

Researching IT multi-sourcing and opportunistic behavior in conditions of uncertainty

Lioliou, Eleni; Willcocks, Leslie ; Liu, Xiaohui

License:

Creative Commons: Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)

Document Version

Peer reviewed version

Citation for published version (Harvard):

Lioliou, E, Willcocks, L & Liu, X 2019, 'Researching IT multi-sourcing and opportunistic behavior in conditions of uncertainty: a case approach', *Journal of Business Research*.

[Link to publication on Research at Birmingham portal](#)

Publisher Rights Statement:

Checked for eligibility: 05/07/2019

General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

Researching IT Multi-sourcing and Opportunistic Behavior in Conditions of Uncertainty: A Case Approach

Abstract:

Multi-sourcing arrangements are a major trend in the contemporary outsourcing landscape, but our understanding of what makes these complex ventures effective remains relatively fragmented. Our study focuses on the multi-sourcing and opportunistic behavior of service providers, and in particular a relatively neglected but major driver of opportunistic behavior, namely the uncertainty surrounding the transaction. Developing an extended transaction cost economics perspective, our investigation focuses on the roles of internal and behavioral uncertainty and the occurrence of opportunistic behavior. We research a rich multi-sourcing case study within the financial services sector and compare and re-analyze a detailed case in the literature. According to our findings, internal uncertainty creates an ‘alignment of actions’ problem between outsourcing partners, while behavioral uncertainty can shape an ‘alignment of objectives’ problem, leading to the occurrence of opportunistic behavior. Our findings further contribute to a more thorough understanding of ways to reduce these uncertainties and facilitate cooperation between multiple vendors.

Keywords: Multi-sourcing, Opportunism, Transaction costs, Uncertainty, Co-opetition

INTRODUCTION

IT outsourcing has emerged as an important tool for enabling organizations to enhance their growth and competitiveness. Firms have become more mature in their outsourcing ventures and have progressed to externalizing more complex functions that often involve multiple vendors. Multi-sourcing, that is using multiple sources, to deliver service requirements has been a major trend in information technology outsourcing (ITO) and business process outsourcing (BPO) for over 25 years (Cullen, Lacity and Willcocks, 2014). But ITO/BPO models have evolved even further in the past decade, and large outsourcing deals with a single supplier have been increasingly replaced by several selective contracts with a set of suppliers (Bapna, Barua, Mani and Mehra 2010; Lacity, Khan and Yan, 2016; Snowden and Fersht, 2016).

In parallel with the massive growth of outsourcing and multi-sourcing arrangements, the existence of opportunistic behavior between the outsourcing partners has been widely acknowledged as of central concern in outsourcing activities (Aubert, Patry and Rivard, 2004; Lacity, Willcocks and Khan, 2011). Opportunistic behavior can hinder collaborative activity, putting the effectiveness of outsourcing arrangements in danger. The risks and threats of such behavior become even more prominent in multi-sourcing arrangements (Poston, Kettinger and Simon, 2009).

Multi-sourcing arrangements constitute a distinctive context for the study of opportunistic behavior primarily for two reasons. First, multi-sourcing ventures are inherently more complex and therefore involve higher levels of uncertainty, as compared to dyadic outsourcing relationships. Clients need to manage a greater number of vendors at the same time, which inherently increases the uncertainty level they have to deal with.

Second, in contrast to earlier (and more traditional) outsourcing arrangements, contemporary multi-sourcing ventures are seeking to capitalize on the co-operation as well as the competition amongst outsourcing partners. This dual challenge of voluntary ‘coopetition’ (Nalebuff and Brandenburger, 1996; Osarenkhoe, 2010:216) or forced-by-the-client ‘coopetition’ (Wiener and Saunders, 2014), represents a distinctive feature of multi-sourcing ventures that differs from traditional dyadic outsourcing arrangements.

Recent studies in the area of multi-sourcing make strong contributions but also suggest that much still needs to be done to fully reveal the challenges that these complex ventures present and the effective practices that might steer them (Wiener & Saunders, 2014; Bapna, Barua, Mani and Mehra, 2010). More specifically, we currently have little understanding of how uncertainty challenges increase the risk for opportunistic behavior in a multi-sourcing context. There is also a scarcity of studies that investigate ways of reducing uncertainties, potentially facilitating therefore, as Wiener and Saunders (2014) suggest, the development of coopetition in a multi-sourcing context.

In this study, we aim to address these two issues and contribute to the literature on outsourcing by exploring opportunistic behavior in a multi-sourcing context, a theme that, to the best of our knowledge, has not been investigated in depth. Our primary research questions are going to be ‘How does the existence of internal and behavioral uncertainties in a multi-sourcing arrangement increase the likelihood of opportunistic behavior? How do clients and their suppliers seek to reduce these uncertainties and their impact?’

We adopt a transaction cost economics (TCE) perspective to underpin our analysis since it has prevailed as a dominant (if criticised) theory in the explanation of phenomena related to opportunism. We aim to contribute to the outsourcing literature by providing a more thorough understanding of the role of uncertainty in the occurrence of opportunistic behavior in a multi-sourcing context. The findings from our study help to provide new insights on the conditions that reduce uncertainty and opportunistic behavior in multi-sourcing, and therefore enable the customer to develop coopetition between vendors.

REVIEW OF LITERATURE

Multi-sourcing arrangements and the threat of opportunistic behavior

The growth of multi-sourcing arrangements has been attributed to using best-in-class vendors for specific work as well as the synergistic effects that collaboration between different vendors can bring. Clients are able to access the specialized expertise and capabilities of multiple vendors and receive agile and flexible services (Bapna, Barua, Mani and Mehra, 2010; Lacity, Khan and Yan, 2016).

Multi-sourcing arrangements also may result in other benefits; for example, the spread of outsourcing risks amongst multiple vendors, the reduction of dependency by the client as well

as improved adaptability to changing market conditions (Koo, Lee, Heng and Park, 2016; Bapna, Barua, Mani and Mehra, 2010). Multi-sourcing can also help clients source best-of-breed suppliers, reduce over-reliance on a single supplier, offer greater flexibility and control, promote competition and prevent complacency.

On the other hand, multi-sourcing brings very significant challenges and risks. Governance becomes more complex, and transaction costs rise with the increased management challenges (Cullen, Lacity and Willcocks, 2014). Research has revealed difficulties, including the design of interdependent contracts between independent providers, multi-party interfaces and handovers, end-to-end process management, and governance challenges (Parida, Wincent and Oghazi, 2016; Cullen, Lacity and Willcocks, 2014; Lioliou, Zimmermann, Willcocks and Gao, 2014).

Emerging risks include attracting the market for smaller slices of work, keeping providers interested and incentivized, integrating complexity and tracing accountability (Oshri, Kotlarsky and Willcocks, 2011). In practice, suppliers also incur more transaction costs due to shorter contract length, more competition for a greater number of small-sized deals and more frequent bidding for contracts (Cullen, Lacity and Willcocks, 2014). In all this, the possibility for providers' opportunistic behavior may well rise.

Opportunistic behavior in a multi-sourcing context, while a major concern and challenge, has received relatively little academic investigation (Wiener and Saunders, 2014; Bapna, Barua, Mani and Mehra, 2010). While this very significant theme has rarely been explicitly researched, there are a few rich cases in the literature where the issue and the counter-tactics can be identified. One such case, particularly thorough and holistic in illustrating the evolution of the multi-sourcing arrangement, is that of Adidas (Aubert, Saunders, Wiener et al., 2014). Since the Adidas case is representative of the issues, but takes a different path from our researched DUTCH case study, we will use it further for comparative purposes in our analysis section below.

The Adidas case is interesting because while its authors in their comprehensive descriptions and overviews are clearly raising issues of opportunism, they do not address these issues conceptually or explicitly in their study. Evidently the distinctive features of multi-sourcing create ample space for the existence of opportunism and can put at risk the effectiveness of an entire venture.

As will be illustrated, Adidas represents a multi-sourcing case that established a high degree of overlap in the work of the vendors and, relatedly, high supplier competition. In our own DUTCH case study, there were limited overlaps in the work of the vendors, and competition between them was relatively low. In both cases, however, (as happens in multi-sourcing), the clients aspired to exploit the benefits of the vendor's collaboration and synergistic endeavour. We therefore use the Adidas case study for its points of contrast to our own DUTCH case study, providing a fruitful avenue for comparative analysis.

