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Oliver Marschollek

Goethe University Frankfurt, marschollek@wiwi.uni-frankfurt.de

Roman Beck

Goethe University Frankfurt, beck@itu.dk

Robert Gregory

Goethe University Frankfurt, RWGregory@iese.edu

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PSYCHOLOGICAL CONTRACT VIOLATION IN IT MEGAPROJECTS IN THE CONTEXT OF PUBLIC PRIVATE PARTNERSHIPS – THE GERMAN TOLLCOLLECT CASE

Marschollek, Oliver, Johann Wolfgang Goethe University, Grüneburgplatz 1, 60323 Frankfurt, Germany, marschollek@wiwi.uni-frankfurt.de

Beck, Roman, Johann Wolfgang Goethe University, Grüneburgplatz 1, 60323 Frankfurt, Germany, rbeck@wiwi.uni-frankfurt.de

Gregory, Robert, Johann Wolfgang Goethe University, Grüneburgplatz 1, 60323 Frankfurt, Germany, gregory@wiwi.uni-frankfurt.de

Abstract

Prior research in the context of public private partnerships has mainly focused on organizational and risk management aspects. Because there is a growing number of IT megaprojects in the context of public private partnerships, recent work concentrates on the explanation of the relationship between public and private partners and the success factors for these relations. However, we still have a lack of understanding on the causes and consequences for IT megaproject failure in the context of public private partnerships. In this exploratory, qualitative single-case study from the German TollCollect IT megaproject we draw on findings from the psychological contract theory to explain psychological contract violation as a threat to IT megaproject success. Our research model suggests that the management of common understanding and expectations, moderated by political and public pressure of a public-private environment, affects the stability of the psychological contract and therefore the success of an IT megaproject in the context of public private partnerships.

Keywords: Psychological Contract, Public Private Partnerships, IT Megaprojects

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1 INTRODUCTION

Information technology (IT) investments and its effective management is not a core competency of public authorities. Public private partnership (PPP) as form of collaboration is becoming increasingly popular for sourcing of IT services from specialized providers (Hodge & Greve 2007). This form of cooperation is often used for the realization of megaprojects which are multibillion-dollar, civil engineering projects that are characterized as complex, and politically-sensitive involving a large number of partners (Davies & Gann & Douglas 2009, Flyvbjerg & Bruzelius & Rothengatter 2005). Nowadays, PPPs are gaining importance in IT megaprojects as well since increasingly public infrastructure projects are large joint IT projects between public and private partners rather than brick and mortar infrastructure projects as in the past (Brooks 1987, Venugopal 2005). The PPP context adds to the complexity of IT megaprojects and makes them even more susceptible to failure than small or large IT projects (Flyvbjerg et al. 2005, Nelson 2007). Although the amount of research on failure of IT projects (Kappelman & McKeeman & Zhang 2006) and the context of PPPs is increasing (e.g., Jost & Dawson & Shaw 2005), we still have a lack of understanding on the reasons for IT megaproject failure in this context. PPP research has mainly concentrated on organizational aspects (Reijniers 1994) in infrastructure projects like collaboration governance (e.g., Clifton & Duffield 2006, Sharma 2007), and risk management approaches (e.g., Bing & Akintoye & Edwards & Hardcastle 2005, Ng & Loosemore 2007). More recent work concentrates on the explanation of the relationship between public and private partners (Smyth & Edkins 2007) and success factors for these relations (Jacobsen & Choi 2008, Jost et al. 2005). Due to an increasing amount of public-private cooperations and ongoing difficulties during their realization the main focus of prior research encountering an external view (Flyvbjerg et al. 2005) on project performance, budget and on-time delivery needs to be extended. Hence, current research underlines the necessity of an internally-focused view of actual practices in the light of project design and culture (van Marrewijk & Clegg & Pitsis & Veenswijk 2008).

