IT Application Outsourcing in Europe: Long-term Outcomes, Success Factors and Implications for ITO Maturity

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Abstract

Scientists developed maturity models for IT outsourcing (ITO) in the past with the aim to achieve better ITO result with it. But currently, companies and science still own no patent recipe to ensure success with ITO. The dramatic growth of ITO is accompanied by backsourcing of formerly outsourced IT functions or reports about dissatisfaction and problems with ITO. Hence, the effectiveness of existing maturity models is questioned by the author. Both these contrary trends make clear, that first an answer must be found to the fact which factors are really responsible for sustained ITO success, before these factors can be assigned to maturity levels. This paper takes up this research gap and presents the core success factors emerging from an intensive multiple case study analysis of 8 successful application outsourcing cases in 5 European banks and their temporal relevance within the generic ITO process. Implications of these results for an ITO maturity model are discussed.

1. Introduction

Information technology outsourcing (ITO) in this study is defined as the replacement of in-house production of an (IT) activity by the use of third party suppliers from outside the company [9]. ITO started already in the 1960s [20] and increased dramatically. If one looks at the turnover the global ITO market was expected to reach a volume of $ 313. 2 billion USD dollar in 2011, and till 2015 the market should grow yearly about on an average 4.6% [27].

Alongside the still persistently outsourcing trend, backsourcing of previously outsourced activities, which means bringing previously outsourced IT functions back in-house [31], and problems with ITO were reported in recent years [14]. And despite the rich set of experiences companies already made with ITO, the chances of success are seen as at best 50:50 [1] [17].

It has not been possible to evaluate the success of ITO strategically, particularly over the long term, due to a lack of data [10] [21] [22]. Outsourcing and backsourcing - both these contrary trends make an ITO model mandatory and demonstrate the need of identifying critical success factors.

Researchers have noted that reported ITO failures may in fact be due to a lack of understanding of the possible success factors [16]. However, researchers differ regarding factors that distinguish between success and failure [19] and they demand even a specific ITO theory explaining ITO success instead of relying on general management theories which do not fit exactly to the IT sourcing context [18].

A maturity model, like the CMMI-Model for Outsourcing [12], illustrates best practices for the effective outsourcing of software, systems, and IT and guides stepwise process improvement efforts with the aim to achieve business success with better IT products produced by external vendors. To fulfill this claim, these models must guarantee to contain all factors responsible for the success with ITO. Existing ITO maturity models illustrate not all aspects relevant for success as it is shown in chapter 5.

The author took up this research gap and conducted in 2010 a multiple case study of eight successful nearshore and onshore application outsourcing cases in five well-known European banks running already between two und seventeen years. The outcome of the ITOs, the responsible success factors, success factor interdependencies and when the success factors needs to be considered within the ITO process were determined. Based on this data, an ITO model was developed which can aid banks in planning and implementing ITO solutions by guiding them step-by-step through an ITO project that exhibits the core factors relevant for sustained ITO success.

The central findings for researchers and practitioners emerging from this study are:

Finding 1: Outsourcing of applications by banks is successful in the long term.
Finding 2: General and specific factors responsible for sustainable success with application outsourcing in the banking industry exist.

Finding 3: The ITO model aiding banks in planning and implementing application outsourcing solutions by guiding step-by-step through an ITO project comprising general and specific aspects relevant for success.

2. ITO Maturity Models

A maturity model is a method for assessing whether processes used and how they are used, are characteristic for the maturity of an organization [28].

Many maturity models were applied to various fields in the past such as systems security, helpdesk, project management, etc. Most of them refer either to Nolan’s original stage model [24] or to the Software Engineering Institute’s (SEI) Capability Maturity Model (CMM) [12]. In recent years also maturity models for the ITO process emerged, as for example the SEI’s “Capability Maturity Model Integration (CMMI) for Outsourcing” [12] and Raffoul’s “Outsourcing Management Maturity (OMM) Model” [28]. All these maturity models have in common, that they are supposed to guide companies with best practices and process improvement measures to achieve better process results; in case of ITO, to achieve better ITO outcomes.