Uncertainty, opportunism and transaction cost economics

The theory of transaction cost economics (TCE) has been widely used in the study of outsourcing. Transaction cost theorists have primarily focused on explaining governance choices (i.e. in-house, joint ventures, outsourcing, markets) in conjunction with the potential for vendor opportunistic behavior (Tiwana and Bush, 2007; Aubert, Patry and Rivard, 2004).

Uncertainty is generated by phenomena that are hard to anticipate and, consequently, hard to specify in the contract. Taking into account the broadness of uncertainty as a concept, we observe that a number of TCE studies have operationalized uncertainty in a relatively constrained manner. TCE studies so far, have taken into account certain facets of uncertainty while ignoring others or neglecting the role of uncertainty altogether (Thouin, Hoffman and Fort, 2009; De Vita, Tekaya and Wang, 2010).

Williamson (1985) did not provide a very detailed definition of uncertainty, but referred to the work of Koopmans (1957) and progressed to identify three classes of uncertainty. Firstly, the primary class of uncertainty which is 'state contingent'. The secondary class, which arises from a lack of timely and accurate communication which, however, is innocent and non-strategic in nature. Williamson further identified 'behavioral' uncertainty to refer to all those cases where there is strategic non-disclosure, disguise or distortion of information.

Williamson's conceptualization has not been sufficiently concrete to operationalize and further transaction cost economics studies distinguished between environmental, internal and behavioral types of uncertainty in the organizational context. Framed in this manner, environmental uncertainty tends to reflect Williamson's conceptualization of primary uncertainty; internal uncertainty resembles Williamson's conceptualization of secondary uncertainty; behavioral uncertainty corresponds to Williamson's third type of uncertainty.

In our study, we focus on aspects of internal and behavioral uncertainty, as our research respondents did not bring forward any major issues of environmental uncertainty affecting their arrangements. In particular, regarding internal uncertainty, we will initially focus on the ability of a firm to define precisely its IT requirements and services. Furthermore, we follow Aubert, Partry and Rivard (2004) and examine the level of professionalization of the IT department. We also follow Lacity, Willcocks and Khan (2011) as well as Karimi-Alagheband et al (2011) and pay particular consideration to measurement difficulties, which we also classify as elements of internal uncertainty.

Behavioral uncertainty stems from difficulties in predicting the actions of the exchange party, in the face of the possibility of opportunistic behavior. In practice, a number of TCE studies tend to relate behavioral uncertainty to the difficulty of measuring the performance of the vendor. We follow Lacity, Willcocks and Khan (2011), as well as Karimi-Alagheband et al (2011) and argue that this link departs from the core of TCE, and therefore we focus our assessment on possibilities for opportunistic behavior that the supplier may engage in.

With regard to his views on opportunism, Williamson defined opportunism as 'self-interest seeking with guile' (Williamson, 1985). On this basis, he suggested that opportunism combines (i) self-interest seeking with (ii) dishonest behavior, such as the 'incomplete or distorted disclosure of information, and calculated efforts to mislead, distort, disguise, obfuscate or otherwise confuse' (Williamson, 1985: 47).

Ghoshal and Moran (1996, p.18) and later, Das and Rahman (2002), distinguished between the *attitude* of opportunism and its *behavioral* manifestation, that is, the occurrence of opportunistic behavior. The authors asserted that research should differentiate between these two facets of opportunism and referred to the attitudinal facet of opportunism as 'opportunistic propensity'. Opportunistic propensity therefore refers to a firm's willingness to engage in self-interested activity. Opportunistic behavior, on the other hand, refers to the actual engagement in such activity.

In our study, therefore, we examine opportunistic propensity by investigating whether the arrangement is based on relational, open-ended elements or on formal contracts and safeguards. We then examine the existence of opportunistic behavior, based on narratives around the evolution of the outsourcing relationship in the context of multi-sourcing arrangements. Our research aims to provide an exploratory understanding of how the existence of internal and behavioral uncertainties increases the risk of opportunistic behavior in a multi-sourcing context.

The following graph illustrates the guiding framework for our analysis:

[Figure 1 here]

RESEARCH METHODOLOGY

The chosen research strategy is the case study research method. The case study research method is considered suitable because it enables the researcher to study contemporary phenomena over which he/she has little or no control and examine the context within which these phenomena take place (Yin, 2003). Benbasat, Goldstein and Mead (1987) suggested that a single in-depth case study can be an appropriate method to test the boundaries of well-formed theory, which is exactly what we wanted to achieve with the theory of transaction cost economics. Along these lines, our intention was to conduct an in-depth case study that would enable us to examine and understand the predictive power of the theory of transaction costs on sourcing decisions, and the choice of governance in-depth and across time. The participant organization is a major financial services company from the Netherlands. We name the firm DUTCH for reasons of confidentiality. At the same time, we use a rich case study from the published literature – Adidas – to compare and contrast our findings and give analytical insight into the factors at play and how they shape events.

DUTCH offers a wide range of services including insurance, banking and mortgage products to consumers, businesses and institutions, and employs more than 22,000 employees in more than ten business and service units. The company initiated a major strategic multi-sourcing initiative in 2007 with three suppliers.

The entire deal represented a combined value of more than 415 million Euros. As mentioned, this deal represents a multi-vendor dominant model and the client created three different contracts with each of the suppliers, and was also exclusively responsible for their management. Our investigation was focused on all three strategic outsourcing contracts, which started at the same time in 2007, thus forming natural controls for the research process. All three contracts were medium term and would run for five years. The three suppliers will be named Supplier A, Supplier B and Supplier C respectively.

Supplier A is an international IT services provider specializing in managing and transforming the IT operations of its customers. It is based in France and it offers a variety of services ranging from data centers and workplace solutions to infrastructure and information security solutions. Supplier B is a leading telecommunications and ICT service provider in the Netherlands. It offers products including internet, wireless telephony and TV to consumers as well as integrated ICT services to business customers. Supplier C is a global supplier of

information and communication technology services. It offers workspace management, security, communications as well as application and technology transformation services. It is headquartered in the Netherlands and employees about 25,000 people. As from October 2007, Supplier C became part of Supplier B.

We used multiple data collection methods in order to provide a stronger substantiation of our theoretical constructs (Eisenhardt, 1989). We conducted a total of twenty interviews from November 2009 to January 2010 and viewed the three outsourcing contracts under investigation. We sought to improve the reliability of our findings and triangulate our results by questioning interviewees on some common themes, both from the suppliers' and the client's side. Having the chance to view the three outsourcing contracts also enabled us to get a good understanding of the contractual apparatus of governance in place and get the reflections of our research participants on this. We had one interview with each of our thirteen research participants and an additional interview with seven of them. All interviews lasted approximately one hour. The interviews were cross-sectional and were based on participants' recollections. The interviews were then transcribed, coded and analyzed using Atlas software.

We followed an iterative process in our data analysis and compared emergent findings and pre-existing concepts (Eisenhardt, 1989). The DUTCH case study was a multi-sourcing arrangement characterized by high levels of modularity and low competition between the three suppliers. However, the evolution of the relationships and the performance of the three suppliers was different. We found these discrepancies intriguing and we considered that a TCE theorization could illuminate various elements critical for the progress of the venture. Our subsequent data analysis enabled us to identify particular elements of uncertainty and provide insights on how opportunistic behavior can emerge in a multi-sourcing context.

We adopted a procedure of template analysis (King, 2004) while coding our data, which was informed by the TCE theorization. Our interviewees did not raise significant issues relating to environmental uncertainty, and we therefore focused our analysis on aspects of internal and behavioral types of uncertainty, opportunistic propensity and opportunistic behavior. On the basis of the responses of our participants we created codes for each of these elements. The main codes and indicative quotes are provided in the Appendix. Using these codes, we followed an inductive approach in our data analysis.

To ensure a rigorous and valid interpretation of our data, we conducted many iterations of analysis, but we also re-visited our interview transcripts and other documents multiple times. Our intention while following this iterative process was to 'understand the whole' by constantly revising it in 'view of the reinterpretation of the parts' (Myers, 1995). Table 1 summarizes the roles of the research participants we interviewed.

