), *Multisourcing: Moving Beyond Outsourcing to Achieve Growth and Agility,* 1. [print.], Harvard Business School Press, Boston, MA, USA.

Daubechies, I., Devore, R., Fornasier, M. and Güntürk, C.S. (2010), "Iteratively Reweighted Least Squares Minimization for Sparse Recovery", *Communications on Pure and Applied Mathematics*, Vol. 63 No. 1, pp. 1–38.

Deshpande, R. and Webster, F.E. (1989), "Organizational Culture and Marketing. Defining the Research Agenda", *Journal of Marketing*, Vol. 53 No. 1, pp. 3–15.

Dibbern, J., Goles, T., Hirschheim, R., Bandula, J. and Jayatilaka, B. (2004), "Information Systems Outsourcing. A Survey and Analysis of the Literature", *The DATA BASE for Advances in Information Systems*, Vol. 35 No. 4, pp. 6–102.

Eisenhardt, K.M. (1989), "Building Theories from Case Study Research", *Academy of Management Review*, Vol. 14 No. 4, pp. 532–550.

Fahrmeir, L. and Tutz, G. (2001), *Multivariate Statistical Modelling Based on Generalized Linear Models,* 2nd ed., Springer-Verlag New York, New York City, NY, USA.

Faisal, M.N. and Raza, S.A. (2016), "IT Outsourcing Intent in Academic Institutions in GCC Countries. An Empirical Investigation and Multi-Criteria Decision Model for Vendor Selection", *Journal of Enterprise Information Management*, Vol. 29 No. 3, pp. 432–453.

Fawcett, T. (2006), "An Introduction to ROC Analysis", *Pattern Recognition Letters*, Vol. 27 No. 8, pp. 861–874.

Fitzgerald, G. and Willcocks, L. (1994), "Contracts and Partnerships in the Outsourcing of IT", *Proceedings of the 15th International Conference on Information Systems*, 91-98.

Goles, T. and Chin, W.W. (2005), "Information Systems Outsourcing Relationship Factors. Detailed Conceptualization and Initial Evidence", *The DATA BASE for Advances in Information Systems*, Vol. 36 No. 4, pp. 47–67.

Gonzalez, R., Gasco, J. and Llopis, J. (2006), "Information Systems Outsourcing. A Literature Analysis", *Information & Management*, Vol. 43 No. 7, pp. 821–834.

Gonzalez, R., Gasco, J.L. and Llopis, J. (2015), "Information Systems Outsourcing Satisfaction. Some Explanatory Factors", *Industrial Management & Data Systems*, Vol. 115 No. 6, pp. 1067–1085.

Gregor, S. (2006), "The Nature of Theory in Information Systems", *MIS Quarterly*, Vol. 30 No. 3, pp. 611–642.

Grover, V., Cheon, M.J. and Teng, J.T.C. (1996), "The Effect of Service Quality and Partnership on the Outsourcing of Information Systems Functions", *Journal of Management Information Systems*, Vol. 12 No. 4, pp. 89–116.

Harvey Nash/KPMG (2018), *CIO Survey 2018: The Transformational CIO*.

Hevner, A.R., March, S.T., Park, J. and Ram, S. (2004), "Design Science in Information Systems Research", *MIS Quarterly*, Vol. 28 No. 1, pp. 75–105.

Hofstede, G. (1983), "National Cultures in Four Dimensions. A Research-Based Theory of Cultural Differences among Nations", *International Studies of Management & Organization*, Vol. 13 No. 1, pp. 46–74.

Hofstede, G., Hofstede, G.J. and Minkov, M. (2010), *Cultures and Organizations: Software of the Mind. Intercultural Cooperation and its Importance for Survival,* Rev. and expanded 3. ed., McGraw-Hill, New York, NY, USA.

Holland, P.W. and Welsch, R.E. (1977), "Robust Regression Using Iteratively Reweighted Least-Squares", *Communications in Statistics - Theory and Methods*, Vol. 6 No. 9, pp. 813–827.

International Data Corporation (2018), "About IDC", available at: https://www.idc.com/about (accessed 27 June 2019).

Jin Kim, H., Shin, B. and Lee, H. (2013), "The Mediating Role of Psychological Contract Breach in IS Outsourcing. Inter-Firm Governance Perspective", *European Journal of Information Systems*, Vol. 22 No. 5, pp. 529–547.