But can the existing maturity models really govern a company outsourcing IT functions towards outsourcing success, if still no common opinion exists among researcher about the requirements necessary for it? And if the probability of success with ITO is not yet estimated higher than 50:50, what the reports about back sourcing and ITO difficulties prove? The author questions this and claims that first the aspects responsible for sustained ITO success needs to be explored, before these factors can be brought into a maturity order and consequently can be integrated in an ITO maturity model.

Thus, the author identified the basic totality of success relevant aspects for application outsourcing in the banking industry. Chapter 3 explains the applied methodology in detail. And chapter 5 shows that success relevant aspects uncovered in this research are missing in existing ITO maturity models.

3. Methodology

The findings are based on an in-depth, multiple case analysis of eight successful application outsourcing cases in five European banks. Table 1 shows the type of the investigated ITO cases and their overall success rating.

<table>
<thead>
<tr>
<th>Type of application</th>
<th>Contract duration</th>
<th>Years into contract</th>
<th>Financial dependency</th>
<th>Delivery model</th>
<th>Overall success rating*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Banking</td>
<td>Unlimited</td>
<td>~16</td>
<td>External</td>
<td>Onshore</td>
<td>7</td>
</tr>
<tr>
<td>Core Banking</td>
<td>Unlimited</td>
<td>~17</td>
<td>External (equity holding)</td>
<td>Onshore</td>
<td>6</td>
</tr>
<tr>
<td>Rating</td>
<td>5 years, unlimited prolongation</td>
<td>~6,5</td>
<td>Joint Venture</td>
<td>Onshore</td>
<td>7</td>
</tr>
<tr>
<td>CRM</td>
<td>Unlimited</td>
<td>~4,5</td>
<td>External</td>
<td>Onshore</td>
<td>5</td>
</tr>
<tr>
<td>Standard</td>
<td>Unlimited</td>
<td>~4,5</td>
<td>External (equity holding)</td>
<td>Onshore</td>
<td>5</td>
</tr>
<tr>
<td>Core Banking</td>
<td>7 years after prolongation</td>
<td>~14</td>
<td>Internal</td>
<td>Nearshore</td>
<td>7</td>
</tr>
<tr>
<td>Diverse Banking</td>
<td>Unlimited</td>
<td>~2</td>
<td>Internal</td>
<td>Nearshore</td>
<td>7</td>
</tr>
<tr>
<td>Diverse Banking</td>
<td>Unlimited</td>
<td>~7</td>
<td>Internal</td>
<td>Nearshore</td>
<td>5</td>
</tr>
</tbody>
</table>

* According to Dahlberg and Nyrhinen [15] based on a 7 point Likert scale (1: not successful; 7: successful)

The outsourcing of diverse applications was investigated. At the time of investigation, the banks were between 2 and 17 years into contract, the agreed contract duration was unlimited or of a longer term nature. The complete range of organizational forms was covered by these cases. Internal ITO means sourcing from a vendor belonging to the corporate group (e.g. subsidiary company) [13]. In case of a joint-venture, client and vendor found a joint enterprise for the external execution of IT goods and services [12]. External ITO means sourcing from a financially independent vendor [13]. Different delivery models were given. Onshore means a supply of goods and services from inland [23]. In Nearshore outsourcing the IT goods and services are supplied from abroad, with service provision within the own continent [23].

ITO success was measured qualitatively by comparison of the objectives set for ITO versus the objectives achievement by a 7-point-Likert scale according to Dahlberg and Nyrhinen [7]. ITO cases with an overall assessment of satisfaction > 4 (mean value) were classified as successful. Only successful cases were selected (see Table 1).

By application of this measurement model, it is assumed, that ITO is an IT strategy bounded with specified objectives and that the goal of ITO is the achievement of these objectives. IT (internally or externally performed), must be capable enough to support the strategy and goals of the organisation (“business – IT – alignment”). Thus the objectives
bounded with ITO can differ between organisations. The measurement model applied needed to cover organisation specific ITO objectives which were fulfilled by the model of Dahlberg and Nyrhinen [7].

The long contract terms of the majority of the examined ITO cases (see table 1) allow emanating from a certain outsourcing maturity of the banks.