[Table 1 here]

In this study, we aim to provide an in-depth analysis by comparing and contrasting our observations against a complementary study mentioned in the literature review, namely the Adidas case study by Aubert, Saunders, Wiener et al, (2014). We set up this comparison and contrast in order to more systematically analyze the management and the co-ordination efforts of DUTCH and Adidas, as well as their actions to incentivize their vendors. Within this context, we compare and contrast a case study of low overlaps of work and low competition between the vendors (DUTCH) with a case study of high overlaps of work and

high competition (Adidas). The following sections will present aspects of opportunistic propensity, internal and behavioral uncertainties for the two cases.

CASE STUDY IN DUTCH FINANCIAL SERVICES

Overview of the arrangement

In 2004 DUTCH engaged in its first IT outsourcing venture with Supplier A on mainframe operations. The main reasons DUTCH decided to engage in this IT outsourcing venture were related to the reduction of cost and the fact that the mainframe operations were not considered part of the company's core business. It was thus considered that outsourcing was a good strategy to utilize the technical expertise and competencies of a supplier specialized in this area. The outsourcing venture between DUTCH and Supplier A progressed successfully and resulted in significant cost reductions for DUTCH. The company thus decided to develop further its outsourcing scope, and at the end of 2007 signed a major multi-sourcing deal with three suppliers.

The entire 2007 deal with the three suppliers represented a combined value of more than 415 million Euros. All three contracts would run for five years. Supplier A would provide the datacenter services for DUTCH and focus on the availability, continuity and security of the service. The contract between DUTCH and Supplier A was worth 145 million Euros. Supplier B would provide communication services including land lines, mobile communications and data networks. The contract between DUTCH and Supplier B was worth 150 million Euros. Supplier C would be responsible for the management and further development of the workstation infrastructure. The company would be providing workstation systems for the entire DUTCH staff. The contract between DUTCH and Supplier C was worth 120 million Euros.

As an overview, across the 2007-2010 period, Supplier A performed well most of the time, and DUTCH did not appear to have serious issues with regard its performance. As illustrated later, there were some instances where DUTCH felt exploited by Supplier A, but there were no serious performance issues. Supplier B did not perform well during the initial phases of the arrangement, but its performance improved over time. There were many instances of mutual blame between DUTCH and Supplier B but, over time, and as the arrangement became more formalized, these instances became less frequent. The performance of supplier C, however, was disappointing throughout. Despite the advancement of DUTCH's governance capabilities and the noticeable performance improvements of the other suppliers (particularly Supplier B), Supplier C never managed to progress.

Aspects of opportunistic propensity

Having been engaged in only one outsourcing arrangement up to 2007, DUTCH was relatively inexperienced in outsourcing, and not at all experienced in multi-sourcing when it signed this major three supplier deal. Although they were about to enter a very big multi-sourcing arrangement, they did not perform a formal RFP process that would have allowed them to compare different service delivery options. This was also the case in 2004 when DUTCH initiated its very first outsourcing engagement with Supplier A.

From our interviews, we established that DUTCH did not engage in a formal RFP process because it did not really have a good understanding of what the market could offer or what solution would fit them best. They were hoping that by outsourcing they could get the help of their partners to sort out their own IT requirements. Furthermore, DUTCH was in favor of informal ways of doing work and did not put much detail in the contracts with its three suppliers. The company preferred to rely on a spirit of partnership and RP3 (DUTCH sector manager on IT operations) reflected on this issue: *“We were convinced, seeing all the different outsourcing in the market at that moment, the only way to make it successful is when you try to establish a real partnership. That was our goal when we started”*. Subsequently, the contracts that DUTCH signed were not sufficiently detailed, leaving room for ambiguity and differing interpretations.

According to our respondents, the choice by DUTCH to execute the deal primarily based on informal relationships was not a wise move and it increased the levels of opportunistic propensity for its three suppliers. The suppliers took advantage of the absence of a formal arrangement to charge more and justify (when needed) underperformance. DUTCH soon realized that the formalization of obligations and responsibilities around the arrangement was crucial to getting the project going and avoid losses. Our respondents expressed the concern that DUTCH was exploited for some time (primarily from Suppliers B and C, but to some extent by A too), and that more formalization was the only way to move things forward in a positive way.

In what follows, we will provide an overview of the various uncertainties prevailing in the internal operating environment within DUTCH, as well as the hazards of behavioral uncertainty the company faced. We will also illustrate the various ways in which DUTCH tried to reduce these uncertainties, and their impact.

Internal uncertainty

Research participants within DUTCH indicated that their organization was not capable of clarifying their needs and requirements. This increased the likelihood of opportunistic behavior by the vendors, enabling them to blame DUTCH for lack of clarity and therefore justify time overruns or under performance. RP1 (DUTCH IT director) recognized that DUTCH had a very limited understanding of its own IT business needs and indicated: *“We should have been more accurate because if you outsource garbage, you get garbage back”*.

DUTCH was also constantly making very specialized requests to its suppliers, which indicated some lack of discipline. RP7 (Contract manager for Supplier B) reflected on this issue: *“DUTCH wants everything as a specialty, really everything has a high priority and it’s not standardized. We contracted PDC where all our products are designed, because we wanted to take standard products from Supplier B and Supplier C. The ink wasn’t even dry and we had a specialty”*. While Supplier B had trouble accommodating the non-standardized requirements of DUTCH, it did manage to finally take care of them, though with some time delays. RP7 (Contract manager for Supplier B) indicated that DUTCH was a very demanding customer and that some delays by Supplier B could be justified, but often these were too long. In the case of Supplier C, the situation was worse. The internal organization of Supplier C was not consistent, and consequently their ability to accommodate non-standard requests from DUTCH was limited. Sometimes Supplier C would blame DUTCH for making non-standardized requests in order to justify their own underperformance.

Furthermore, the internal organization within DUTCH at the time that these outsourcing contracts were signed appeared to be relatively weak. A major problem had to do with the diverse mindsets that existed within the company. DUTCH has been the product of a number of mergers and acquisitions, resulting in a diverse infrastructure and varying philosophies on how IT should be managed. Consequently, the complexity of the tasks was significant. RP13 (Contract manager from Supplier C) noted: *'You (have) got a kaleidoscopic IT world within DUTCH itself which is relatively unmanageable. If you want to outsource ... it really becomes a mess'*. This situation increased the possibility that the suppliers would behave opportunistically.

DUTCH did not have a good command of the environment but, to make matters worse, it also did not have proper measurement and control mechanisms in place. By not establishing proper measurement and control mechanisms, the contracts were not effective in preventing vendors from behaving opportunistically. This was particularly the case with Supplier B and Supplier C which for a long time were claiming much better levels of performance than they were, in practice, putting in.

Furthermore, although DUTCH settled on making rough estimations about its IT needs, it was not capable of making valid assessments. As one example amongst many, when DUTCH calculated the storage capacity they would need from Supplier A their miscalculation was huge. DUTCH signed a deal worth EUR 120 million with Supplier A, but it turned out that the deal had to become much larger in order to accommodate the requirements of DUTCH. The final deal reached EUR 200 million (which represents a 66.7% deviation upwards) and, according to DUTCH respondents, Supplier A took the opportunity to over-charge on additional services.

An over-reliance on a spirit of partnership, and the weak IT management capability of DUTCH, did not work well for any of the three arrangements. Respondents from DUTCH raised concerns that Supplier A, although reliable in terms of performance, took advantage of the weak IT management capability of DUTCH. Suppliers B and C also took many opportunities to offer excuses when their performance was poor. In essence, they were trying to escape responsibility for their variable performances.

In the case of Supplier C, while DUTCH tried to establish some measurement mechanisms, these were not effective. Some of the metrics were not disaggregated enough to challenge the supplier on exactly where they were failing. Furthermore, these metrics were averaged too much so that the supplier performance looked quite good at a general level, but failed to establish why there was such a level of disappointment about some parts of Supplier C's performance.

Behavioral uncertainty

DUTCH chose to outsource to companies with which it already had some sort of business relationship. In a sense, prior history was assumed to be an indicator of the future prospects for co-operation. As mentioned, DUTCH tended to be rather informal in its business relationships, therefore working with companies that they had already successfully collaborated with was significant for them. RP3 (DUTCH Sector manager on IT operations) noted: *"So we said, let's divide our infrastructure into three parts and have one supplier for*

data center, one for network and one for office automation... and in each of these parts we tried to see which supplier we had the best relationship with”.