Therefore, our exploratory, qualitative single-case study of the German TollCollect case focused on the reasons for IT megaproject failure in the context of PPPs, as already discussed in Beck and Möbs (2006). TollCollect was the single-largest PPP project ever carried out in Germany and also the largest IT development project in Europe in the years from 2002 to 2005 with more than €3 billion revenue streams per year and €2 billion cost for development and installation of the system. The goal of TollCollect was to construct the first satellite-based electronic toll collecting system for heavy trucks. In spite of the initial failure of the TollCollect project, caused by breakdown of cooperation between public and private parties, the failing course of action of the project was turned around and implemented successfully with a significant delay of eighteen months. Hence, this case offered an interesting opportunity to answer the following research question: “What are the reasons for failure in IT megaprojects in the context of PPPs?”

The remainder of this paper is structured as follows. The following section contains the theoretical foundations for the study. The next section presents our selected research methodology, consisting of an interpretive case study employing the grounded theory method (GTM). After a brief introduction to the case, we present the emerged theoretical model of psychological contract violation in the context of IT-PPP-megaprojects and explain in detail how it emerged from our theory-building case study. The final section of the paper presents the theoretical and practical contributions and provides directions for future research.

2 THEORETICAL BACKGROUND

Since the 1990s, governmental organizations striving for operational efficiency and effectiveness started to enter into technological alliances with private partners focusing on innovative IT solutions (Reijniers 1994). PPPs are based on formal contracts which provide the legal framework for

cooperation. However, formal contracts are not able to cover every possible risk scenario. Therefore, successful public-private collaboration comprises more than designing an explicit contract and dealing with legal restrictions. It is also about managing the informal aspects of the relationship, like e.g. mutual trust (Grimsey & Lewis 2002). Prior research on project management has already confirmed that informal aspects like e.g. vested interests or cultural differences can cause tensions within a project finally leading to project failure (Shore 2008, Yeo 2002). Hence, underpinning divergences between the parties in a PPP like divergent expectations and interests which are anchored in their different cultural backgrounds are obstacles for the establishment of a successful partnership (Reijniers 1994). Furthermore, collaboration between public and private parties necessitates a merger of divergent political and financial goals as well as perceptions of management approaches. Considering the necessity of an informal contract for enabling a successful partnership, the psychological contract theory can be an adequate lens for analyzing the reasons for project failure. The psychological contract refers to the fulfilment of an individual's mental beliefs and expectations about the mutual obligations in a relationship, based on promises of reciprocal exchange and mutual trust. At the core of the theory lies the idea of establishing mutual understanding. Meeting mutual expectations and understandings level the way for the development of trust. Trust is the psychological state in which an individual accepts the vulnerability relying on positive expectations of the intentions of others concerning their behaviour (Rousseau & Sitkin & Burt & Camerer 1998). Dissatisfying mutual expectations leads immediately to the violation of the psychological contract which manifests itself in feelings of betrayal and frustration (Rousseau 1989). The psychological contract violation may even cause the termination of the formal contract. Rousseau's concept (1989) of the psychological contract is based on an individual level of analysis. Prior information systems (IS) research studies already have used individual psychological contract theory for analyzing psychological contract violation based on perceptions of treatment in buyer-seller online transactions (Pavlou & Gefen 2005) or organizational psychological contract theory analyzing the fulfilment of mutual obligations in inter-organizational customer-supplier IT outsourcing relationships (Koh & Ang & Straub 2004). Therefore, building upon prior IS research, we analyze psychological contract phenomena at the organizational level integrating the views of both, the private and public side, concerning the impact on project realization. Our core categories, psychological contract violation as well as divergent understanding and expectations, all emerged from our analysis following GTM which we explain in more detail in the following section.