As success is seen as dependent from the kind of IT function outsourced [8] [21], all selected ITO contracts had the same kind of IT function (applications) as a basis to ensure comparability of the research results.

The research focused on the banking industry, because the strategic importance of information systems in banking is widely substantiated [25] [26]. Banks rely heavily on IT as the information infrastructure is the mechanism that enables the organisation to exist; hence this branch can serve as an object of study for addressing questions concerning the longer term evolution of the IT branch in general and ITO in particular.

The banks agreed to participate in this research varied in size from small to large banks with 19,000 m – 360 bn in assets. The business model of the banks ranges from a pure retail orientation to mixed models and pure wholesale orientation. The central business district of the banks is in the following European countries: Germany, Austria, Italy, France, Central and South-Eastern Europe.

Individuals of banks were interviewed who made the ITO decision in the past respectively are currently responsible for the ITO cases for 1, 5 – 3 hours. Participants included general manager, division leader IT, subsidiary leader IT, heads of IT department, and heads of vendor management department. Operational units were integrated by the interview partners. During the interviews, the participants were first asked to tell their outsourcing story and critical success factors. By this approach, the participants could tell what they thought was the essence of the outsourcing case. Then a series of semi-structured questions were asked about the relevance of a structured list of success factors in their case that may have been absent from their previous recollections.

At the end of the interview an open question was asked if additional, not mentioned success factors are to be considered within the scope of the ITO. Thereby new factors, not mentioned in previous studies, emerged.

Basis for the structured list of success factors were a taxonomy [15] [29] which was developed in 2009 based on a systematic literature review of 48 scientific publications dealing with ITO outcomes and influencing factors. The list of references was not added for lack of space in this publication but can be requested by the author. All reviewed publications based their findings at least partly on the investigation of ITO contracts of banks. The analysis of the articles yielded for the most part to the same success and failure factors, thus it can be emanated to have extracted the complete picture of influencing factors responsible for ITO success. The creation of this comprehensive picture of success factors was seen as necessary at that time, as scientists mainly investigated the contribution of one or a few factors to ITO success in previous empirical studies or they concentrated on constituent phases of the ITO process. The success factors were derived by qualitative content analysis, and the success factor descriptions were systematically interpreted, condensed, and marshalled in order to obtain common categories. Finally, 10 categories of ITO success factors were derived: environment, strategy, client capabilities, vendor selection, vendor capabilities, contract, stakeholder management, control, co-work, relationship. The success factor taxonomy constitutes the preliminary “theory” necessary prior to the conduct of a case study according to Yin [33].

Furthermore, for all relevant success factors it was asked in which ITO process phase according to Van Lier and Dohmen [30] the success factor is relevant and if the success factor is “mandatory”, “partly necessary” or “nice to have” to achieve success with ITO.

In addition to the interview data, written documentation was gathered as evidence for the statements in the interview (e.g. ITO contracts, annual reports) In order to ensure precious data, a detailed interview protocol was written by the interviewer and confirmed by the interviewee after the interview.

4. Results

4.1. Finding 1: Outsourcing of applications by banks is successful in the long run.

Banks can sustainably outsource applications in the long run. Eight application outsourcing cases of five well-known European banks were valued as successful (see table 1).

The contract terms of the ITO cases at the time of the investigation amounted: 2, 4.5, 6.5, 7, 14, 16 and 17 years.

Four external ITOs, three internal ITOs and one joint venture were the organisational forms of the examined ITO cases. Different kinds of applications were outsourced: Core banking systems, a rating system, a customer relationship management system, a standard system for accountancy, personnel management and goods economy, and others.
Strategic, economic, technological and social benefits were achieved by these ITOs: reduction of costs, improvement of cost control, and improvement of business support, improvement of the availability and quality of service, focus on core competencies, access to necessary or new technology and skills, etc.

What factors make these ITO cases successful?

4.2. Finding 2: General and specific factors responsible for sustainable success with application outsourcing in the banking industry exist.

40 general success factors were determined. These general success factors were basically relevant in each investigated ITO case.