Kern, T. (1997), "The Gestalt of an Information Technology Outsourcing Relationship. An Exploratory Analysis", *Proceedings of the 18th International Conference on Information Systems*, pp. 37–58.

Kern, T. and Willcocks, L.P. (2000), "Exploring Information Technology Outsourcing Relationships: Theory and Practice", *Journal of Strategic Information Systems*, Vol. 9 No. 4, pp. 321–350.

Khan, S.U. and Azeem, M.I. (2014), "Intercultural Challenges in Offshore Software Development Outsourcing Relationships. An Exploratory Study Using a Systematic Literature Review", *IET Software*, Vol. 8 No. 4, pp. 161–173.

Kirsch, L.J., Sambamurthy, V., Ko, D.-G. and Purvis, R.L. (2002), "Controlling Information Systems Development Projects: The View from the Client", *Management Science*, Vol. 48 No. 4, pp. 484–498.

Kishore, R., Rao, H.R., Nam, K., Rajagopalan, S. and Chaudhury, A. (2003), "A Relationship Perspective on IT Outsourcing", *Communications of the ACM*, Vol. 46 No. 12, pp. 86–92.

Koh, C., Joseph, D. and Ang, S. (2009), "Cultural Intelligence and Collaborative Work. Intercultural Competencies in Global Technology Work Teams", *International Workshop on Intercultural Collaboration*, pp. 261–264.

Könning, M., Westner, M. and Strahringer, S. (2019), "A Systematic Review of Recent Developments in IT Outsourcing Research", *Information Systems Management*, Vol. 36 No. 1, pp. 78–96.

Lacity, M.C., Khan, S., Yan, A. and Willcocks, L.P. (2010), "A Review of the IT Outsourcing Empirical Literature and Future Research Directions", *Journal of Information Technology*, Vol. 25 No. 4, pp. 395–433.

Lacity, M.C., Khan, S.A. and Willcocks, L.P. (2009), "A Review of the IT Outsourcing Literature. Insights for Practice", *Journal of Strategic Information Systems*, Vol. 18 No. 3, pp. 130–146.

Lacity, M.C., Khan, S.A. and Yan, A. (2016), "Review of the Empirical Business Services Sourcing Literature. An Update and Future Directions", *Journal of Information Technology*, Vol. 31 No. 3, pp. 269–328.

Lee, J.-N. and Kim, Y.-G. (1999), "Effect of Partnership Quality on IS Outsourcing Success. Conceptual Framework and Empirical Validation", *Journal of Management Information Systems*, Vol. 15 No. 4, pp. 29–61.

Legner, C., Eymann, T., Hess, T., Matt, C., Böhmann, T., Drews, P., Mädche, A., Urbach, N. and Ahlemann, F. (2017), "Digitalization: Opportunity and Challenge for the Business and Information Systems Engineering Community", *Business & Information Systems Engineering*, Vol. 59 No. 4, pp. 301–308.

Leidner, D. and Kayworth, T. (2006), "A Review of Culture in Information Systems Research. Toward a Theory of Information Technology Culture Conflict", *MIS Quarterly*, Vol. 30 No. 2, pp. 357–399.

Liang, H., Wang, J.-j., Xue, Y. and Cui, X. (2015), "IT Outsourcing Research from 1992 to 2013. A Literature Review Based on Main Path Analysis", *Information & Management*, Vol. 53 No. 2, pp. 227–251.

Liang, K. and Zeger, S. (1986), "Longitudinal Data Analysis Using Generalized Linear Models", *Biometrika*, Vol. 73 No. 1, pp. 13–22.

Lytle, A.L., Brett, J.M., Barsness, Z. and Janssens, M. (1995), "A Paradigm for Confirmatory Cross-Cultural Research in Organizational Behavior", *Research in Organizational Behavior*, Vol. 17, pp. 167–214.

Martins, R., Oliveira, T. and Thomas, M.A. (2015), "Assessing Organizational Adoption of Information Systems Outsourcing", *Journal of Organizational Computing and Electronic Commerce*, Vol. 25 No. 4, pp. 360–378.

McCullagh, P. (1984), "Generalized Linear Models", *European Journal of Operational Research*, Vol. 16 No. 3, pp. 285–292.

Oshri, I., Kotlarsky, J. and Gerbasi, A. (2015), "Strategic Innovation Through Outsourcing. The Role of Relational and Contractual Governance", *Journal of Strategic Information Systems*, Vol. 24 No. 3, pp. 203–216.