3 METHODS

Reasons for failure in IT megaprojects in the context of PPPs are currently not explored sufficiently. Hence, we conducted an exploratory, interpretive, qualitative case study (Walsham 1995a, Walsham 1995b, Yin 2003) of the German TollCollect case using a grounded theory approach which is predestined for under-researched areas. Furthermore, grounded theory can be used for discovering deep insights and understanding of the underlying structures and the context of phenomena (Hughes & Jones 2003). We gained access to this revelatory case by invitation of one of the leading corporations responsible for the development of TollCollect. Our initial research objectives, when entering the field, were exploratory and revolved around the main goal of understanding failure in IT-PPP-megaprojects without any preconceived concepts or frameworks in mind. Following GTM (Glaser 1978, Glaser & Strauss 1967), the extant literature solely served as guide or sensitizing device for constant comparisons to support the sensitization and conceptualization process. Our initial data collection and analysis steps focused on open coding as well as identifying discrete concepts and categories. Over time, we reached a point of theoretical saturation in the sampling process (Eisenhardt 1989) and started to integrate our findings to work out the substantive theoretical contribution (Glaser 1978). Our data collection and analysis efforts were deeply intertwined with each other, which is the reason why we present the details jointly in the following.

Our primary sources of data are 12 qualitative expert interviews, lasting from 52 minutes to 3 hours and 45 minutes each. Interviewees were carefully selected according to their role in the project, their

position in the hierarchy, and affiliation to the project's stakeholders. The first semi-structured interviews were held in an open-ended fashion and were conducted in May 2006. Following the GTM technique 'theoretical sampling' these initial interviews were immediately coded and analyzed to guide subsequent data collection and analysis efforts. Over time, the core categories started to emerge from the data and our analytical efforts became more focused. The last semi-structured interviews with a more specific focus on the core themes were conducted in June 2007. All interviews were tape-recorded and transcribed which resulted in 1003 recorded audio minutes and 246 pages of transcriptions. Secondary material was also collected and analyzed to enable further comparisons and triangulation of findings. Secondary data included, but was not limited to, an extensive documentation of the case provided by the project's stakeholders. This documentation described the project's course of action and the historical development of toll collection on German highways. In addition, a secondary data analysis of press articles that appeared during the time period of the project was conducted for triangulation purposes. Besides the above mentioned data triangulation techniques, emphasis was also given to investigator triangulation, meaning that we conducted the analysis in a group of multiple researchers. For coding purposes, the software Atlas.ti (Muhr 2008) was used. The first analysis phase of open coding generated a list of approximately 330 descriptive and partly overlapping codes. Triangulation and conceptualization efforts (following the constant comparative method) led to the consolidation of the codes to a list of four categories and ten codes, comparing the data according to similarities and differences and assigning multiple data incidents to a common meaning.

Initial analysis results were already generated in the second half of 2007. As the analysis was intensified, especially during the first half of 2009, the core categories emerged from the data. For example, 'breakdown of cooperation' was conceptualized from thereon as 'psychological contract violation' as the researchers identified a good fit between the emerging themes and the psychological contract perspective, iteratively comparing theory with data. As the extant literature only served as sensitizing device and additional slice of data to be compared with, new concepts also emerged concerning the context of PPPs (i.e., political and public pressure). In our final data analysis steps, we concentrated on integrating our theoretical findings and analyzing the relationships between the identified categories and concepts. The result of our research is a model of psychological contract violation in IT megaprojects in the context of PPPs.

4 THE GERMAN TOLLCOLLECT CASE

The German IT megaproject TollCollect (www.tollcollect.de) had the ambitious goal to design and develop the first satellite-based toll collecting system in the world. The project was carried out in cooperation between public and private partners and eventually was finished on January 1st, 2005. After a long and problematic tendering procedure beginning in December 1999, the German Federal Ministry of Transport engaged the private companies Deutsche Telekom, DaimlerChrysler Financial Services and the French freeway operator Cofiroute as the executing syndicate TollCollect in September 2002. The service contract between the two parties included the development of a modern, innovative technology using the global system for mobile communications (GSM) standard and the satellite global positioning system (GPS). The system should automatically detect and charge the use of a defined roadway system via satellite depending on the emission class, weight, and number of axles of a truck. In addition, a manual, terminal-based booking functionality was required. The on-board-unit (OBU) which is a fat client for collecting traffic data records as well as sending the mileage data accumulated to the central TollCollect accounting system using GSM had to be installed within each truck for using the automatic booking system. Over 600,000 OBUs were installed into European trucks with software that had to be updated via GSM. Furthermore for enforcing the toll fee, 300 enforcement bridges overarching the autobahn had to be built and connected to a central control facility for an effective control instrument. These bridges are equipped with cameras and scales embedded into the autobahn for a visual control of the trucks, weight control, and for counting the