44 specific success factors were determined. These specific success factors were relevant in case of existence of certain basic conditions. Certain types of ITOs require, for example, certain success factors. In particular the kind of the outsourced IT function, the organizational form of the ITO, the degree of ITO, the delivery model and the type of vendor are triggers for specific success factors. Different ITO objectives have also an influence on the relevancy of certain success factors. Companies who wants to outsource applications is to be recommended to check if these triggers exist in their case requiring the consideration of the specific success factors during the ITO process.

4.3. Finding 3: The ITO model aiding banks in planning and implementing application outsourcing solutions by guiding step-by-step through an ITO project comprising general and specific aspects relevant for ITO success.

This paper presents the core factors responsible for ITO success within the ITO model: the general success factors and main specific success factors per ITO process phase. Appendix A shows the ITO model with its general success factors in the overview. The success factor categories, the success factors in short form and the allocation of the success factors to the relevant phases in the ITO process is shown in figure 1. The ITO process underlying the ITO model contains the following process phases: preparation, selection, contract, transition, and execution, post-deal, according to van Lier and Dohmen [30]. The preparation phase includes all activities to decide whether ITO should be chosen or not and how to organize ITO. In the selection phase, the best internal or external source for the provision of IT goods and services is detected. The contract phase consists of the contract negotiations with the chosen vendor. The actual transition of IT assets and staff and the establishment of related processes will be realized in the transition phase. The execution phase involves the external execution of the IT function by the vendor according to the contract and boosting of additional benefits on both sides. And finally, in the post-deal phase, the client evaluates if the contract will be extended, if the vendor will be switched or if the outsourced IT function will be brought back in-house. The allocation of the success factors to the relevant ITO process phases is done by marking the small box under the respective process phase grey.

Preparation Phase

The support of the high-level management on business and IT side towards the ITO is necessary from the start of the ITO project till the contracting phase to receive a positive decision for the ITO and with it the approval for the completion of the contract and the basic conditions agreed in it as well as to guarantee the necessary technical knowhow for a successful realization of the ITO project.

The nomination of a project manager for the governance of the ITO project from the preparation phase up to the end of the transition to the vendor, and the specification of the accompanying responsibilities, is a mandatory success factor in the beginning. In the preparation phase the nomination of the project manager and the transfer of the competences occur.

In the preparation phase a company considering ITO needs to ensure that it disposes of the mandatory capabilities and skills to carry out an ITO project successfully. These are: business knowledge about the business supported by the outsourced IT function, ITO skills, interpersonal skills, organizational learning capability, the capability to cope flexibly with business changes and the capability to solve operational problems rapidly in a multi vendor environment.

In the preparation phase of the ITO process the type of ITO will be decided what also encloses the choice of the IT subject (IT function) to be outsourced. Vendor management cannot be outsourced. An ITO does not mean the transfer of the full responsibility and work on the vendor, tight governance and control is necessary on the client side to lead the ITO project to success. Furthermore, the ITO strategy must contain the requirement to renegotiate and restructure the ITO contract early in case of dissatisfaction with vendor performance. Should this not lead to the desired improvement, the cancellation of the ITO contract and the possibility to switch to another vendor need to be included in the ITO strategy as well. This helps to avoid a dependency situation from the current vendor.
The documented identification and the management of ITO risks are compulsory for European banks regarding legal regulations. Before the actual ITO, this is necessary for the benefit of a sound motivation of the ITO, to recognize risks early and to put on measures for the benefit of risk decrease from the start. The extent of the risk management is to be chosen depending on the risk content of the ITO.

The employees directly affected by the ITO (employees to be outsourced as well as employees remaining in-house and becoming responsible for the control of the ITO) are to be informed openly and honestly before conversion of the ITO. In particular, a realistic plan of the ITO, the upcoming decisions, the time schedule and the effects on their work are to be communicated. Hence, reliable data must already exist at that time. This requires that vendor evaluations, testing and business case calculations should be done confidentially beforehand. The success factor is therefore relevant from the beginning of the ITO till shortly before completion of the ITO contract.

In the early stages of the ITO (preparation – contracting phase), also the inclusion of relevant business divisions (e.g. human resources, legal department etc.) is to be ensured to consider all relevant aspects and to support a smooth processing of the decision for or against ITO.