Paré, G., Trudel, M.-C., Jaana, M. and Kitsiou, S. (2015), "Synthesizing Information Systems Knowledge. A Typology of Literature Reviews", *Information & Management*, Vol. 52 No. 2, pp. 183–199.

Patil, S. and Wongsurawat, W. (2015), "Information Technology (IT) Outsourcing by Business Process Outsourcing/ Information Technology-Enabled Services (BPO/ITES) Firms in India", *Journal of Enterprise Information Management*, Vol. 28 No. 1, pp. 60–76.

Qi, C. and Chau, P.Y.K. (2013), "Investigating the Roles of Interpersonal and Interorganizational Trust in IT Outsourcing Success", *Information Technology & People*, Vol. 26 No. 2, pp. 120–145.

Schmidt, N., Zöller, B. and Rosenkranz, C. (2016), "The Clash of Cultures in Information Technology Outsourcing Relationships. An Institutional Logics Perspective", in Kotlarsky, J., Oshri, I. and Willcocks, L.P. (Eds.), *Shared Services and Outsourcing: A Contemporary Outlook, Val d'Isère, France, February 16-19, 2016*, Springer International Publishing, pp. 97–117.

Schneider, S. and Sunyaev, A. (2016), "Determinant Factors of Cloud-Sourcing Decisions. Reflecting on the IT Outsourcing Literature in the Era of Cloud Computing", *Journal of Information Technology*, Vol. 31 No. 1, pp. 1–31.

Shmueli, G. and Koppius, O.R. (2011), "Predictive Analytics in Information Systems Research", *MIS Quarterly*, Vol. 35 No. 3, pp. 553–572.

St. John, J., Visinescu, L.L., Guynes, C.S. and Prybutok, V.R. (2016), "Information and Communication Technology Offshoring Logistics Success. A Social Exchange Perspective", *Information Systems Management*, Vol. 33 No. 3, pp. 212–230.

Swar, B., Moon, J., Oh, J. and Rhee, C. (2012), "Determinants of Relationship Quality for IS/IT Outsourcing Success in Public Sector", *Information Systems Frontiers*, Vol. 14 No. 2, pp. 457–475.
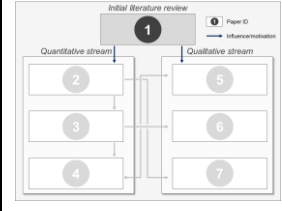
Vom Brocke, J., Simons, A., Niehaves, B. and Riemer, K. (2009), "Reconstructing the Giant: On the Importance of Rigour in Documenting the Literature Search Process", *Proceedings of the 23rd European Conference on Information Systems*.

Walsham, G. (1995), "Interpretive Case Studies in IS Research. Nature and Method", *European Journal of Information Systems*, Vol. 4 No. 2, pp. 74–81.

Walsham, G. (2006), "Doing Interpretive Research", *European Journal of Information Systems*, Vol. 15 No. 3, pp. 320–330.

Webster, J. and Watson, R.T. (2002), "Analyzing the Past to Prepare for the Future: Writing a Literature Review", *MIS Quarterly*, Vol. 26 No. 2, pp. xiii–xxiii.

Westner, M. and Strahringer, S. (2010), "Determinants of Success in IS Offshoring Projects. Results from an Empirical Study of German Companies", *Information & Management*, Vol. 47 No. 5-6, pp. 291–299.

Wiener, M., Remus, U., Heumann, J. and Mähring, M. (2015), "The Effective Promotion of Informal Control in Information Systems Offshoring Projects", *European Journal of Information Systems*, Vol. 24 No. 6, pp. 569–587.

Wiener, M. and Saunders, C. (2014), "Forced Coopetition in IT Multi-Sourcing", *Journal of Strategic Information Systems*, Vol. 23 No. 3, pp. 210–225.

Winkler, J.K., Dibbern, J. and Heinzl, A. (2008), "The Impact of Cultural Differences in Offshore Outsourcing. Case Study Results from German-Indian Application Development Projects", *Information Systems Frontiers*, Vol. 10 No. 2, pp. 243–258.

Xu, P. and Yao, Y. (2014), "Knowledge Sharing in Offshore Software Development. A Vendor Perspective", *Journal of Global Information Technology Management*, Vol. 16 No. 1, pp. 58–84.

