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EXPLORING THE IMPACT OF FIT BETWEEN CONTEXT FACTORS AND PRICING MODEL CHOICE ON THE SUCCESS OF IT OUTSOURCING MEGA-DEALS

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Abstract

The interplay between internal and external contextual factors and pricing model choice in IT outsourcing (ITO) contracts is still an under-researched area in the ITO literature. However, as past and current examples of outsourcing failures indicate, an informed selection of an adequate pricing model indeed plays a crucial, if not decisive role to ensure a successful deal outcome and to mitigate risks in the wake of the deal. Based on contingency theory, the paper at hand explores 60 ITO mega-deals (> EUR 50 million) for the impact of the alignment of business objectives and market factors with pricing model choice on ITO deal performance. Our empirical results, which were based on a fit-as-gestalts conceptualization, suggest that a high congruence of business objectives and market characteristics with pricing model attributes in ITO contracts engender better cost control and service results and a higher level of satisfaction after ITO deals than a low congruence of these factors. Our findings offer several interesting implications that can be used to improve pricing configurations in ITO deal contracts.

Keywords: IT outsourcing, pricing model, business objectives, market characteristics, fit analysis

1 INTRODUCTION

Worldwide outsourcing spending is big and continuously growing which is also due to the fact that pervasive IT adoption and capabilities as well as the degree of commoditization of IT has increased tremendously in the last couple of years. While Gartner reports an average growth of 7.8% in worldwide IT outsourcing (ITO) spending from 2002 to 2007 (in absolute terms from 162 to 236 $bn), they also state that the top 100 European average contract value of ITO deals has been growing in size from 254 $mn in 2001 to 645 $mn in 2003 representing an average growth rate of 36% (Smith et al., 2008). Taking these statistics into account, IT outsourcing deals are becoming large company bets as they can create or destroy huge value and thus may enable or constrain future business strategy. However, behind this apparent overall success of ITO hides a mixed picture. Besides success stories preached in newspapers and on outsourcing conferences, all too frequent failures have occurred in the last couple of years ranging from a lack of sufficient skills in post-deal execution of the ITO provider to too complicated or inadequate contractual arrangements. In addition, a gloomy outlook is offered for the future of ITO deals. Drawing on past research evidence, Willcocks and Cullen (2005) forecast that ITO mega-deals involving complex processes and a big portion of the IT budget, could see a third fail and another third have mixed outcomes (Willcocks & Cullen, 2005).

Given the facts of growing ITO spending and average contract values, but obviously malfunctioning practices in the ITO relationship, the question arises how practitioners can better be informed in the configuration of contract parameters for a better control on deal outcome? Although various research has been conducted on the configuration of contractual issues in ITO (e.g., Cullen et al., 2005), less attention has been attached to the importance and impact of pricing arrangements on ITO success. Cullen et al. (2005) even come to the conclusion that "[…] the ITO literature is surprisingly silent on pricing constructs given that different pricing structures have such strong motivational impacts on supplier behavior" (Cullen et al., 2005, p. 370). Besides this under-researched area in the ITO research literature, more flexible and modular pricing models of ITO providers have generated more degrees of freedom in the selection of outsourcing contract modalities in the last couple of years. Besides classical fixed-fee pricing models, more flexible options (such as usage-based and performance adjusted pricing options) are now available to help outsourcing companies to optimize the match between their business strategy and financial implications of ITO. In the face of this newly gained flexibility, the question can be posed on what basis a client company can configure ITO pricing models to optimize the deal outcome? This is exactly where this research study wants to provide answers, as we argue that specific internal and external contextual factors of a company have to be aligned with the pricing model choice to produce higher ITO success rates.

In this regard, the goal of this paper is twofold. First of all, it wants to shed light on the variance of pricing models selected in large-scale ITO deals in the last couple of years. Second, based on a configurational (i.e., gestalts), our study wants to explore alignment relationships between two relevant contractual context factors and pricing model choice and its ITO deal performance implications from the perspective of client companies. In accordance with Mintzberg and Lampel (1999), the authors believe that finding coherent and successful patterns of configurational characteristics does not only lead to enhanced performance outcomes, but also to straightforward guidelines for practitioners (Mintzberg & Lampel, 1999, p. 25).