**Selected Specific Success factors of the ITO Model in the Preparation Phase**

Aspects like an ITO strategy or ITO objectives are not rated as generally relevant, as a part of the investigated ITO cases faced changes in strategy, business and ITO objectives which did not lead to the completion of the ITO, the fulfillment of the ITO contract was still central.

IT functions which were seen as not possible to outsource in previous studies (IT management, critical systems, highly interconnected functions), were outsourced in the investigated cases.

**Selection Phase**

The project manager steers the project from his nomination and responsibility transference in the preparation phase of the ITO up to the end of the transition to the vendor.

The project manager has to ensure that the vendor disposes of mandatory capabilities and skills enabling him to carry out an ITO project successfully. These are: business knowledge about the client’s industry, IT knowledge about the outsourced IT function, ITO knowledge, interpersonal skills, organizational learning capability, and the capability of a professional staff management in terms of staff quality, capacity, working conditions and allocation, flexibility regarding the implementation of changing client and IT needs, capability of a reliable, professional job completion, financial stability and the capability of a professional cost and financial management, and finally a short response time in case of problems. The fulfillment of legal requirements for outsourced systems is compelling for success during the whole ITO process to maintain the legal capacity of the outsourcing enterprise. Hence, the ability of the vendor to implement these business requirements is to be guaranteed in the vendor selection phase as well.

Different roles needs to be assigned and the responsibilities needs to be transferred in the vendor selection phase: a notably agreed account manager on the vendor side, relationship managers at the client and vendor side and a service level manager at the client side.

Relationship building and management between client and vendor (selection – execution phase) is mandatory for ITO success. The more in partnership the cooperation is, the more intensely relationship management is to be pursued. Generally, a regular and effective communication between client and vendor during the time of cooperation is compelling for success with ITO.

During the course of the vendor selection phase the employees in charge of the ITO project apply the necessary knowledge about the business supported by the outsourced IT function, ITO in general and their interpersonal skills to the advantage of the ITO project.

The commitment of the high level management on the business and IT side, the documented identification and management of ITO risks, the information of employees directly affected by the ITO and the involvement of relevant functional departments is also relevant in the vendor selection phase (see preparation phase).

**Selected Specific Success Factors of the ITO Model in the Selection Phase**

A detailed requirements specification emerged as just relevant in certain cases. It was not accomplished in case of internal ITOs, as necessary service adaptations could also be done after contract conclusion, due to influencing possibilities coming along with the capital interlocking between client and vendor.

**Contract Phase**

It is recommended to anchor the following general contract components in the ITO contract to guarantee long-term success with ITO: Obligation to the conversion of legal business requirements in the outsourced IT function, flexibility terms, communication channels between client and vendor.
(vendors account manager, etc.), a termination clause and the support of the vendor in that case, and control rights for the client and regulatory institutions.

A detailed specification of the service requirements and the linked measures and reports in the ITO contract are not general, but specific success factors, which may be surprising. Under the examined ITO cases, some did not anchor detailed service levels in the ITO contract. Instead, these were developed successively after contract conclusion. These concerned on the one hand internal ITOs by which service adaptations could be done also after contract conclusion as influencing possibilities exist due to the capital interlocking between client and vendor. In another case of an external sourcing of a standard application with low divergences from the standard functionality, the standard contract of the vendor was originally accepted for the benefit of scale advantages. Necessary adaptations of the service requirements were done afterwards. In case of necessity of anchoring the service level requirements in the contracting phase, the service level manager installed in the selection phase is to be involved already in the service level definition.

Before contract conclusion, external advice is to be engaged in the contracting phase, depending on the experience and missing knowledge of the outsourcing enterprise (legal and technical experts, chartered accountants, tax advisers, etc.).

The following success factors mentioned in the preparation and selection phase are also relevant in the contracting phase: a project manager steering the ITO project, the commitment of the high level management on the business and IT side, the application of business, ITO and interpersonal skills at the client side, a clear and effective communication between client and vendor, relationship building and management, the documented identification and management of ITO risks, the information of employees directly affected by the ITO and the involvement of relevant functional departments.