Yin, R.K. (2014), *Case Study Research: Design and Methods,* 5th edition, SAGE Publications, Thousand Oaks, CA, USA.

Contents Part 2: Publications

3.1 A Systematic Review of Recent Developments in IT Outsourcing Research

Overview

	Publication	Outlet	Ranking[1]
	Könning, Michael; Westner, Markus; Strahringer, Susanne. *A Systematic Review of Recent Developments in IT Outsourcing Research*	Information Systems Management, Vol. 36 (2019), No. 1	B/B/C

Abstract

Incomplete conceptualization of the information technology outsourcing (ITO) literature represents a challenge for navigating extant research and engaging into purposeful academic discourse. We extend the analysis of empirical findings on determinants of ITO decisions, outcomes, and governance. We identify increasing levels of research maturity, analyze effects of 38 new independent variables, highlight contradictory findings, and observe increasing interest in emerging topics such as innovation through ITO and multisourcing.

URL/DOI

3.2.1 Multisourcing on the Rise – Results from an Analysis of More Than 1,000 IT Outsourcing Deals in the ASG Region

Overview

	Publication	**Outlet**	**Ranking[1]**
	Könning, Michael; Westner, Markus; Strahringer, Susanne. *Multisourcing on the Rise – Results from an Analysis of More Than 1,000 IT Outsourcing Deals in the ASG Region*	Multikonferenz Wirtschaftsinformatik (MKWI) 2018, Lüneburg, Germany	-/C/D

Abstract

Information technology outsourcing (ITO) has long been recognized for its numerous potential advantages such as lowering costs, accessing external skills, and improving efficiency, flexibility, and quality. However, it also exposes client companies to various risks, including vendor lock-in, poor agility, or insufficient vendor expertise in individual domains, especially in increasingly dynamic market environments. Consequently, companies increasingly implement multisourcing by composing a "best of breed" set of vendors for their various IT services. In this paper, we use a dataset of 1,016 ITO deals closed with Austrian, Swiss, and German client companies between 2006 and 2017 to analyze the development of the ITO market in general and multisourcing in particular. Our results show decreasing services run rates, shorter contract lengths, an increasing number of concurrent service providers per client, and a distribution of the total number of contracts to a larger set of vendors, all pointing towards an increasing popularity of multisourcing.
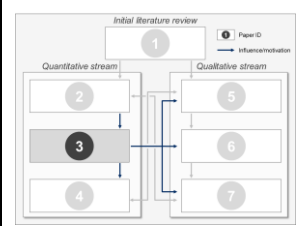
URL/DOI

http://mkwi2018.leuphana.de/wp-content/uploads/MKWI2018_Band5.pdf

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[1] CORE 2018 ranking as per http://portal.core.edu.au/jnl-ranks/, http://portal.core.edu.au/conf-ranks/; accessed 27 June 2019.
WKWI ranking as per http://wi.vhbonline.org/zeitschriftenrankings/; accessed 27 June 2019.
VHB-JOURQUAL3 ranking as per http://vhbonline.org/vhb4you/jourqual/vhb-jourqual-3/teilrating-wi/; accessed 27 June 2019.

3.2.2 Analyzing Influences on Pivotal ITO Contract Features: A Quantitative Multi-Study Design with Evidence from Western Europe

Overview

	Publication	Outlet	Ranking[1]
	Könning, Michael; Heinrich, Kai; Zschech, Patrick; Leyh, Christian. *Analyzing Influences on Pivotal ITO Contract Features: A Quantitative Multi-Study Design with Evidence from Western Europe*	Americas Conference on Information Systems (AMCIS) 2018, New Orleans, USA	A/B/D

Abstract

As information technology (IT) in private and public organizations continues to gain importance, IT outsourcing (ITO) has become a critical component of corporate strategy for many institutions. Consequently, substantial research has investigated topics around ITO decisions, outcomes, and contractual governance. Despite decades of academic research, however, quantitative analyses of key contract features are still scarce. By applying three statistical lenses on a dataset of more than 1,000 ITO deals from the ASG region, we shed light on three pivotal ITO contract characteristics. Our findings are twofold: Contextually, they point to declining contract lengths and run rates, identify significant influence factors on contract value, contract length, and pricing method, and demonstrate high prediction rates in binary classification of pricing method and contract value. Methodically, they serve as a proof of concept for building theory in IS by applying quantitative mixed-method approaches to similar datasets with global scope and additional variables.
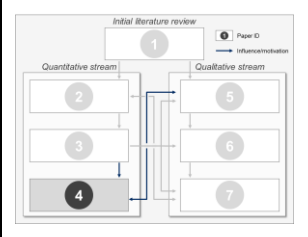
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3.2.3 A Quantitative Analysis of Culture-Induced Differences in Pivotal IT Outsourcing Contract Features