number of axles. If a truck is not logged into the TollCollect system then an automatic check against the German license plate register (or registers from other European countries) is made to identify the owner of the truck and to send a ticket. As often when ‘innovation-on-demand’ is ordered, the completion was delayed several times due to political, managerial, and technical problems. Although TollCollect was nearly on the verge of becoming a failure, the public and private parties managed to turn around the failing course of action and finally succeeded in implementing the toll collecting system (Rehring 2006). Emerging as core themes from our analysis, psychological contract violation between public and private parties was driven by a divergent understanding and divergent expectations. The following section will present in detail the findings from our case analysis.

5 CASE ANALYSIS

TollCollect was already a famous case for difficulties which can occur in PPPs when we entered the project. Consequently, we focused from the very beginning of our research on the barriers and hindering reasons in IT-PPP-megaprojects. The core category which emerged from our analysis was the psychological contract violation which explains the situation within the project coping with divergent understandings and expectations of e.g. project goals and management approaches. These divergences between public and private environments and the difficulties of merging the different perceptions of the parties led to breakdown of cooperation by psychological contract violation. According to Glaser (1978), the core category as well as the causes and consequences need to be carefully analyzed. On this account, in the following subsections the antecedents and the consequences of psychological contract violation in the TollCollect case are presented and the emerged model is explained.

5.1 Divergent Understanding as Antecedent of the Psychological Contract Violation

The first set of concepts that emerged from our analysis relate to the theme of ‘divergent understanding’, consisting of divergent goals and knowledge concerning political constraints and business procedures. The partnership working on the realization of the German toll collecting system consisted of the German Federal Ministry of Transport on the public side and Deutsche Telekom as well as DaimlerChrysler Financial Services amongst others on the private side. Both parties entered into the project with divergent goals of the joint undertaking. The public side focused on opening up new fiscal incomes and implementing a market-based pricing and control system for the use of the German autobahn, as a leading manager from the public side mentioned:

“The goal of the implementation of a toll collecting system was not only distance-oriented fiscal charging. Besides, we had the vision of a market-based controlling for using the German autobahn.”

On the other hand, the private parties pursued additional goals that were divergent to the overarching goals of the public side, but also inconsistent within the private syndicate. For example, a representative from the private side stated:

“Deutsche Telekom considered entering the tendering procedure for this project because of expanding their telematics market share.”

Interview results with DaimlerChrysler showed that their main goal was the innovation of new value-added services and their implementation into automobiles. The divergent goals were one of the basic drivers of psychological contract violation because they led to a lack of common understanding which is a crucial precondition for the fulfilment of mutual obligations and the maintenance of mutual trust (Rousseau 2004).

‘Political constraints’ were another reason for ‘divergent understanding’. Due to a lack of know-how on the management of IT-PPP-megaprojects, the public party was dependent on the support of TollCollect for realizing their ambitious vision. However, the public party had to adhere to certain

political constraints making compromises with TollCollect almost impossible. For example, compromises on project requirements during the negotiation phase could have led to the accusation of distortion of competition from other bidders or a European public authority, which was experienced by a leading manager of TollCollect:

“The initial negotiations directly showed us that the public party would not make any concessions according to procedural reasons because they were afraid of accusation of distortion of competition.”

From TollCollect’s viewpoint, the behaviour of the public party was not understandable because they were not familiar with the political environment. The persistence of the public party and the missing understanding of the private party exacerbated the development of a mutual understanding. After the initial failure of the project, a leading manager from the public side stated:

“The private partners did not understand that ignoring the existing political constraints directly could have led to project termination because of non-discrimination issues.”