**Selected Specific Success Factors of the ITO Model in the Contract Phase**

The contractual fixation of regular renegotiation possibilities was not relevant in each case. Partly no profit achievement intention (e.g. internal ITO, joint venture) existed; only the costs were passed on to the clients. In another case, an external ITO to a vendor operating only within a banking group was given. In all of these cases prices are not negotiated.

**Transition Phase**

The regular and strict control of the vendor in the transition and execution phase concerning the fulfillment of the ITO contract (SLAs, etc.) is compelling for the achievement of ITO success. This is to be done on the basis of a procedure to measure tangible and intangible expectations over a long timescale. In particular with the help of the SLA reports it is recognizable, if a debasement of the vendor performance occurs. Thus the opportunity exists on taking measures early. From the start of the external execution in the transition phase the service level manager acts as a receiver for the agreed service level reports and exercises the regular control of the vendor performance. It appeared that a strict control becomes even more important in case of cultural differences.

A regular reporting of the vendor performance to the management level of the client is necessary in particular in case of insufficient vendor performance. This requires the communication between client and vendor on management levels to positively influence vendor behavior modification. Partially the management reporting is limited to failure situations with which the general monitoring responsibility is delegated at employee’s level.

When using a sourcing network and consequently with availability of several disturbance sources a quick problem solution at the client side is compelling in the transition and execution phase of the ITO process, regardless how it is organized.

The communication channels agreed in the ITO contract, in particular the vendor account manager, are to be used during the external execution which positively influences a common understanding and which prevents vendor opportunism and negative consequences of legal loopholes.

And in order to positively influence a successful external production of IT goods and services, knowledge transferring and sharing between client and vendor is to be promoted actively from the start. Vendors should share the necessary knowledge for using the outsourced IT function. Clients should share their business knowledge for improving the vendor’s understanding of business requirements. The application of organizational learning capability on the client and vendor side positively influences effective knowledge sharing.

Furthermore, the client needs to ensure the acceptance of the vendor in his organization during the external execution of the outsourced IT function.

The following success factors mentioned in the preparation, selection and contracting phase are also relevant in the transition and execution phase: the application of business, ITO and interpersonal skills at the client side, a clear and effective communication between client and vendor, relationship building and management. Risk assessment and risk management contains in the transition phase mainly the monitoring of the ITO risks. And the commitment of the high level
management on the business and IT side refers on the co-carrying of the ITO consequences (e.g. software changes only within agreed release cycles), relationship management at management level and acting as a level of escalation in case of performance disputes.

**Selected Specific Success Factors of the ITO Model in the Transition Phase**

Success factors could be determined which are only connected with the organizational form of a joint-venture: working packages in responsibility of the companions; "top balance" between the companions; Neutral body for mediation; Recruitment of the society employees from the market.

**Execution Phase**

All mentioned success factors of the transition phase are also relevant in the execution phase.

In addition, the client is recommended to settle payments to the vendor on schedule in case of satisfaction with vendor performance.

And, the client must cope flexibly with changes of business requirements for the benefit of a permanent and adequate business support. Thereby change project management practices ensuring quality is compelling for ITO success. In particular, the following abilities matter: Re-planning of change projects, management of project risks and construction of an efficient project organization in terms of few involved people at the client and vendor side.

**Post-deal Phase**

The main success factor in the post-deal phase is risk assessment and management in terms of the evaluation whether the ITO basically and/or with the current vendor is continued or not. Therefore, the client capabilities, the experiences gained and the people involved in the ITO project needs to be leveraged.

**5. Implications for ITO Maturity Models**

By comparison of the success factors uncovered within the ITO model with best practices described in ITO maturity models it becomes obvious that success relevant aspects are missing in the maturity models. In the following, the different success aspects of the ITO model are explained. Table 2 gives an overview about these and marks with "Yes" or "No" whether these aspects are included in the ITO maturity models CMMI [12] and OMM [28].

If one looks at the types of success factors illustrated in the ITO model it becomes clear that different kinds of success factors exist. Some success factors are duties to be carried out during the ITO process (e.g. the definition and contractual fixation of service levels, measures and reports).