Overview

	Publication	Outlet	Ranking[1]
	Könning, Michael; Heinrich, Kai; Leyh, Christian; Westner, Markus. *A Quantitative Analysis of Culture-Induced Differences in Pivotal IT Outsourcing Contract Features*	European Conference on Information Systems (ECIS) 2019, Stockholm, Sweden	A/A/B

Abstract

More than 30 years after its first implementation, IT outsourcing (ITO) is unanimously considered a critical component of corporate strategy for private and public institutions alike. While implementations of ITO around the world share some common characteristics like typical reasons for outsourcing, key success factors, or dimensions along which they can be classified, extant research also points to regional differences. However, research on this topic, specifically regarding pivotal contract features like contract value, contract length, or pricing methods, is still in its infancy, and quantitative analyses on the subject are particularly scarce. We address this research gap by analyzing data on 14,917 ITO contracts closed between 2007 and 2017 through the lens of cultural regions and three statistical methods. The contribution of our paper is threefold. First, our descriptive analysis points to globally decreasing contract lengths and contract values, confirming previous studies and practice reports. Second, an ANOVA with independent post-hoc testing provides quantitative support for the degree of dissimilarity among individual regions in pivotal ITO contract features. Finally, our quantitative replication of a previous study identifies culture-induced regional differences between USA and Japan regarding the effect of influence factors on ITO contract features.
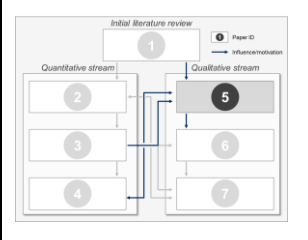
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[1] CORE 2018 ranking as per http://portal.core.edu.au/jnl-ranks/, http://portal.core.edu.au/conf-ranks/; accessed 27 June 2019.
WKWI ranking as per http://wi.vhbonline.org/zeitschriftenrankings/; accessed 27 June 2019.
VHB-JOURQUAL3 ranking as per http://vhbonline.org/vhb4you/jourqual/vhb-jourqual-3/teilrating-wi/; accessed 27 June 2019.

3.3.1 Conceptualizing the Effect of Cultural Distance on IT Outsourcing Success

Overview

	Publication	**Outlet**	**Ranking[1]**
	Könning, Michael. *Conceptualizing the Effect of Cultural Distance on IT Outsourcing Success*	Australasian Conference on Information Systems (ACIS) 2018, Sydney, Australia	-/C/-

Abstract

The relationship quality between client and vendor organizations is one of the most significant influence factors for IT outsourcing success. In this context, the degree of dissimilarity between cultural values of two or more organizations ("cultural distance") can represent a considerable challenge for establishing and maintaining good-quality relationships. Still, research on cultural distance and its effects is scarce. This paper seeks to address this gap. Building on extant theory on culture and IT outsourcing, we develop a research model which we are currently evaluating. This is done by means of an exploratory, qualitative research design based on an in-depth single case study that analyzes three outsourcing configurations of a leading European media company. Their diversity allows for a detailed examination of cultural distance on the national, organizational, and team level. Given its highly relevant characteristics, we expect our research to yield valuable contributions for both theory and practice.
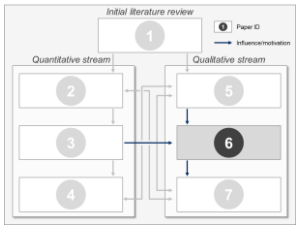
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3.3.2 Unraveling the Impact of Cultural Distance on IT Outsourcing Success – Insights from Three Major Sourcing Reconfigurations

Overview

	Publication	Outlet	Ranking[1]
	Könning, Michael; Westner, Markus; Strahringer, Susanne. *Unraveling the Impact of Cultural Distance on IT Outsourcing Success – Insights from Three Major Sourcing Reconfigurations*	Journal of Enterprise Information Management (2020, forthcoming)	C/-/C

Structured Abstract

Purpose: IT Outsourcing (ITO) has developed into an established practice for organizations but the interorganizational and oftentimes international collaboration it involves comes at a price: Reports from academia and practice suggest that more than 25% of all ITO projects fail, many because of cultural differences between client and provider organizations. Against this background, this paper analyzes the complex nature of cultural distance and its multi-faceted effect on ITO success.