The third concept within the category of ‘divergent understanding’ that emerged from our data is ‘different perceptions on management approaches’ which we conceptualized as ‘business knowledge’. As a result of the political constraints, the rigid specifications did not provide enough flexibility for the private syndicate to deliver the demanded innovation instantly. Although there were ways of optimizing the technical solution, the public partner did not understand these alternatives because of lacking business knowledge. In addition, while some requirements were not negotiable, others were changed by the public partner not understanding the upcoming organizational difficulties, as the public side later acknowledged:

“(the necessity for)...freezing requirement specifications for the realization of an IT project and its meaning were not apparent to us.”

This lack of business knowledge on the public side increased the communication difficulties between the partners. After the public party realized that the technical complexity of the IT solution could not be handled in time, divergent understandings escalated leading to withdrawal of commitment to cooperate from both parties. This obvious sign of psychological contract violation was explained by the new management team after project turnaround as follows:

“The initial goal was the realization of a 100 % solution. However, after it became clear to the parties that this aspired innovation-on-demand was impossible, one party insisted on the restrictions and specifications and the other side was unable to deliver.”

The foundations of mutual understanding are based on a common set of beliefs on reciprocal obligations within a relationship (Rousseau 2003). As a consequence of the divergent backgrounds within the PPP, mutual understanding was restrained because the private party did not comprehend the motivation for certain actions of the public side. Therefore, divergent goals, the misunderstanding of political constraints of the private party, and the lack of business knowledge of the public party contributed to psychological contract violation.

5.2 Divergent Expectations as Antecedent of the Psychological Contract Violation

A further important antecedent of psychological contract violation that emerged from our analysis was ‘divergent expectations’ consisting of ‘false promises’, ‘communication failure’ and ‘expectations change’ which is explained in the following. Triggered by the need to make a proposal to accomplish a low-priced solution and at the same time focused on getting this innovative, well-paid assignment, the different competitors were forced to underbid each other. Nevertheless, they knew that the offered possibility could lead to problems. The promises from TollCollect did not reveal the actual feasibility of the project, as a system auditor said:

“The greed of the private parties to get the project assignment and outrivaling their competitors led to promises which they knew were predetermined to fail.”

Simultaneously, the public partner was politically restricted by law to choose the cheapest provider. Quality criteria or additional services were not decisive for the tendering procedure. The pressure to be the cheapest provider fostered false promises as a leading manager on the private side revealed:

“Since the public client is bound by law to choose the cheapest provider, the possibility of project delay, low quality and cost overrun is very high since bidders are virtually forced to promise the impossible.”

Ambitious initial promises made by the winning bidder led to unrealistic expectations. Mutual obligations of a psychological contract are defined by uttered promises (Robinson & Kraatz & Rousseau 1994). Insisting on these promises while knowing that they might be unrealistic contributed to psychological contract violation when the public side realized that the syndicate could not fulfil them. In addition, communication failures were contributing to the gap between promises made and expectations fulfilled. As a result of a functional tender, the requirements of the technical solution were vaguely formulated to leave room for different approaches. However, this also created ambiguities, as a manager from TollCollect openly criticized:

“Because the public side did not openly communicate their vision, we were not able to provide the necessary services.”

Furthermore, legal difficulties during the tendering procedure led to project start postponement. Due to a fixed delivery deadline, the available time for TollCollect to deliver melted away. Therefore, explicit and open communication of the expectations would have been instrumental for expectation fulfilment. However, the public party did not realize that their active cooperation was necessary for in-time realization, as an industry manager remarked:

“The sponsor often does not explicitly articulate his vision. However, if the outcome then does not correspond with his evolving ideas, he will refuse project acceptance.”