DUTCH believed that working with organizations that they already had a business relationship with would enable them to have some expectations with regard to their way of doing business and their performance. What is interesting to note, however, is that not all the suppliers that were chosen for this multi-sourcing arrangement had had a successful record of business with DUTCH, or had a very positive reputation in the market. Respondents within DUTCH suggested that the choice of Suppliers A and B on the basis of their previous performance and reputation was reasonable. However, they were very skeptical about the choice of Supplier C. Firstly, although DUTCH had worked with Supplier C, they did not have any experience with them in the workspace environment. Additionally, in 2007 when the Supplier C contract was signed, Supplier C appeared to have a bad image in the market.

A number of research participants expressed their skepticism about whether Supplier C was chosen for good enough business reasons. RP3 (DUTCH Sector manager on IT operations) noted: *“For Supplier A, it is more or less understandable in terms of the fact that they already had a sourcing contract on the mainframe side and they were doing well on that contract. We were very satisfied with their performance and naturally they would be the first party you look at when you want to outsource platforms. Supplier B was of course already a very important business partner for us in terms of telecommunications. The selection process with regard to Supplier C... I do not have it on the table nor do I care too much because I am just managing the existing situation. But I have my suspicions this was not a very careful, scientific auditable process”.* It turned out, however, that the former DUTCH IT director who signed the Supplier C contract in 2008 went to work for Supplier C a few months after the closing of the deal.

With regard to the overall orientation towards the arrangement, DUTCH was a big account for supplier A, and therefore a significant client. Supplier A also saw the potential for doing more business with DUTCH in the future, especially in the area of applications. Supplier A therefore, appeared very interested and involved in this agreement and this increased the expectation of DUTCH that Supplier A would not behave opportunistically.

This was not so clearly the case with Supplier B. The development of the relationship between DUTCH and Supplier B had been rather patchy. An important reason for this appears to be that although the contract with Supplier B was big in terms of its value, DUTCH was not ranked among the top customers of Supplier B. RP7 (DUTCH Contract manager working with Supplier B) said: *“I believe that they see us as one of their customers... Just a customer because they have bigger customers. So we are just another one of their customers. That is how it feels”.* Therefore, because DUTCH was not a key customer for Supplier B, the possibility that Supplier B would not prioritize the needs of DUTCH was increased.

Supplier C was quite indifferent to the arrangement from the start. As already mentioned, the choice of Supplier C was perhaps influenced by political considerations, rather than based on rational business criteria. The former DUTCH IT director who signed the contract with Supplier C went to work for Supplier C and therefore it may well be that with this genesis, the venture was at risk from the start. However, from our respondent comments, it did not appear that Supplier C was particularly interested in keeping DUTCH satisfied as a customer.

Comparative Analysis

Overview of the Adidas case

It is useful at this point, for comparative purposes, to describe briefly the Adidas case, and the issues it raises. In 2009, Adidas, as a multinational wholesale and retail sporting goods company, had over 1000 IT employees and outsourced to an Indian IT supplier, as well as having a center in Hyderabad. A new CIO felt that the single vendor had become complacent, and that Adidas had become too dependent on one supplier. From 2011-2013 it adopted a multi-sourcing strategy. It brought in two new vendors – both medium sized, one a ‘hungry’ Indian supplier, the other from Eastern Europe (India 2 and Belarus). Their skill sets overlapped significantly with those of the incumbent large Indian single supplier; this was a deliberate Adidas policy. Each centre of excellence in Adidas (e.g. Sales and Retail IT CofE), eCommerce, IT CofE - was instructed to work with at least two of the three vendors to deliver a full set of activities from development, testing through to integration and support. The relevant IT CofE was responsible for coordinating overall projects and programs. Thus, for any IT task Adidas could have all three suppliers bidding, creating both competition but also a subsequent need for cooperation across the winning suppliers. The new suppliers learned much, including from the large supplier, while the amount of IT work at Adidas was increasing so none of the suppliers experienced a decline in revenues.

These arrangements had some drawbacks. They made it difficult for the vendors to achieve economies of scale and scope: higher transaction costs were incurred through increased interfaces and more bidding; Adidas had to take more final program management responsibility; a lot of skills replication was needed across the IT CofEs. These drawbacks were addressed in the Phase 2 2013-15 period. Having successfully brought on board the two new vendors, Adidas sought to ‘industrialise’ the IT organization by reorganizing to have development, testing, integration and support as separate processes across all CofEs. This new horizontal structure created fewer vendor overlaps but they were bigger in size, thus creating more volume bundling in the work bid for by the suppliers. The two new vendors would be assigned to each horizontal function (e.g. development) and subsequent functions had to be performed by different vendors. The aim was to create high levels of supplier competition and cooperation. The authors found that while this all reduced the number of interfaces considerably, the suppliers remained highly dependent on one another, had to learn from each other but also could bid for larger work blocks, thus leveraging economies of scale and scope, while Adidas reduced its coordination costs. Responsibilities also became more clearly demarcated. Overlapping suppliers also introduced a higher level of flexibility and agility than was possible using a more traditional multi-sourcing ‘best-in-class’ model with very few overlapping supplier activities.

In the following section we compare and contrast the two cases on aspects of opportunistic propensity, internal uncertainty, and behavioral uncertainty, as a basis for a more detailed discussion.

Aspects of opportunistic propensity

As already mentioned, DUTCH favoured informal ways of working, and therefore did not put much detail in the contracts with its three suppliers. This choice, however - to rely on a spirit of partnership rather than concrete contractual safeguards - increased the propensity of its

vendors to behave opportunistically. Right from the start of its multi-sourcing deal, DUTCH had to face issues of opportunistic behavior with all its vendors, even with Supplier A (with whom DUTCH had a long-standing relationship). Many respondents from DUTCH, including the IT director, recognized that relying on a spirit of partnership rather than a detailed formal contract worked against DUTCH when managing the behavior of its vendors.

Adidas, on the other hand, was very rigorous in creating a strong contractual regime with its suppliers. This attitude of Adidas decreased the opportunistic propensity of its vendors, and, right from the start, Adidas showed clear signs that it would keep tight control over the arrangement.

Internal uncertainty

DUTCH had a relatively weak command of its IT environment, and was less mature in its IT and outsourcing management compared to Adidas. As we saw, DUTCH was the product of many mergers and acquisitions and had to integrate diverse IT infrastructures. The company did not seem to have reached a robust state of IT integration at the time that it signed its multi-sourcing arrangement. For this reason – immature management capability which resulted to a lack of robust IT platforms - the company was unable to properly measure and control the work of its different vendors. As a result, internal uncertainties at DUTCH contributed to varieties and different levels of opportunistic behavior by the three suppliers.

Adidas, conversely, appeared to have a very good command of its internal IT operations. This was an important reason why the company was so effective in the reduction of internal uncertainties. Adidas was also competent in splitting IT projects amongst three vendors, without running into accountability issues; for example, which vendor was responsible for which aspect of the work, and who got paid for delivery. Adidas appeared to have strong retained capability and so emerged as very competent across both phases and regimes in how it divided its IT work and projects between the different vendors, and also in how it maintained effective on-going control over vendor performance.

Behavioral uncertainty

As mentioned, DUTCH chose to outsource to companies with which it already had some sort of business relationship. In particular, DUTCH had already had a successful outsourcing relationship with Supplier A and later on, it expanded the arrangement and included suppliers B and C. The details behind these arrangements but also the scepticism around the inclusion of Supplier C in the contract are mentioned earlier on.

With regard to Adidas, over the years of outsourcing to a single vendor, Adidas Global IT had begun to identify problems of over-dependency. Adidas had co-operated successfully with its largest supplier since 1998 and they had a good long-standing relationship, similarly to the DUTCH-Supplier A case. While in this case we did not find indications of opportunistic behavior by that supplier, Adidas itself certainly saw the need to reduce its dependency on a single vendor and mitigate behavioral uncertainties and opportunism. However, in their renewed outsourcing arrangement, they carried on their cooperation with India1 and brought in also India 2 and Belarus.