The structure of the paper is as follows. First, the paper reviews the ITO literature on performance effects of pricing model choice in section 2. In section 3, we then show how the theory of fit can be applied as theoretical basis to investigate the alignment of company and market factors with ITO pricing models and its implications on ITO deal performance. In section 4, we present our research methodology, which is based on a multi-case study approach including 60 ITO mega-deals. Major descriptive and explanatory findings of this research study, which are based on a content analysis of reports and interviews as well as on a rigorous fit analysis, follow in section 5. The paper concludes

with a discussion on theoretical and practical contributions, shortcomings and promising future research approaches.

2 PREVIOUS RESEARCH IN ITO PRICING

In order to get a thorough understanding of previous research in ITO pricing and performance, an analysis of the state-of-the-art literature was conducted based on most current ITO literature reviews (e.g., Lacity et al., 2009). In a content analysis of major IS conference and journal papers published between 1997 and 2005, Wiener found that 8 major content categories are predominant in ITO research: contract, culture, decision, environment, organization, performance, relationship, and strategy (Wiener, 2006, p. 51). Focusing on the research topic at hand, all 50 papers in the categories 'contract' dealing with aspects related to the agreement on the project contents, and 'decision' which deal with aspects related to the selection of the provider, the project, and the project location, were chosen for closer scrutiny. In addition, ITO research papers published in IS journals and conferences after 2005 were also included in the literature analysis (Lacity et al., 2009).

All in all, only few papers deal with the performance effects of contractual parameters and even fewer with pricing model choice as key antecedent of (or mediator between key antecedents and) IT outsourcing success. Aubert et al. (2003), Chen (2005), and Richmond and Seidmann (1993) investigate performance implications of general contract characteristics, such as contract completeness (Aubert et al., 2003), structure (Chen, 2005) and business value (Richmond & Seidmann, 1993), without elaborating on pricing options. Lee et al. (2004) deal with contingency-based and configurational explanations of ITO success by investigating the fit between strategic competence, cost efficiency, and technology catalysis with general ITO strategies, namely independent, arm's length, and embedded strategies (Lee et al., 2004). More prevalent topics in ITO decision and contract research are related to investigating competence and capabilities (Swinarski et al., 2001), risk (Aubert et al., 2003) and governance (Agrawal et al., 2000), largely neglecting the role of pricing options for ITO deals and outcomes. Contributions in more practical publication outlets mostly emphasize specific pricing issues in the contract design such as Lee (1996) regarding pricing and payment options in ITO contracts (Lee, 1996). In a study of 90 offshore software development contracts, Gopal et al. (2003) examined several factors affecting the selection of fixed-price and time-and-materials contracts. They found for example that increased perceived requirements uncertainty, larger projects and increased risk of availability of trained personnel is significantly associated with time-and-materials contracts, while perceptions of higher client MIS experience, larger clients and the importance of the project to the client are associated with a higher probability of a fixed-price contract (Gopal et al., 2003). Rottman and Lacity (2006) also discuss fixed price versus time and material contracts (Rottman & Lacity, 2008). Lacity and Willcocks (1998) looked at contract types of 40 ITO deals against client outcome measure and found that detailed fee-for-service contracts outperform standard, loose and mixed fee-for-service contracts (Lacity & Willcocks, 1998). To the knowledge of the authors, only Cullen et al. (2005) deal with a finer-grained conceptualization of pricing mechanisms as a key antecedent of an organization's ITO contract configuration that, as they conclude in their study, indeed contributes significantly to understanding, comparing, and managing ITO arrangements. They discover that fixed-fee, usage-based, and cost-plus pricing schemes are still the most widely used models, but present no findings on what decision basis these models are selected and configured for an optimization of the deal outcome.

In summary, previous literature offers a considerable body of knowledge on the relationship between pricing mechanisms and deal outcome. However, existing research lacks a conceptualization of pricing mechanisms that embrace not only the "fixed fee versus time & materials" dimensions, but provides a more differentiated picture. In addition, current literature provides only scant insights into the role of pricing model choice in the link between contextual factors (such as internal and external requirements) and ITO deal success. Given the parsimony in this research area, it seems compelling to fill the existing research gap with empirical research studies.