During the phase of project realization, the public party adapted and specified their vision of the IT solution. Hence, the matching of initial promises with evolving expectations became impossible. According to psychological contract theory, unfulfilled expectations that build upon initial promises are a major reason for violating the psychological contract (Robinson & Rousseau 1994). As a result of a learning process about feasible strategic options, the public party developed new ideas concerning the specification of the solution resulting in the change of initial expectations. Since the development of the project was progressing, the change of specifications implied that already realized components had to be adapted, as a leading manager on the private side explained:

“Accompanying project realization, requirements specification became more refined and detailed from the public side. However, this meant that actual developments of the technical solution needed to be changed permanently.”

While the rollout and starting deadline stayed unchanged, the unplanned adaptations subsequently induced further workloads resulting in even more delays. The steady change of requirements was a major effect for drifting apart of initial promises and expectations which was underlined from leading managers of the private side:

“Coming closer to project start with a public client is always difficult because the client initially is often not aware about the target structure of project requirements. Therefore, IT megaprojects are often exposed to moving targets.”

Besides the observed missing communication of the expectations, bridging the divide between initial promises and final expectations became even more difficult due to constant requirement changes. Since a psychological contract is based on perceived reciprocal obligations, a not communicated change of expectations of one party consequently affects the contract stability because of a higher possibility of expectations' non-fulfilment (Rousseau 2003).

5.3 The Moderating Role of Pressure

The moderating variables that emerged from the data are pressure from political as well as public side. These variables are unique to the context of IT-PPP-megaprojects because of the influence of politicians being project sponsors and the visibility of the project in the media. The first moderating variable therefore is 'political pressure'. Because of upcoming elections, the politicians in charge were eager to implement the toll collecting system on time. Furthermore, this innovation was planned to improve the German federal fiscal budget and therefore already was part of the following German fiscal year's budget, as one of the leading managers of TollCollect mentioned:

"The political motivation was not only to improve the next fiscal year's budget, but also was driven by upcoming elections which increased the political pressure on in-time project realization."

In addition to fiscal and political reasons, the politicians in charge mostly feared project failure because of the possible damage of reputation which one of the system auditors stated:

"PPPs must not be a flop or a failure because otherwise the politicians in charge are ruined or embarrassed."

The pressure which was laid on project realization increased the effect of divergent understanding on psychological contract violation. The communication between public and private parties worsened and became even more difficult due to upcoming elections because the different parties refused trying to understand each other persisting on their single point of view. In the light of an already disturbed relationship, the resulting non-communication behaviour intensified and reinforced the divergent expectations leading to an even wider gap between the two parties. Besides political pressure, a rising interest of the public media also intensified the pressure on the TollCollect project. This 'public pressure' is the second moderating variable. From our secondary data analysis, involving 2323 press articles from January 2002 to July 2006 about the TollCollect case, one can observe that the peak of daily articles appeared between autumn 2003 and spring 2004 which is the phase of the project when cooperation breakdown was noticed. Most articles were based on speculations rather than facts, as noticed by a leading manager of the syndicate:

"...(what was) significantly influencing project realization and the partnership was the - primarily on guesswork founded - news coverage and the public interpretation of project internal developments."

Achieving the first automatic, satellite-based toll collecting system in a short period of time already was an ambitious goal. However, adding non-discriminating demands and value-adding services to the project raised the level of complexity even higher. In addition, not only the media used the turbulences within the project for cover stories, but also the opposing parties in parliament used TollCollect for their election campaigns, as a leading manager of the private side mentioned:

"The false news coverage was politically motivated by election campaigns and quarrelling of opposing parties."

Public pressure troubled the basis for mutual understanding. Furthermore, constant observation of the media left no leeway to manoeuvre for the responsible stakeholders on public and private side to renegotiate their psychological contracts and adapt their divergent expectations. This affected matching initial promises and expectations because the politicians thought that the private party would not keep their word.

5.4 Psychological Contract Violation and its Consequences

As result of the unmet promises and obligations, the public side perceived the violation of the psychological contract. The widening gap between expectations and their fulfilment caused 'frustrations'. This was recognized by a leading manager of the private syndicate after project turnaround:

“The private syndicate did not understand the political constraints. Therefore, the public party was becoming frustrated and refusing further compromises.”