DUTCH was valued as a client by Supplier A, but not so much by Suppliers B and C. The fact that DUTCH was not seen as a particularly significant account for Suppliers B and C

increased the likelihood of opportunistic behavior from these suppliers. The Adidas case does not present us with much information on how its suppliers valued it as a client; from the case study, however, it may be assumed that all suppliers were highly interested and highly involved in the arrangement and wanted to satisfy Adidas as a client. These elements reduced behavioral uncertainty risks for Adidas. India 1 had had a long-term relationship with Adidas, since 1998. The two additional vendors that were introduced in 2011 were tier-2 suppliers, that were most likely gaining a lot of reputational benefits from their collaboration to Adidas. In all three cases Adidas was offering additional work, because IT was experiencing a rising workload across the research period. This, undoubtedly, reduced behavioral uncertainty risks and mitigated opportunistic behavior on the part of the suppliers.

DISCUSSION

Comparison of the case studies has allowed us to develop insights into how opportunistic attitudes and behaviors on the part of vendors may arise in outsourcing and multi-sourcing arrangements. As previous studies also noted, we observed that multi-sourcing arrangements are much more complex by nature than single sourcing arrangements and require significant co-ordination efforts (Bapna, Barua, Mani and Mehra, 2010). The division of roles, responsibilities and accountabilities in a multi-sourcing context is much more demanding and the on-going governance much more challenging (Poston, Kettinger and Simon, 2009).

According to our findings, in the case of DUTCH, there was already high opportunistic propensity from the vendors as the arrangements were primarily dependent on relational elements and not a robust contractual regime. While previous literature has identified relational elements as key for successful outsourcing outcomes (Kishore, Rao, Nam, Rajagopalan and Chaudhury, 2003; Dibbern, Winkler and Heinzl, 2008) it seems that these elements cannot generate benefits unless there are adequate safeguards. Relational governance, therefore, does not always substitute for formal governance successfully (Lioliou, Zimmermann, Willcocks and Gao, 2014; Huber, Fischer, Dibbern and Hirschheim, 2013). In contrast, for Adidas, the danger of vendors' opportunistic propensity was low because there were detailed contracts in place, which acted as safeguards from opportunistic behavior. Interestingly, having established a good formal framework for the arrangement, this encouraged the development of a better (i.e. more effective) relationship as compared to DUTCH.

We also found that the internal uncertainties within DUTCH shaped, in practice, an 'alignment of processes' problem. This problem indicated low governance maturity and low IT management capability. Without proper governance mechanisms in place, DUTCH was not able to effectively control or coordinate the work of its suppliers. Lack of 'alignment of processes' in this sense limited the space for effective collaboration. Previous literature has identified that the mechanisms setting communication lines, roles and responsibilities are key for effective collaboration (Kotlarsky, Van Fenema and Willcocks, 2008). The absence of such mechanisms made collaboration very difficult indeed for DUTCH and its suppliers. Furthermore, DUTCH did not have a good command of its own IT environment and outsourcing this, therefore, exacerbated their problems. Conversely, Adidas demonstrated significant governance maturity and enhanced IT management capability. Internal uncertainties had been sorted and Adidas not only did not face significant issues related to

opportunistic behavior, but went forward to build collaborative efficiencies in the work of its vendors.

We further found that behavioral uncertainties were also shaping in practice ‘alignment of objectives’ problems, increasing the likelihood for opportunistic behavior. Lack of alignment of objectives indicates an absence of common vision and orientation which hinders the effectiveness of the arrangement (Oshri, Kotlarsky and Willcocks, 2011). These problems further inhibited the proper incentivization of the suppliers. In the absence of aligned objectives, suppliers were not adequately motivated to perform and, as demonstrated in the DUTCH case, this situation led to instances of opportunistic behavior on the part of the vendors. On the other hand, Adidas not only managed to align its own objectives to each of its suppliers individually but went further to create harmonious roles and objectives between its suppliers.

The Adidas case shows how adept client handling can help to align and incentivize vendor attitudes and performance. While involving multiple vendors may reduce their motivation to make client-specific investments (Bapna, Barua, Mani and Mehra, 2010), Adidas demonstrated that it was capable of maintaining the interest of all its vendors. Adidas successfully managed to generate competitive pressure among its different suppliers and keep them interested in winning more projects. Adidas also cleverly created mutual objectives between the suppliers because they became co-dependent on one another to perform effectively, and gain revenues. In DUTCH conversely, without the spur of organized competition across the multi-vendors, opportunistic behavior emerged.

The case analysis also reveals the actions clients may take to mitigate the vendors' propensity towards opportunism in specific circumstances. The cases are sufficiently rich and different to identify the major factors at work (for a summary of our results please see Figure 2). DUTCH was deficient in its outsourcing experience, retained capability and application of the full gamut of effective management practices, let alone creating and applying new ones, and launched the agreement over-reliant on a partnering ethos which was not present in two of the vendors. Inside DUTCH there was increased internal uncertainty, which reduced its ability to align and coordinate its processes with the vendors. The essential finding here is that DUTCH faced significant ‘alignment of processes’ problems that hindered work and created the space for opportunistic behavior.

Adidas’s greater experience with outsourcing and its more mature IT management and governance capabilities eliminated internal uncertainties and therefore ‘alignment of processes’ problems from the start. In this regard, Adidas did not have to work hard to mitigate issues related to opportunistic behavior (as happens in a lot of multi-sourcing arrangements). Therefore Adidas was able to apply effective management practices identified in the academic literature (Cullen, Lacity and Willcocks, 2014; Lacity, Khan and Yuan, 2016), but also some novel ones, in particular that of using overlapping vendors to achieve keener competition, better cooperation, and superior outsourcing performance.

While modularity and overlaps in work across multiple vendors can be seen in a negative manner, often because of the co-ordination issues they may create, the Adidas case shows that a firm that has good command of its internal processes (and therefore reduced internal uncertainty) can exploit more benefits from the simultaneous competition and co-operation between vendors, or ‘coopetition’ (Nalebuff and Brandenburger, 1997; Osarenkhoe, 2010:216). Adidas was able to maintain constructive and effective relationships with all of its

vendors. The climate of collaboration, but also constructive competition and learning that they created among the different vendors, appeared to work well.

More importantly however, it seems that Adidas had adroitly managed to make each of the vendors shadow the work of its peers. All vendors carried similar skill sets, and their work often overlapped. It could therefore be concluded that, in addition to the control exercised by Adidas, the vendors were set up to exercise control over between them, indicating the development of peer control, thus mitigating the possibilities for opportunistic behavior.

While ‘alignment of processes’ and ‘alignment of objectives’ problems are also evident in dyadic relationships, the challenge of managing these issues is exacerbated in a multi-sourcing context. In a multi-sourcing arrangement, as shown in the case of Adidas, the client needs to master its internal processes in such a way that it is able to fully control the work of each of the vendors individually, but also between them. The possibility for the exercise of peer control is another unique feature to multi-sourcing, as shown in the Adidas case. Conversely, DUTCH was not able to master its internal IT infrastructure well and entered its multi-sourcing arrangement in a very weak position to exploit multi-sourcing benefits. DUTCH hardly knew what sort of work it was handing and what it should expect. The outcome of the arrangement was consistently bad, until DUTCH managed to improve its internal retained management and governance capabilities.

Furthermore, ‘alignment of processes’ and ‘alignment of objectives’ issues in a traditional dyadic outsourcing relationship typically aim towards collaboration between the client and the supplier. In a multi-sourcing context, however, and in order to truly exploit the benefits of this model, ‘alignment of processes’ and ‘alignment of objectives’ should aim towards the cultivation of collaboration between clients and suppliers, but also the development of competition, as shown in the Adidas case study.

CONCLUSIONS

Focusing on the distinctive context of multi-sourcing arrangements, our research makes a number of contributions to the outsourcing literature. First, we investigate opportunistic behavior in a multi-sourcing context, which is a growing field in the industry, yet still lacks academic investigation (Oshri, Dibbern and Kotlarsky, 2015; Wiener and Saunders, 2014; Bapna, Barua, Mani and Mehra, 2010). More specifically, we explicitly examine how internal and behavioral uncertainties create the space for the occurrence of opportunistic behavior in a multi-sourcing context. Our investigation demonstrated that uncertainty elements play a key role in covering underperformance and blurring its boundaries with purposeful opportunistic activity. We illustrated that while uncertainty is an element that is often neglected from the analysis of many TCE studies, it is a dimension that deserves further consideration, particularly in the investigation of opportunistic behavior.