3 FIT-AS-GESTALTS AS CONCEPTUAL FOUNDATION

The study at hand draws on a contingency perspective to explore the fit relationships of company and market factors with ITO pricing and their impact on deal success. While in past ITO research, a great diversity of theoretical lenses (such as the transaction cost or production cost theory, the incomplete contract theory, the agency theory, the real option theory or game theory) have been taken to examine ITO success from an universalistic perspective, contingency (or closely related configurational) approaches have been mainly used in this context to explore relationships claiming that the success of an ITO strategy will vary based on contextual variables (e.g., Lee et al., 2004). The contingency approach to the study of organizations were developed in the early 1950s as a response to criticisms that the classical theories (i.e. Scientific Management, the Human Relations and Human Resources movements) advocated "one best way" of organizing and managing. Contingency (or configurational) theories, on the other hand, proposed that the appropriate organizational structure and management style were dependent upon a set of "contingency" factors. Szilagyi and Wallace adequately summarize, "The contingency approach attempts to understand the interrelationships within and among organizational subsystems as well as between the organizational system as an entity and its environments. It emphasizes the multivariate nature of organizations and attempts to interpret and understand how they operate under varying conditions […]" (Szilagyi & Wallace, 1980, p. 178). Contingency (or configuration) theories have also received considerable attention in MIS research, where most prevalent relationships studied have been between contextual factors such as strategy, structure, size, environment, technology, and tasks on the one side, and MIS variables (e.g., implementation), MIS and organizational performance (e.g., satisfaction, success) on the other side (Weill & Olson, 1989, p. 63). The greatest accomplishment of contingency (or configurational) theory is said to be by delineating the relationships among sets of variables by analyzing how different variables coalign with each other and what gestalts (i.e., feasible sets of internally consistent configurations) and non-gestalts (i.e., incongruent configurations) emerge over time in order to optimize performance variables (Ensign, 2001).

For the study at hand, the fit-as-gestalts concept lends itself for the investigation of how contextual factors have an impact on ITO deal success via pricing model choice. According to Venkatraman (1989), this notion of fit is defined in terms of the degree of internal coherence among a set of theoretical attributes (Venkatraman, 1989). The role of gestalts has been best described by Miller: "Instead of looking at a few variables or at linear associations among such variables we should be trying to find frequently recurring clusters of attributes or gestalts" (Miller, 1981, p. 5). Such patterns are said to "provide useful insights into […] feasible sets of internally consistent and equally effective configurations" (Miller & Friesen, 1977, p. 264). In this paper, we argue that pricing attributes in ITO contracts more or less coalign with contextual factors and thus generate higher or lower ITO deal performance. In this regard, congruent and non-congruent gestalts between contextual factors and pricing attributes determine the level of ITO deal performance.

In this paper, we want to explore the alignment relationships of business objectives including strategic competence (Lee et al., 2004) and risk factors (Bahli & Rivard, 2001) on the one hand, and market factors including demand and supply indicators (e.g., Kouvelis & Milner, 2004) on the other. Ideally, pricing models should reflect the outsourcer's business objectives, i.e., mirror the main outsourcing strategy (such as efficiency or effectiveness) and the risk propensity of a client company. According to Cullen et al. (2005), alignment between business objectives and pricing is usually achieved by choosing an adequate pricing unit, rate, and dynamic over time. In this regard, contingency theory suggests that companies that for example strive to reduce costs by outsourcing parts of their IT infrastructure and stress efficiency in the ITO relationship should thus choose pricing models that set clear boundaries on the scope (i.e., clearly specify which products/services in what volumes are included or excluded), timing (i.e., precisely determine how cost savings should be distributed over time), and price ranges (i.e., explicate what the maximum price is that the outsourcer wants to pay) of the ITO deal. By contrast, incongruent patterns of business objectives-pricing model relationships will

be less efficient and effective, as they will leave too much wiggle room (i.e., opportunities for opportunistic behavior) to the provider. For instance, if the client company is a risk-averse entity, the contract should include that the provider assumes all initial migration investments with pricing mechanisms that enable the provider to earn back the investments over time (Gopal et al., 2003). Otherwise the deal will either not work out or fail due too misleading financial incentives caused by incongruent gestalts of business objectives and pricing model choice. Based on these exploratory conceptualizations of fit-as-gestalts, we thus formulate:

Proposition 1: The gestalt (or a higher fit) of business objectives and pricing model choice will be positively associated with ITO mega-deal performance.

