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CONTROL BALANCING IN INFORMATION SYSTEMS DEVELOPMENT OFFSHORING PROJECTS

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Appendix

Research Process

Table A1 depicts our research process, including the main steps as well as associated tasks and outcomes. While the table depicts a linear process, we adhered to grounded theory practice and were highly iterative in our approach. For example, the process analysis was conducted in parallel with substantive and theoretical coding. Furthermore, data collection and analysis tasks were highly intertwined with each other and each influenced the other over time. Therefore, we do not clearly differentiate between data collection and data analysis tasks.

Table A1. Research Steps, Tasks, and Outcomes		
Research Step	*Tasks*	*Outcomes*
Problem formulation	• Establishing the phenomenon in terms of its practical relevance as a prerequisite to produce grounded theory that has 'grab' (Glaser and Strauss 1967). • State what the problem is from a practice and theory perspective and why it is important (Van de Ven 2007). • Screening prior research to identify gaps in the literature (Urquhart 2007).	• Identified the management of ISD offshoring projects as a practically relevant problem that many managers are struggling with. • Problem identified as developing a relationship with an offshore vendor and managing an ISD offshoring project which is important due to the rapid growth of ISD offshoring and the associated well-known challenges (King and Torkzadeh 2008). • Identified gaps in the literature on controlling ISD offshoring projects.
Single case study design	• Establishing engaged relationship with practitioners and negotiating access to data (Pan and Tan 2011; Van de Ven 2007). • Selecting a case study site and motivating the rationale for conducting a single case study, e.g., the main criterion for a revelatory case is "when an investigator has an opportunity to observe and analyze a phenomenon previously inaccessible to scientific investigation" (Yin 2003, p. 42).	• Reached an agreement with a banking company to conduct a longitudinal multi-year case study of an ISD offshoring project and to obtain data from both the client and the vendor. • Selected a "revelatory case": longitudinal analysis of an ISD offshoring project including both client and vendor perspectives, which has been inaccessible to scientific investigation before (Choudhury and Sabherwal 2003, p. 313; Dibbern et al. 2008, p. 359).

Table A1. Research Steps, Tasks, and Outcomes (Continued)		
Research Step	*Tasks*	*Outcomes*
Open coding data collection	• Gathering rich primary and secondary data, including intensive interviewing (Charmaz 2006). • Coding the data and understanding what it is about by going through interview transcripts line by line, assigning conceptual labels to data segments, and identifying core categories (Glaser 1978). • Adhering to the principle of emergence of grounded theory: categories should emerge from the data in the sense that they must "fit" (they must be readily, not forcibly, applicable to and indicated by the data under study) and "work" (they must be meaningfully relevant to and be able to explain the behavior under study) (Glaser and Strauss 1967). • Triangulating and comparing different slices of data to find similarities and differences (Charmaz 2006).	• Conducted multiple interviews, observed meetings, and obtained project documentation. • Generated more than 300 initial codes and more than 300 pages of notes and analytical memos. • Identified categories related to the simultaneous use of multiple controls throughout the ISD offshoring project without forcing existing concepts from the literature onto the data. Insured that the categories were relevant the understanding of control in offshore ISD projects. • Compared multiple perspectives, including client and vendor's, and compared multiple sources of data.
Selective coding & data collection	• Delimiting further coding to only those concepts and variables that relate to the emerged categories (Glaser 1978). • Making constant comparisons between instances of data labeled as a particular category and other instances of data in the same category to sub-stantiate categories (Urquhart et al. 2010). • Further data collection guided by the principle of theoretical sampling, i.e., deciding on analytic grounds where to sample from next (Glaser and Strauss 1967, p. 45).	• Delimited further coding to a set of tentative core categories which evolved into control types, control degree, and control style. • Followed the constant comparisons technique of grounded theory research, focusing on the development of categories and concepts by constantly comparing data to data (e.g., primary interview data to secondary data such as project documentation, data from Germany to data from India, data from early data collection to later data collection) as well as data to theoretical concepts outside the domain of study. • Collected and analyzed additional data as needed to develop our emerging theory. As an example, when our theorizing became focused on control types, degrees, and styles, we decided to conduct additional interviews to flesh out their properties in more detail.
Process analysis & data collection	• Mapping of key events (e.g., decisions, actions, outcomes) against a timeline with a focus on depicting the exact sequencing of events with respect to control behavior and decisions in the case study (Mähring and Keil 2008). • Delineation of states/phases from triggering mechanisms (Langley 1999; Van de Ven 2007).	• Constructed a detailed case narrative and process model describing sequences of events and evolution of the project and the relationship over time. • Identified three different control configurations which form the phases of our process model. • Identified triggers and consequences of control balancing decisions which evolved into four types of shared understanding in the client–vendor relationship.
Theoretical coding & data collection	• Analysis and specification of theoretical relation-ships between core concepts and categories (Bryant and Charmaz 2007, p. 25). This theo-retical coding (Glaser 1978), also referred to as iterative conceptualization (Urquhart et al. 2010), is aimed at increasing the level of abstraction, relating categories to each other, and clarifying which categories may be properties of others.	• Analyzed relationships between the tentative categories control type, degree, and style. Conceptualized control types, degree, and style as three different dimensions of control, each with associated properties and ranges.

Table A1. Research Steps, Tasks, and Outcomes (Continued)

Research Step	Tasks	Outcomes
Scaling up	• Engaging with other theories for theory building: To raise the level of conceptualization and scale up the emerging theory, existing theories or concepts should be used for comparisons (Urquhart 2007). Thereby, meta theories and theoretical categories with limited empirical content and general scope are particularly suitable as heuristic or sensitizing devices (Kelle 2007). • Grouping higher level categories into broader themes with the goal of increasing the generalizability of the theory and being able to relate the theory to the broader literature (Urquhart et al. 2010).	• Engaged with literature on balancing in organizational contexts (e.g., Bradach and Eccles 1989). • Conceptualized control balancing as a higher level category. Defined it as making adjustments to the control configuration periodically in terms of control types, control degree, and control style, to allow the ISD offshoring project and relationship to progress. • Conceptualized three different combinations of control types, degree, and style (i.e., control configurations): authoritative control, coordinated control, trust-based control.
Theoretical integration	• Relating the theory to other theories in the same or similar field by comparing the substantive theory generated with other, previously developed theories (Glaser 1978; Urquhart et al. 2010).	• Compared our core category of control balancing with the notion of "a portfolio of control modes" (Kirsch 1997), the literature on control dynamics (Choudhury and Sabherwal 2003; Kirsch 2004), and the literature on control evolution (Cardinal et al. 2004). • Compared our findings on controlling ISD offshoring projects with prior literature on managing and controlling ISD offshoring projects and relationships (e.g., Choudhury and Sabherwal 2003; Dibbern et al. 2008; Levina and Vaast 2008; Rai et al. 2009; Sabherwal 1999).

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