Secondly, we demonstrated that internal uncertainties shape an ‘alignment of processes’ problem and behavioral uncertainties create an ‘alignment of objectives’ problem which often result in opportunistic activity. We further illustrated that ‘alignment of processes’ problems are due to the lack of IT management capability and governance immaturity, while ‘alignment of objectives’ problems can be traced to an inability to appropriately incentivize vendors. Vendors’ incentives should be aligned to the objectives of the client, but they should also create a harmonious relationship among vendors.

Thirdly, by comparing and contrasting the two cases, we were able to unpack the complexity associated with multi-sourcing arrangements and contribute to a more comprehensive account of the conditions under which cooperation between multiple vendors can be generated. In particular, we showed that the existence of internal and behavioral uncertainties act as hindrances to the development of cooperation between the vendors. In other words, under conditions of internal and behavioral uncertainty, multiple vendors are highly likely going to behave opportunistically, therefore reducing the space for the development of cooperation.

In the case studies, one limitation is that we did not focus on environmental uncertainties. However, DUTCH vendor C showed that internal problems at a vendor due to external market conditions could lead to increased opportunistic behavior in relation to its outsourcing client DUTCH. One could also see that Adidas was experiencing rapid business growth in the global market during the research period. This contributed to creating more IT work for the multi-vendors, which certainly contributed to more cooperation and less opportunistic behavior than if the amount of IT work had been declining in the same period. Clearly, this aspect of external uncertainties and their possible correlation with opportunistic attitudes and behavior deserves more research attention, though it did not emerge as a major factor in the two case studies.

Future research could therefore explore this element and elicit how environmental uncertainties can affect the occurrence of opportunistic behavior. In a similar vein, a wide range of institutional factors, competition, markets, as well as wider industry practices and standards should be taken into account in the examination of the possibility for opportunistic behavior in a multi-sourcing arrangement.

Moreover, while our research has provided a point of departure, more research is needed in order to obtain a more profound understanding of how clients can create a regime of cooperation between their vendors. In particular, future research could explore how a good balance between the dimensions of cooperation and competition can be achieved. This theme of research is particularly topical, taking into account that a major driver for the growth of multi-sourcing is the actual exploitation of cooperative benefits. It is also important to note that while the reduction of various types of uncertainties and opportunistic behavior enables cooperation (as shown in our findings), one could also argue that vendor cooperation can play a focal role in reducing opportunistic behaviors. The role of cooperation in the reduction of opportunistic behaviors can be further explored.

Furthermore, so far relatively limited research in multi-sourcing has taken into account the perspectives of the suppliers. Suppliers also need to carry the constant pressure of managing the interfaces between client and other suppliers in their multi-sourcing deals and they also face the danger of opportunistic behavior from the various parties involved. This is certainly a very significant and promising area for further research.

In addition, it needs to be recognized that while the development of cooperation in multi-sourcing arrangements is overall seen in a positive light, it may not be desirable for all types of multi-sourcing arrangements. Depending on the type of service that is outsourced (and the level of modularity) and the client's attitude towards outsourcing, clients can make different decisions on the levels of collaboration they seek to develop with and between their vendors, as well as the levels of competition among them. Future research could further explore these decisions.

Our findings are very relevant for practitioners, illuminating the fact that special attention has to be paid to the internal processes that co-ordinate work between the client and its multiple vendors. While the absence of effective internal processes can create risks and facilitate the occurrence of opportunistic behavior even in dyadic outsourcing arrangements, these hazards are significantly more prominent in a multi-sourcing context. This context inherently is more complex, therefore creating more opportunities for the vendors to obscure their actions or mask performance problems.

Similarly, clients should be alert to the possibilities of creating more peer control among the different suppliers in multi-sourcing arrangements. As mentioned above, multi-sourcing can generate significant monitoring costs for the client; however, when vendors are set up to exercise control over themselves, the possibility for opportunistic behavior becomes more limited.

Our study further underlines the importance of incentivizing the different suppliers to perform as well as the alignment of objectives between the various parties involved. While multi-sourcing arrangements can be promising in terms of propagating benefits related to the joint collaborative effort of the suppliers, this potential may not materialize when appropriate incentives do not exist. In the absence of such incentives, the space for cooperation can become seriously constrained, and even more importantly, the threat for opportunistic behavior begins to rise.

REFERENCE:

Alaghehband, F. K., Rivard, S., Wu, S., & Goyette, S. (2011). An assessment of the use of transaction cost theory in information technology outsourcing. *The Journal of Strategic Information Systems*, 20(2), 125-138.

Aubert, B.A., Patry, M. and Rivard, S. (2004). A Transaction Cost Model of IT Outsourcing, *Information and Management* 41(7): 921–932.

Aubert, B., Saunders, C., Wiener, M., Denk, R., and Wolfermann, T. (2014) Embracing Vendor Overlaps in IT Multi-sourcing: The Case of Adidas. IAOP Research Into Practice Workshop, Orlando, February

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*, 21(4), pp.785-795.

Benbasat, I. Goldstein, D. and Mead, M. (1987). The Case Research Strategy in Studies of Information Systems, *MIS Quarterly*, 11(3):368-387.

Bhattacharya, S., Gupta, A. and Hasija, S., (2012). Single sourcing versus multisourcing: The role of effort interdependence, metric-outcome misalignment, and incentive design.

- Carson, S. Madhok, A. and Wu, T. (2006), Uncertainty, Opportunism, and Governance: The Effects of Volatility and Ambiguity on Formal and Relational Contracting, *Academy of Management Journal*, 4(5):1058-1077.
- Chen, A. and Bharadwaj, A. (2009). An Empirical Analysis of Contract Structures in IT Outsourcing, *Information Systems Research* 20(4): 484–506.
- Cullen, s., Lacity, M. and Willcocks, L. (2014) *Outsourcing – All You Need To Know*. (White Plume, Melbourne).
- Cullen, S., Seddon, P. B., & Willcocks, L. P. (2005). IT outsourcing configuration: Research into defining and designing outsourcing arrangements. *The Journal of Strategic Information Systems*, 14(4), 357-387.
- Das, T. K., & Rahman, N. (2002). Opportunism dynamics in strategic alliances. In F. J. Contractor & P. Lorange (Eds.), *Cooperative strategies and alliances* (pp. 89–118). Oxford: Elsevier Science.
- Das, T. K., & Teng, B. (1996). Risk types and inter-firm alliance structures. *Journal of Management Studies*, 33, 827–843.
- De Vita, G., Tekaya, A. and Wang, C. (2010). Asset Specificity's Impact on Outsourcing Relationship Performance: A disaggregated analysis by buyer-supplier asset specificity dimensions, *Journal of Business Research* 63(7): 657–666.
- Dibbern, J., Winkler, J. and Heinzl, A. (2008). Explaining Variations in Client Extra Costs Between Software Projects Offshored to India, *MIS Quarterly* 32(2): 333–366.
- Eisenhardt, K. (1989). Building Theories from Case Study Research, *The Academy of Management Review* 14(4): 532–550.
- Ghoshal, S., & Moran, P. (1996). Bad for practice: A critique of the transaction cost theory. *Academy of Management Review*, 21, 13–47.
- Goo, J., Nam, K. and Kishore, R. (2009). The Role of Service Level Agreements in Relational Management of Information Technology Outsourcing: An empirical study, *MIS Quarterly* 33(1): 119–145.
- Gopal, A. and Koka, B. (2012). The Assymetric Benefits of Relational Flexibility: Evidence from software development outsourcing, *MIS Quarterly* 36(2): 553–576.
- Granovetter, M. (1985). Economic Action and Social Structure: The problem of embeddedness, *American Journal of Sociology* 91(3): 481–510.
- Heiskanen, A., Newman, M., & Eklin, M. (2008). Control, trust, power, and the dynamics of information system outsourcing relationships: A process study of contractual software development. *The Journal of Strategic Information Systems*, 17(4), 268-286.
- Hoetker, G. & Mellewigt, T. (2009) Choice and performance of governance mechanisms: matching alliance governance to asset type, *Strategic Management Journal*, 30, 1025–1044.