Analogous to business strategy, characteristics of the business demand side (such as requirements volatility) and IT supply side (such as the degree of commoditization of the outsourced IS) should also be appropriately integrated into the pricing model of the ITO deal contract (Gopal et al., 2003). Analogous to business strategies, pricing unit, rates, and dynamics over time should be configured in dependence of the degree of business demand volatility and IT supply commoditization. As an example for a strong alignment, low demand predictability could be reflected in a usage-based pricing scheme with clear definitions of an Additional Resource Component/Reduced Resource Component (ARC/RRC) model that explicitly links consumption of a well-defined resource unit to payment. In this way, pricing models would appropriately adjust to changing volumes of demand over time. The other way round, pricing models that do not take into account volume flexibility in case of predicted demand volatilities will be predisposed to failure, as contract terms prevent the outsourcing company from adjusting the pricing terms. Thus, we would expect that a stronger alignment between market characteristics and pricing model choice causes a higher ITO deal performance for the client company than a weak alignment between market characteristics and pricing model choice. Thus, we derive:

Proposition 2: The gestalt (or a higher fit) of market characteristics and pricing model will be positively associated with ITO mega-deal performance.

Figure 1 illustrates the research model and the derived propositions.

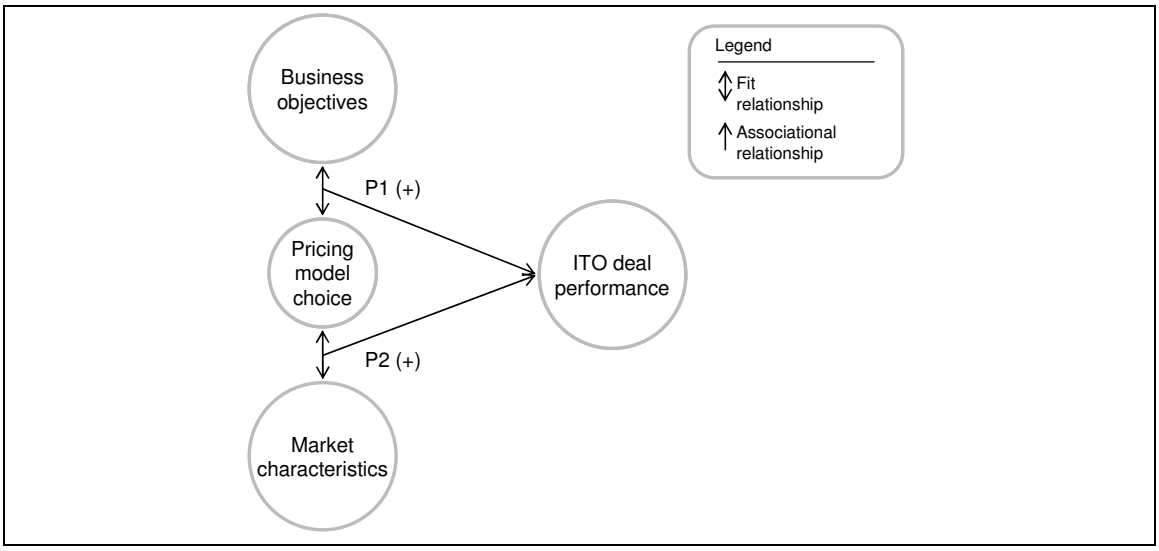

Figure 1. The Proposed Conceptual Model and Research Propositions

4 RESEARCH METHODOLOGY

To investigate the research propositions at hand, the methodology applied in this research study was based on descriptive and exploratory case study research. Case study research epistemologically