Then there are two big blocks with necessary capabilities on client and vendor side (e.g. ITO knowledge, flexibility, interpersonal skills). Furthermore necessary behavior patterns are included like effective communication and relationship building and management. Furthermore necessary behavior patterns are included like effective communication and relationship building and management.

### Table 2. Success aspects of the ITO model in ITO maturity models

<table>
<thead>
<tr>
<th>Types of Success factors</th>
<th>ITO Model</th>
<th>CMMI</th>
<th>OMM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duties and responsibilities</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Capabilities</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Behaviour patterns</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Basic conditions</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Organisational aspects</td>
<td>Yes</td>
<td>(Yes)</td>
<td>(Yes)</td>
</tr>
<tr>
<td>Decision aspects</td>
<td>Yes</td>
<td>(Yes)</td>
<td>No</td>
</tr>
<tr>
<td>Use cases</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Temporal relevance</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>ITO process</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Dependencies</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Banking specifics</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Also internal and external basic conditions like corporate culture, corporate terms and an existing vendor market are success relevant. Success factors related to the organizational and operational structures are also stated (e.g. certain roles and responsibilities, change project organization). Finally, success factors are included which refer to the decision for or against ITO, i.e. recommendations for which type of ITO to chose or not. The ITO model contains also banking specific success factors, i.e. conditions for the compliance with regulatory requirements. Not all of these types of success factors are part of the ITO maturity models CMMI [12] and OMM [28] as indicated in table 2. The maturity models seem to be primarily duty oriented, in the sense of which tasks to perform and when during the ITO process (e.g. definition of service levels, measures and reports). The CMMI model [12] defines in addition typical work products resulting from the tasks. The ITO model shows that not only duties but also other aspects are success relevant, which is partly missing in the ITO maturity models. The necessary capabilities of client and vendor and the consideration of internal and external basic conditions are missing in the ITO maturity models. The organizational and decisional aspects are just partly considered. For example, the ITO maturity models describe that roles and responsibilities needs to be defined, but do not state which roles (e.g. service level manager) are necessary to achieve ITO success. Or, the process for decision
finding is described, but no decision recommendations are given regarding the choice of the type of ITO.

The ITO model determines for each success factor the point or period of time when it needs to be considered within the ITO process phases preparation, selection, contract, transition, execution, post-deal. This is also missing in ITO maturity models.

In addition, the ITO model makes clear, that not all success factors are relevant in each ITO case. General and specific success factors exist (see finding 2). The success factor use cases are also absent in the ITO maturity models.

The ITO model also contains dependencies between success factors. The explanation of success factor interdependencies could be found in the CMMI model [12] but not in the OMM model [28].

In order that the ITO maturity models can fulfill their purpose, which is to illustrate best practices leading to better ITO results, it is necessary that all aspects relevant for success find consideration there.

The empirically validated core success factors of the ITO model show the basic totality of the factors responsible for success with application outsourcing in the banking industry which can serve as the basis for the development of a success-effective ITO maturity model for banks in future.

Hereby questions needs to be answered like: Must the success factors be assigned to a certain maturity level or does each success factor go through every maturity level and is optimised thereby? SEI’s “CMMI for Outsourcing” [12] consists of six core competence process areas of successful acquirers. Each process area is assigned to a single maturity level. Whereas just maturity level 1-3 was occupied, level 4-5 were not described until now. In Raffoul’s OMM model [28] both variations appear. Some qualifiers for ITO success were assigned to a single maturity level; others are further developed in each maturity level. If each success factor is assigned to a single maturity level, how to decide about the appropriate level? Another question to answer will be how many maturity levels make sense?

The enhancement of existing ITO maturity models is to be recommended basically, because they help enterprises to bring orientation and weighting in the huge number of success relevant aspects, to allow enterprises to recognize and follow the basic conditions without those an ITO would not function successfully and to develop step by step in the direction of ITO process excellence.

6. Conclusion

This case study research of 8 application ITO cases in 5 European banks clarifies that applications can be successfully operated externally by IT vendors in the long term.