Design/methodology/approach: This paper builds upon extant literature on culture on the national, organizational, and team level, conceptualizes its effect on relationship quality and ITO success, and hypothesizes a model on potential moderators and management techniques to offset culture-induced challenges. It then evaluates and refines the model by means of an interpretive qualitative research design for an in-depth single-case study of ProSiebenSat.1 Media SE (P7S1), a leading European media company that reconfigured its IT sourcing model three times in 10 years.

Findings: The results from interviews with top managers from client and provider organizations represent one of the first integrated views on the critical importance of cultural compatibility on multiple levels, provide manifold examples for its complex effect on ITO success, as well as moderators and potential management techniques to promote ITO success.

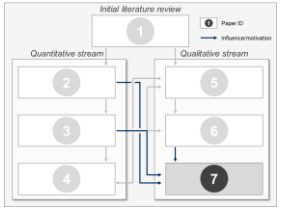*Research limitations/implications*: This paper contributes relevant empirical insights to the growing body of literature on culture and its underestimated role in ITO success. It builds on tentative theory that is confirmed and refined.

Practical implications: The paper helps in substantiating the complex and intangible nature of culture and demonstrates means for its effective management.

Originality/value: The results from interviews with top managers from client and provider organizations represent one of the first integrated views on the critical importance of cultural compatibility on multiple levels, provide manifold examples for its complex effect on ITO success, as well as moderators and potential management techniques to promote ITO success.

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[1] CORE 2018 ranking as per http://portal.core.edu.au/jnl-ranks/, http://portal.core.edu.au/conf-ranks/; accessed 27 June 2019.
WKWI ranking as per http://wi.vhbonline.org/zeitschriftenrankings/; accessed 27 June 2019.
VHB-JOURQUAL3 ranking as per http://vhbonline.org/vhb4you/jourqual/vhb-jourqual-3/teilrating-wi/; accessed 27 June 2019.

3.3.3 There and Back Again: Reconfiguring IT Sourcing at ProSiebenSat.1

Overview

	Publication	Outlet	Ranking[1]
	Könning, Michael; Chasin, Friedrich. *There and Back Again: Reconfiguring IT Sourcing at ProSiebenSat.1*	International Conference on Information Systems (ICIS) 2018, San Francisco, USA	A*/A/A

Abstract

In early 2007, ProSiebenSat.1 Media SE, one of Europe's leading independent media corporations, embarked on a journey to define a new sourcing configuration for its IT landscape. Previously operating a completely insourced IT delivery model, the company looked at outsourcing in hopes of reducing costs, leveraging economies of scale, and capitalizing on innovations. Now, after ten years and a number of major reconfiguration efforts, it is clearly apparent which expectations have materialized – and which have not. Based on interviews with the company's top management and insights from strategy projects performed in the course of these reconfigurations, this teaching case reconstructs P7S1's journey from its initial insourcing to complete outsourcing and back to insourcing the major areas of its IT landscape. Taking its readers through ten years of decision-making about IT sourcing, the case outlines a broad range of sourcing strategies. The case helps students to grasp the risks and challenges that are associated with sourcing decisions and illustrates how a company can reintegrate parts of the previously outsourced IT areas back in-house.

URL/DOI

https://aisel.aisnet.org/icis2018/education/Presentations/14

Unpublished Appendix

Semi-Structured Interview Guideline:
IT Sourcing and Culture at ProSiebenSat.1

1) Introduction

Explanation	**Brief introduction** • *Present previous education and professional experience* • *Highlight previous experience in IT sourcing, particularly while at the Firm*
Explanation	**Presentation of research proposal** • *Summarize previous course of the doctorate* • *Outline relevance of interviewee for ongoing research and upcoming paper*
Explanation	**Presentation of procedure** • 30-60 minutes • Semi-structured interview: Prepared questions, deviations possible • Three parts: Introduction, IT sourcing and culture at P7S1, closing
Question	**Permission to record** • *Ask interview partner for permission to record and transcribe interview*
Question	**Introduction/ presentation of interviewee** • Current role at P7S1/ sourcing provider/ consultancy • Previous employers and roles • Previous positions and tenure at current position • Points of contact/ general experience with IT sourcing, specific experience with regard to P7S1's IT sourcing

2) IT sourcing and culture at P7S1

Questions (all interviewees)	**ITO success** • How would you define ITO success? When is an ITO project / an ITO relationship successful for you? • Client satisfaction? Service quality? Business impact (by means of innovation)? • Are there any other features that represent ITO success? • What are main influence factors for ITO success?