These frustrations of the public side were triggered by a perceived mismatch of initial goals and evolving expectations, as well as an increasing divide between managerial feasibility and political constraints. In addition, outside interference through political and public pressure intensified these feelings. The initial frustrations culminated into massive ‘trust decline’. Not meeting several delivery deadlines and then requesting for deadline extension intensified the dissatisfaction of the public party. The public side accused the private side of not telling the truth about project status and that they were concealing problems. After the management had been replaced, finally the problems concerning mutual trust were recognized by the private party:

“The underlying mutual trust between TollCollect and the politicians was ultimately destroyed. At that point of time the media were proclaiming the failure of the project and interpreting it as a symbol for the downfall of Germany in the area of high technology.”

Divergent understanding and expectations had led to the violation of the psychological contract. The divide between the two parties was unbridgeable. In consequence, the formal contract was terminated in February 2004. A leading manager from the public side justified this final decision due to a loss of mutual trust that made an ongoing collaboration impossible:

“Due to insufficient cooperation and communication behaviour (of the private party) concerning project status, sustaining the partnership became impossible for the public party. Therefore, the termination was the only solution.”

Realizing the situation, the private party tried to restore mutual trust by offering improvement efforts. However, this was not acceptable to the politicians who were driven by the upcoming elections and the public pressure claiming that huge amounts of taxpayers’ money were wasted at TollCollect and that there will never be a working system in place.

5.5 Emerged Model of Psychological Contract Violation in PPPs

As a result of the analysis, we present the emerged model of psychological contract violation in IT-PPP-megaprojects in Figure 1. Psychological contract violation in our case resulted from divergent understanding and divergent expectations between public and private parties. Divergent understanding evolved due to different goals as well as a lack of understanding concerning political constraints on behalf of the private party and business knowledge on behalf of the public party. Without having a mutual consent of reciprocal obligations, fulfilling the psychological contract was nearly impossible. As shown in our case analysis, divergent understanding led to psychological contract violation which expressed itself through frustrations and trust decline. Hence, we propose:

Proposition 1: Divergent understanding in public private partnerships leads to psychological contract violation.

Next, we explained how divergent expectations due to unrealistic promises, changed expectations, as well as communication failures contributed to the violation of the psychological contract. Drifting apart of mutual expectations without adaptation also supported upcoming frustrations and trust decline. Therefore, we propose:

Proposition 2: Divergent expectations in public private partnerships lead to psychological contract violation.

In addition, our analysis illustrates that the variables ‘political and public pressure’ have a moderating effect on the relationship between divergent understanding and psychological contract violation on the one hand and divergent expectations and psychological contract violation on the other hand. The involvement of politicians as well as the public media coverage strengthened the effect of divergent understanding on psychological contract violation because communication between public and private

parties became difficult due to upcoming elections and communication bias through the media affecting the possibility of potential compromises. This led to intensive frustrations and trust decline. Any attempt to renegotiate the psychological contract and overcome the lack of shared understanding was even more challenging due to political and public pressure. Hence, we propose:

Proposition 3: Political and public pressure strengthens the effect of divergent understanding in public private partnerships on psychological contract violation.

The involvement of politicians as well as the rising public interest also strengthened the effect of divergent expectations on psychological contract violation because there was no leeway to manoeuvre renegotiating the psychological contract. Therefore, we propose:

Proposition 4: Political and public pressure strengthens the effect of divergent expectations in public private partnerships on psychological contract violation.