It became evident that success factors exist which are basically relevant for all examined ITO cases (general success factors). The relevancy of the other part of the success factors depended on the existence of different basic conditions as for example from the organizational form of the ITO (specific success factors). New success factors could be determined tied to the organizational form of a joint venture.

The core factors responsible for sustained ITO success are: No outsourcing of vendor management; Client capabilities (business and ITO knowledge, flexibility, problem management, etc.); Vendor capabilities (IT and ITO knowledge, staff management in terms of quality, capacity, working conditions and allocation, flexibility, financial stability, etc.); Contract clauses (flexibility terms, communication channels, contract review by external experts, etc.); Stakeholder involvement (high level business and IT management, staff affected from ITO, functional departments); Roles and responsibilities (project manager, account manager, relationship managers, service level manager); Regular monitoring and reporting of vendor performance; Vendor payment on time in case of satisfaction; Effective communication and knowledge transferring and sharing; Good change project management; Risk assessment and risk management; Relationship building and management; Renegotiation and restructuring of critical ITO contracts before vendor switching; Regulatory compliance regarding ITO in general and outsourced applications in particular.

For each success factors the temporal relevance within the ITO process was determined. This paper presents the core factors responsible for ITO success within the ITO model: general and main specific success factors per ITO process phase.

These success factors can serve as the basic totality of success relevant aspects for the development of an ITO maturity model in future.

7. Limitations

This study has focused on the investigation of application outsourcing by European banks. Banks of different sizes (19,000 m – 360 bn assets) and with different business models (retail, mixed, wholesale) participated in this research. Also the complete range of organisational forms (internal ITO, joint venture, and external ITO) and ITO degrees (partly and full ITOs) was covered. The preliminary ITO theory underlying this study was constructed based on a review of 48 empirical studies about ITO in banks worldwide. Hence, the ITO model can be generalised.
for application outsourcing by banks. The applicability of the ITO model for all types of organisations and IT functions requires its test for other types of IT functions (infrastructure, business processes) and for other branches. The investigation of the ITO model with ITO cases from other areas supports the development of an ITO theory.

8. References


### Appendix A: ITO Model (extract): General success factors within the ITO process

<table>
<thead>
<tr>
<th>Success Factor Category</th>
<th>Success Factor</th>
<th>Outsourcing Process Phases</th>
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<tbody>
<tr>
<td></td>
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<td>Preparation</td>
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<td>Selection</td>
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<td>Execution</td>
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<td>Post-Deal</td>
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<td>Environment</td>
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<tr>
<td>Strategy</td>
<td>IT functions: vendor management</td>
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<td></td>
<td>Renegotiation and restructuring of ITO contract / Vendor switching</td>
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<tr>
<td>Client Capability</td>
<td>Business knowledge</td>
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<tr>
<td>Vendor Capability</td>
<td>IT knowledge (in particular about the IT function to be outsourced)</td>
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<td>ITO knowledge</td>
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<td>Interpersonal skills</td>
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<td>Organisational learning capability</td>
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<td>Staff management: quality, capacity, working conditions, allocation</td>
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<td></td>
<td>Flexibility with changing client and IT needs</td>
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<td>Reliable, professional job completion</td>
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<td>Financial stability / Cost and financial management</td>
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<td>Short response time in case of problems</td>
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<tr>
<td>Contract</td>
<td>Contract: Flexibility terms</td>
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<td>Contract: Communication channels</td>
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<td>Contract: Termination clause</td>
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<td>Contract: Control rights</td>
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<td>Contract review</td>
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<td>Stakeholder Management</td>
<td>Stakeholder involvement: High-level management</td>
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<td>Stakeholder involvement: Staff affected from ITO</td>
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<td>Stakeholder involvement: Functional departments</td>
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<td>Roles and responsibilities: Relationship manager</td>
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<td>Roles and responsibilities: Service level manager</td>
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<td>Control</td>
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<td>Vendor payment</td>
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<td>Vendor performance reporting</td>
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<td>Risk assessment and risk management</td>
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<td>Co-work</td>
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<td>Knowledge transferring and sharing</td>
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<td>Change project management</td>
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<td>Relationship Management</td>
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