Questions (P7S1 employees)	• What were the criteria for provider selection ten years ago? • Did P7S1, especially the IT organization, already have experience with IT outsourcing or was it really the first time that this happened? • What are the criteria today, what did you learn? • *If the interviewee discusses culture, follow up. If not, ask: Was or is culture a criterion? Why (not)?*
Questions (P7S1 employees)	**Infrastructure Provider A: Culture-induced differences** • Please describe where there were conflicts between P7S1 and Provider A! • How were these conflicts addressed? Was it possible to solve them? • How did the different corporate culture become noticeable? Where could different patterns of behavior/ values/ processes be observed?
Questions (P7S1 employees, provider employees)	**Infrastructure current providers: Culture-induced differences** • Please describe where there is conflict today between P7S1 and its providers! • How are these conflicts addressed? Is it easier to solve them? • How are the different corporate cultures noticeable today? Where are different patterns of behavior/ values / processes observed?
Questions (P7S1 employees)	**ADM 2008-2015 (Provider A offshore): Culture-induced differences** • Please describe where there were conflicts between P7S1 and Provider A! • How were these conflicts addressed? Was it possible to solve them? • How did the different corporate culture become noticeable? Where could different patterns of behavior / values / processes be observed?
Questions (P7S1 employees)	**ADM 2015-2018 (Provider A nearshore): Culture-induced differences** • Please describe where there were conflicts between P7S1 and Provider A! • How were these conflicts addressed? Was it possible to solve them? • How did the different corporate culture become noticeable? Where could different patterns of behavior/ values/ processes be observed? • What had changed relative to Provider A offshore?
Questions (all interviewees)	**Characteristics and differences in national culture** • To what degree do you think that differences in **national culture** have led to different patterns of behavior? Can you name differences/ typical problems that occurred in outsourcing? • *Push interviewees to provide examples for national-level cultural differences without giving away individual dimensions, then follow-up on these examples to understand the specific underlying dimensions.*

	- Did you observe differences with regard to the following dimensions: - **Individualism vs. collectivism**: The degree to which members of a society act as individuals rather than as members of a group - **Masculinity vs. femininity**: „men are supposed to be assertive, tough and focused on material success, whereas women are supposed to be more modest, tender, and concerned with quality of life" - **Power distance**: „The extent to which the less powerful members of organizations within a country expect and accept that power is distributed unequally" - **Uncertainty avoidance**: „The extent to which the members of a culture feel threatened by ambiguous or unknown situations" - **Long-term vs. short-term orientation**: oriented toward future rewards (e.g., perseverance and thrift), and short-term orientation, i.e., the emphasis on virtues oriented towards present and past (e.g., tradition, face, social obligations) - **Indulgence vs. restraint**: Achieving happiness through the exercise of control over one's own life and the importance of leisure - **Activity vs. passivity**: Active members see themselves as doers (actively contribute own ideas); passive members consider themselves as reactors - **Communication style and language:** Refers to any differences, difficulties and misunderstandings due to the use of the common language used in the interaction (Carmel and Agarwal 2002). Second is the way that a given language is used, i.e., the communication style which can be more abstractive or assertive, high context or low context, more holistic or more linear. - **Conflict resolution**: Describes the way that a culture typically handles and solves conflict situations. Koh et al. (2009) illustrates how members from low power distance and more individualistic cultures voice disagreements by means of direct confrontation, whereas members of collectivistic and high power distance cultures tend to avoid and withdraw from conflict situations. - What else comes to your mind that characterizes the cultures in Germany and in the offshore and nearshore locations? What differentiates them?
Questions (all interviewees)	**Characteristics and differences in organizational culture** - To what degree do you think that differences in **organizational culture** have led to different patterns of behavior? Can you name differences / typical problems that occurred in outsourcing? - *Push interviewees to provide examples for organizational-level cultural differences without giving away individual dimensions, then follow-up on these examples to understand the specific underlying dimensions.* - Did you observe differences with regard to the following dimensions: - **Process vs. results orientation:** This dimension contrasts a culture with strict adherence to pre-defined, risk-minimized, routine-based processes (*process-oriented*) with one where goals are the core concern, with less focus on how they are achieved (*results-oriented*). In practice, *process-oriented* organizations tend to be more rigid, *result-oriented* work teams are more flexible and organic.