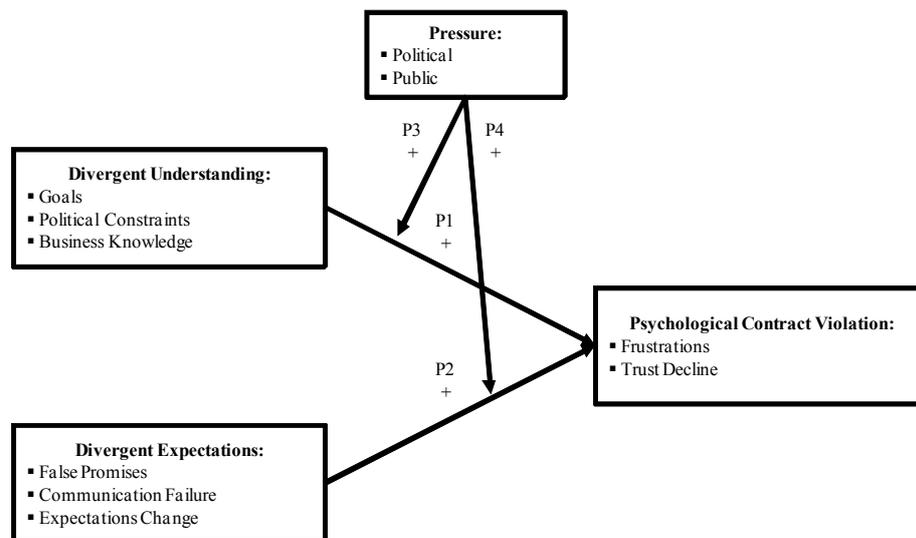


Figure 1. Psychological Contract Violation in IT-PPP-megaprojects

6 CONCLUSIONS AND IMPLICATIONS

Reasons for project failure in IT-PPP-megaprojects are rather unexplored. Through our analysis of the TollCollect case, we were able to shed light on the role of divergent understanding and expectations for failure in IT-PPP-megaprojects. We illustrate how these two factors led to psychological contract violation, further driven by the particular context of PPPs. Psychological contract violation manifested itself in our case through frustrations and trust decline which subsequently even led to the termination of the formal contract. Mutual trust has already been identified as success factor in prior research on PPPs (Jacobsen et al. 2008, Jost et al. 2005, Smyth et al. 2007). In our case study, we were able to delineate the antecedent conditions for establishing mutual trust as sufficient condition for success in IT-PPP-megaprojects by the use of psychological contract theory. Comparing our results with findings from IS literature on failure factors in IS projects (Yeo 2002), we identified the specifications of divergent understanding and divergent expectations leading to IT-PPP-megaproject failure. Instead of the identification of project management skills (Shore 2008), we concentrated on the informal aspects of relationship and stakeholder management. Analyzing psychological contract violation in a PPP environment also allowed us to identify the specific influence of the public-private context on the antecedent conditions (e.g., ‘political constraints’) as well as the relation between the antecedent conditions and psychological contract violation. The model we developed and that emerged inductively out of the data as well as deductively out of existing literature provides a substantial theoretical contribution in the area of psychological contract violation in IT-PPP-megaprojects. The

generalizability of our findings is restricted to the PPP domain. Furthermore, psychological contract theory does not provide an explanation for formal controls which support relationship and stakeholder management in a PPP environment.

Prior research has either focused on psychological contract violation in buyer-seller online transactions (Pavlou et al. 2005) or in inter-organizational customer-supplier IT outsourcing relationships (Koh et al. 2004). In contrast, we focused on psychological contract violation and their antecedents leading to IT-PPP-megaproject failure. Besides our substantive theoretical contribution, we also offer practical advice. The challenge for practitioners in an IT-PPP-megaproject context is to establish and maintain a 'healthy' psychological contract and foster the development of mutual trust in the relationship. In past literature, it has been stated that the success of public-private collaboration comprises more than designing an explicit contract and dealing with legal restrictions (Grimsey et al. 2002). Our analysis shows how important the psychological contract is for the success of PPPs in IT megaprojects. Open communication and fostering mutual understanding may help to establish trust between the parties and prevent frustrations. Consequently, the violation of the psychological contract and the termination of the formal contract can be avoided. Future research may investigate which capabilities IT megaproject managers in the context of PPPs should have to bridge the divide between public and private parties by establishing and maintaining a 'healthy' psychological contract.

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