Huber, T., Fischer, T., Dibbern, J. & Hirschheim, R. (2013) A process model of complementarity and substitution of contractual and relational governance in IS outsourcing. *Journal of Management Information Systems*, 30, 3, 81–114.

Kern, T. and Willcocks, L. (2001) *The Relationship Advantage: information technologies, sourcing and management*. Oxford, Oxford University Press.

King, N. (2004). Using template analysis in the qualitative analysis of text. 2004) *Essential guide to qualitative methods in organisational research*. Sage: London.

Kishore, R., Rao, H. R., Nam, K., Rajagopalan, S., & Chaudhury, A. (2003). A relationship perspective on IT outsourcing. *Communications of the ACM*, 46(12), 86-92.

Koo, Y., Lee, J.N., Heng, C.S. and Park, J., (2016). Effect of multi-vendor outsourcing on organizational learning: A social relation perspective. *Information & Management*.

Kotlarsky, J. Van Fenema, P. and Willcocks, L.P. (2008) "Developing a knowledge-based perspective on coordination: The case of global software projects" *Information & Management*, 45(2)96-108.

Lacity, M., Khan, S., Yan, A. and Willcocks, L. (2010). A Review of the IT Outsourcing Empirical Literature and Future Research Directions, *Journal of Information Technology* 25(4): 395–433.

Lacity, M., Khan, S. and Yan, A. (2016). Review of the Empirical Business Services Sourcing Literature: an update and future directions. *Journal of Information Technology*, 31, 3.

Lacity, M. and Willcocks, L. (2001) *Global Information Technology Outsourcing: In Search of Business Advantage*. Wiley, Chichester.

Lacity, M. and Willcocks, L., 2014. Business process outsourcing and dynamic innovation. *Strategic Outsourcing: An International Journal*, 7(1), pp.66-92.

Lacity, M., Willcocks, L. and Khan, S. (2011). Beyond Transaction Cost Economics: Towards an Endogenous Theory of Information Technology Outsourcing, *Journal of strategic information systems* 20(2): 139–157.

Levina, N., & Su, N. (2008). Global multisourcing strategy: The emergence of a supplier portfolio in services offshoring. *Decision Sciences*, 39(3), 541-570.

Lioliou, E. and Zimmermann, A. (2015), Opportunistic Behavior in IT Outsourcing: Insights from a TCE and a Social Capital Perspective, *Journal of Information Technology*, 30:307-324.

Lioliou, E. Zimmermann, A. Willcocks, L.P. and Gao, L. (2014), Formal and Relational Governance in IT Outsourcing: Substitution, Complementarity and the Role of the Psychological Contract, *Information Systems Journal*, 24(6):503-555

- Myers, M. D. (1995). Dialectical hermeneutics: a theoretical framework for the implementation of information systems. *Information systems journal*, 5(1), 51-70.
- Nalebuff, B. J., & Brandenburger, A. M. (1997). Co-opetition: Competitive and cooperative business strategies for the digital economy. *Strategy & leadership*, 25(6), 28-33.
- Ouchi, W. (1980). Markets, Bureaucracies, and Clans, *Administrative Science Quarterly* 25(1): 129–141.
- Osarenkhoe, A. (2010). A study of inter-firm dynamics between competition and cooperation—A co-opetition strategy. *Journal of Database Marketing & Customer Strategy Management*, 17(3-4), 201-221.
- Oshri, I., Dibbern, J., & Kotlarsky, J. (2015), “Joint Vendor Performance in Multi-sourcing Arrangements: The Moderating Role of the Guardian”, In *Academy of Management Proceedings* (Vol. 2015, No. 1, p. 17393). Academy of Management.
- Oshri, I., Kotlarsky, J. and Gerbasi, A., (2015), Strategic innovation through outsourcing: the role of relational and contractual governance. *The Journal of Strategic Information Systems*, 24(3), pp.203-216.
- Oshri, I., Kotlarsky, J. and Willcocks, L. (2011) *The Handbook of Global Outsourcing and Offshoring*. Palgrave, London
- Parida, V., Wincent, J. and Oghazi, P., (2016). Transaction costs theory and coordinated safeguards investment in R&D offshoring. *Journal of Business Research*, 69(5), pp.1823-1828.
- Parkhe, A. (1993). Strategic Alliances Structuring: A game-theoretic and transaction cost examination of interfirm cooperation, *Academy of Management Journal* 36(4): 794–829.
- Pilling, B.K. Crosby, L.A. and Jackson, D.W. (1994), Relational bond in industrial exchange: An experimental test of the transaction cost economic framework, *Journal of Business Research*, 30:237-251.
- Poppo, L. and Zenger, T.R. (2002). Do Formal Contracts and Relational Governance Function as Substitutes or Complements, *Strategic Management Journal* 23(8): 707– 725.
- Poston, R., Kettinger, W. and Simon, J. (2009). Managing The Vendor Set: best pricing and quality service in IT outsourcing. *MISQ Executive*, 8, 21, 45-58.
- Snowden, J. and Fersht, P. (2016) *HFS Market Index – The ITO and BPO Market Size and Forecast 2016-2020*. Boston; HFS Research.
- Thouin, M., Hoffman, J. and Ford, E. (2009). IT Outsourcing and Firm-Level Performance: A transaction cost perspective, *Information & Management* 46(8): 463– 469.

Tiwana, A. and Bush, A. (2007). A Comparison of Transaction Cost, Agency, and Knowledge-Based Predictors of IT Outsourcing Decisions: A US-Japan cross-cultural field study, *Journal of Management Information Systems* 24(1): 259–300.

Uzzi, B. (1996). The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The network effect, *American Sociological Review* 61(4): 674–698.

Wiener, M., & Saunders, C. (2014). Forced competition in IT multi-sourcing. *The Journal of Strategic Information Systems*, 23(3), 210-225.

Willcocks, L., Cullen, S. and Craig, A. (2011). *The Outsourcing Enterprise: From cost management to collaborative innovation*, London: Palgrave Macmillan. Williamson, O.E. (1985). *The Economic Institutions of Capitalism*, New York: Free Press.

Williamson, O.E. (1993). Opportunism and its Critics, *Managerial and Decision Economics* 14(2): 97–107.

Williamson, O.E., (1993). Calculativeness, trust, and economic organization. *The Journal of Law and Economics*, 36(1, Part 2), pp.453-486.

Williamson, O.E. (1996). *The Mechanisms of Governance*, New York: Oxford University Press.

Williamson, O.E. (1998). Transaction Cost Economics: How it works; where it is headed, *De Economist* 146(1): 23–58.

Williamson, O.E., (2008). Outsourcing: Transaction cost economics and supply chain management. *Journal of supply chain management*, 44(2), pp.5-16.

Yin, R. (2009). *Case Study Research: Design and methods*, London: Sage.

Zazac, E.J. and Olsen, C.P. (1993). From Transactional Cost to Transactional Value Analysis: Implications for the study of interorganizational strategies, *Journal of Management Studies* 30(1): 131–145.