	- **Employee vs. job orientation:** This dimension opposes an orientation towards people (*employee-oriented*) to an orientation on completing the work (*job-oriented*). While *employee-oriented* cultures take a responsibility for employee welfare and respect employees' private life, employees in *job-oriented* cultures perceive the organization as only interested in the work they fulfill. - **Parochial vs. professional:** This dimension discerns between organizations whose employees strongly connect their identity and private life with the organization and feel hired as a whole person (*parochial*) from those where people consider their private life and identity their own business and feel the organization solely hires on the basis of job competence (*professional*). - **Open vs. closed system:** This dimension depicts whether members of an organization consider it open to outsiders and newcomers, where new members feel at home after a short period of time (*open system*), or whether they perceive it to be closed and secretive, even to society members (*closed system*). - **Loose control vs. tight control:** This dimension measures the amount of internal structuring of an organization. Employees in *loose control* organizations typically report that meeting times are only kept approximately and cost awareness is rather low. In contrast, work in organizations with *tight control* is carried out more cost-conscious and meeting times tend to be kept more diligently. - **Normative vs. pragmatic:** This dimension evaluates organizations in terms of customer orientation. It locates organizations between *normative* units where the main emphasis is on strictly adhering to organizational procedures, whereas *pragmatic* units are described as market-driven with strong focus on customer needs. In these units, results are more important than correct procedures. - What else comes to your mind that characterizes and differentiates P7S1's org. culture vs. those of its providers (or other organizations you may have seen)?
Questions (all interviewees)	**Team-level culture at P7S1 and at providers** - Aside from P7S1's general organizational culture, what further characterizes Group IT's culture? To what extent is it special within P7S1, in contrast to providers, in contrast to previous employers? - What characterizes the individual departments at provider organizations?
Questions (all interviewees)	**Influence of behavioral differences on relationship quality** - To what degree / how have differences in behavior affected the partnership between P7S1 and its providers? - *Ask openly, do not give away individual dimensions too early. Ask for participants' own examples, do not suggest topics too early.* - *Only as a second step ask for specific dimensions that might have been influenced, like in the following:* - How did these differences influence communication, cooperation, trust, performance? Did they lead to additional conflict? - How satisfied were you with the collaboration?

Questions (all interviewees)	**Influence of interaction necessity on strength of effect of behavioral differences**
	• *Again, try to be very open in asking for moderators. Ideally, the interviewee comes up with moderators themselves and/or discusses them, not just validates / falsifies our hypotheses.* • Can you think of moderators that influence the strength of the effect of behavioral differences on relationship quality? • In your opinion, how does interaction necessity influence this relationship? • Are there differences between service types or setting that influence this moderator? Is cultural distance more or less influential in infrastructure work than in ADM work or vice versa?
Questions (all interviewees)	**Influence of leadership and management on the influence of behavioral differences on relationship quality**
	• What have you done to mitigate the effect of cultural distance? • Is there a way to manage cultural differences in professional relationships? • Did you establish any culture training for managers / other employees? • Did you organize on-site visits or similar measures? Regular informal meet-ups between employees to foster mutual understanding (of cultures)? • Do you have any mechanisms for this today?
Questions (all interviewees)	**Perceived ITO success and dependence from cultural distance**
	• Unfortunately, the outsourcing engagement with Provider A was not perceived as particularly successful. In retrospect, to what extent were cultural differences responsible? • How was the ITO engagement perceived on the business side? How is the situation perceived today?
Questions (all interviewees)	**Key take-aways**
	• What have you / has your organization learned from your ITO projects? • To what extent does culture play a role today in partner selection? • (How) did you evaluate culture in recent sourcing decisions?
Questions (all interviewees)	**Open questions, additions**
	• What else comes to your mind with regard to sourcing, culture, P7S1?

3) Closing

Closing	• *Thank interviewee for the opportunity* • *Ask them if they would be open to answer any follow-up questions*