Figure 1: Guiding research framework

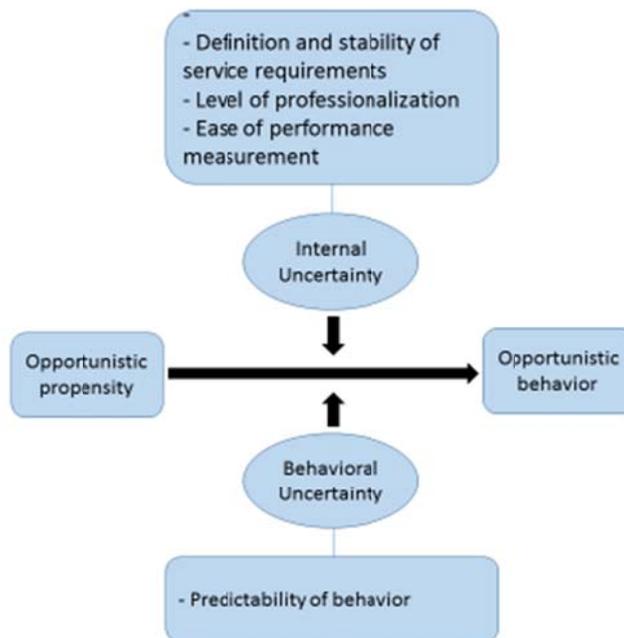


Figure 2: Summary of findings

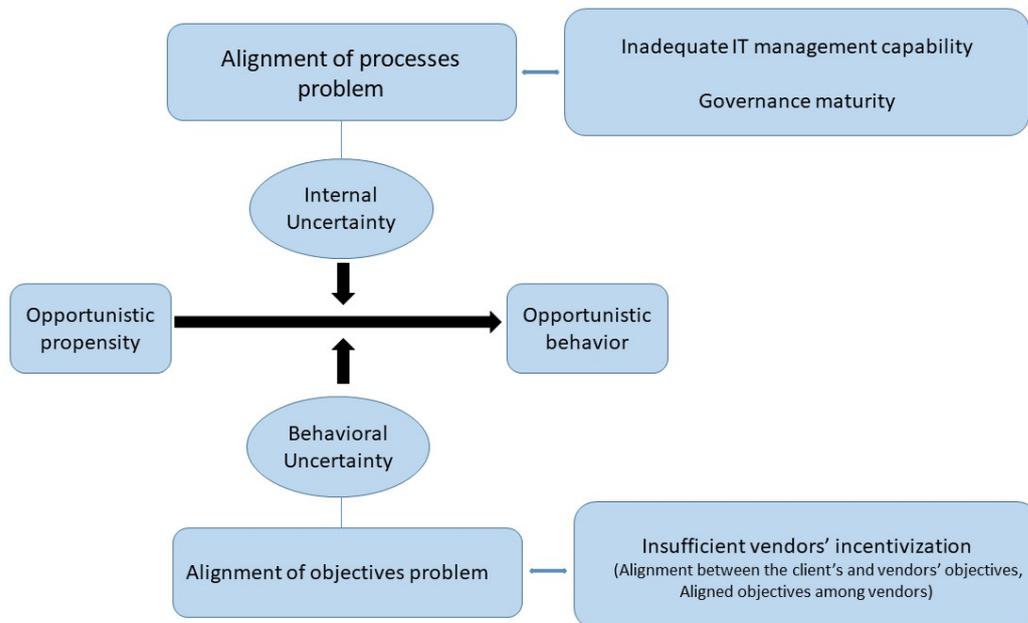


Table 1: Roles of research participants

DUTCH case study		
Research participants from DUTCH	Role	Number of interviews
RP1	IT director	One
RP2	Sector manager for sourcing arrangements	Two
RP3	Sector manager on IT operations	Two
RP4	IT demand manager	One
RP5	Consultant	One
RP6	Contract manager for Supplier A	Two
RP7	Contract manager for Supplier B	Two
RP8	Contract manager for Supplier C	Two
RP9	Outsourcing operations for Supplier B	Two
Research participants from Supplier A	Role	
RP10	Engagement manager	Two
Research participants from Supplier B	Role	
RP11	Engagement manager	One
Research participants from Supplier C	Role	
RP12	Client director	One
RP13	Contract manager	One

APPENDIX: Codes and illustrative examples

Constructs	Examples
<p>Opportunistic propensity</p> <p>Level of formalization of the arrangement</p>	<p><i>“We were convinced, seeing all the different outsourcing in the market at that moment, the only way to make it successful is when you try to establish a real partnership. That was our goal when we started.”</i> RP3 (DUTCH sector manager on IT operations)</p> <p><i>“If we had contracted it differently and said, ‘This is the date that you are responsible for migrating the services to the FMO and our prices are dropping at that moment’, they would get pressured.... Now all the pressure and the issues are with DUTCH, not with our vendors.... They have all the reasons for some time to stay in the PMO (present mode of operation) or PMO Plus instead of moving to the Future Mode of Operations... So, basically, there is not a natural alignment of incentives.... From a contractual perspective, we did not establish the proper incentive to move to PMO Plus or FMO.”</i> RP1 (DUTCH IT Director)</p>
<p>Internal uncertainty</p> <p>Definition and stability of service requirements</p> <p>Level of professionalization</p>	<p><i>“And when you are outsourcing, you should know what you need functionally and ask your provider to do it... And we had a catalogue with services which was really far from complete... We should have been more accurate because if you outsource garbage, you get garbage back.”</i> RP1 (DUTCH IT Director)</p> <p><i>“DUTCH wants everything as a specialty, really everything has a high priority and it’s not standardized. We contracted PDC where all our products are designed, because we wanted to take standard products from Supplier B and Supplier C. The ink wasn’t even dry and we had a specialty.”</i> RP7 (Contract manager for Supplier B)</p> <p><i>“When we outsourced our workspace management systems... we did this too fast and there were a lot of things that we did not know how they worked and we were asking the supplier to explain to us, while it should be the other way around... This meant that we were actually not in control...”</i> RP1 (DUTCH IT Director)</p> <p><i>“We had not properly invested in the environment that we were moving to the vendors. We did not have the proper assessment levels, maintenance levels and we did not know what we were outsourcing to them. Consequently, in the first phase of the contract there was the verification phase. And what happened was ‘We do not know what we have given to you, can you please</i></p>

<p>Ease of performance measurement</p>	<p>tell us?" RP1 (DUTCH IT Director)</p> <p><i>"If you are not capable of explaining your challenges as an IT business to the primary business of DUTCH itself as customers, you are always in reaction mode. This is a major challenge for DUTCH."</i> RP4 (DUTCH IT demand manager)</p> <p><i>"You (have) got a very kaleidoscopic IT world within DUTCH itself which is relatively unmanageable. If you want to outsource that... it really becomes a mess."</i> RP13 (Contract manager from Supplier C)</p> <p><i>"DUTCH is not one customer. DUTCH is a group of customers with their own history.... And these customers do not always concur with what one part of the company has thought and what DUTCH has contracted."</i> RP8 (Contract manager for Supplier C)</p> <p><i>"They did not know how much hardware they had in their data centers. The contract was signed for 120 million over five years and it turns out to be 200 million... Storage is the bigger part of the contract and they miscalculated by an enormous percentage. DUTCH IT merged with Interpolis and because they were going to outsource they did not pay attention to the merger... They thought it is going to happen in the outsourcing and they did not look at the south of Holland. So they did not know their numbers."</i> RP10 (Supplier A Engagement manager)</p> <p><i>"We saw an SLA performance of 50% and Supplier B was saying 'it looks like 50%, but there is this... and this... and this... and they spoke it up to 80%, which is the minimum performance they should achieve."</i> RP7 (Contract manager for Supplier B)</p> <p><i>"We said the performance had to be 80%. We show them the rating and it was 70%... They were always saying to us 70% is not correct... it is actually 85%'... So we are not talking about how we can get the performance to a higher level, but we are talking about the rating."</i> RP9 (Outsourcing operations for Supplier B)</p>
<p>Behavioral uncertainty</p> <p>Predictability of behavior</p>	<p><i>"We did not want one single supplier. We wanted three suppliers because we did not want to lock in on one supplier... So we said 'Let's divide our infrastructure into three parts and have one supplier for data center, one for network and one for office automation... and on each of these parts we tried to see which is our main supplier where we had the best relationship with."</i> RP3 (DUTCH Sector manager on IT operations)</p> <p><i>"Supplier A was already in place because we had already outsourced our mainframe with them. We already had an experience with Supplier A in an outsourcing way of thinking... Supplier B was our connectivity partner... a large part of the network was already in the hands of Supplier B. Thus, we had a large understanding with Supplier B.... So Supplier A very logical, Supplier B logical -while also we did not have any outsourcing experience with them-... Supplier C really to be honest... a bit strange... I am not sure where that came from... I know we did business with them but from my point of view, we did not do business with them on the workstations until then... So that was actually a rather strange decision afterwards... I am not sure who made that decision."</i> RP3 (DUTCH Sector manager on IT operations)</p>

	<p><i>“I believe that they see us as one of their customers... Just a customer because they have bigger customers. So we are one of their customers. That is how it feels.”</i> RP7 (DUTCH Contract manager for Supplier B).</p>
--	--