focuses single or few research objects (i.e., ITO deals in this study) to comprehensively get a handle on more complex social phenomena. Although it is criticized for its lack of external validity, case studies are frequently used where the research object has not been investigated in great detail so far, the depth and thoroughness of insights supersedes the importance of external validity, and/or the data collection possibilities are limited due to technical, legal, or privacy reasons (Yin, 2003, p. 3-9). In this study, case study research has been selected as most relevant method, since its strength is that it can deal with a full variety of evidence such as documents, artifacts, interviews, and observations and thus allows a comprehensive analysis of the topic under investigation. It should also be noted that our research methodology supports the exploratory nature of this study with emergent theorizing (Eisenhardt, 1989).

4.1 ITO deal sample characteristics

Our study draws on materials and documents of a management consulting firm that we have interviewed based on our propositions. The management consulting firm that self-reportedly collected and documented comprehensive information on 144 ITO deals occurring between 2007 and 2008 acted as middleman in all contract negotiations between clients and providers. It could provide us information on 60 ITO mega-deals on a confidential basis exceeding a transaction volume of 50 €mn. The sample included 15 companies of each of the following industries: banking, travel and logistics (T&L), high tech, and telecommunication. Since this highly sensitive selection of ITO deals represents a convenience sampling, we cannot scientifically make generalizations about the total population from this sample (Bryman & Bell, 2007). However, as we had the unique opportunity to study 60 interesting ITO mega-deals, the results may be used to identify common patterns (i.e., gestalts) with future formal modelling to validate the patterns (Lee, 1991).

4.2 Research instrument specification and validation

4.2.1 Deriving category items for content analysis

Each ITO deal was analyzed for the occurrence or non-occurrence of the constructs under investigation based on project reports and interviews with consultants. We could also cross-validate the statements (i.e., in particular the process outcome measures) from consultants by interviewing client project team members that were involved in the respective ITO deal. Before conducting the content analysis of the ITO deal reports, preliminary interviews were thus undertaken with at least 1 consultant *and* 1 manager of the companies involved in the ITO deals to specify the factors of interest drawn from literature and to refine our content analysis guide. Evolving categories used to classify contextual factors, pricing model options and ITO deal performance were then pre-tested with another 3 IS professors for sufficient content validity and as preparation for the coding procedures.

Following Kolbe and Burnett (1991), two senior IS researchers and two IS practitioners who were conversant with ITO research and contractual pricing and who were unaware of the study's purpose underwent a training sequence for coders (Kolbe & Burnett, 1991). First, the coders had a meeting with the authors to discuss examples of coding categories. This meeting also resulted in the creation of a reference sheet with examples of how to code the concrete category items examined in this study. Second, the coders were asked to test the initial coding instrument in a pretest by coding 6 ITO deals each (10% of overall sample). Based on this pretest, coding problems and inconsistencies were discussed leading to a revised coding instrument and reference sheet that the coders used during the actual coding procedure. To ensure an independent coding and a credible inter-rater reliability score, the coders did not communicate during the actual coding procedure. Overall, each coder analyzed the 60 ITO deals during a two-week period in June 2009.

Contextual factors	Categories for content analysis	Options	Examples of impact on pricing model choice
Business objectives			
Strategy	Competitive focus	Effectiveness, efficiency, flexibility	Effectiveness/Growth: emphasis on process innovation, efficiency: focus on cost
	Importance of process	Core or support process	Support processes: emphasis on competitive pricing, core: incentives linked to customer value and innovation
Risk	Willingness to take long-term business risk	Contract, joint venture or equity stake	Joint venture model can be used to enable value sharing and remain in control over assets and services
	Willingness to make initial investments	Split of up-front migration investment between provider and client, use of external financing	Shift all upfront investments to provider will lead to longer contract duration, to enable provider to earn back investments
Market characteristics			
Demand	Requirements volatility	Few or many requirement changes	Many changes: increase insight into providers' costs
	Volume stability	High or low volume stability	Low stability: preference for usage based pricing
	Volume predictability	High or low degree of predictability	Low predictability: preference for usage based pricing with clear definitions of Additional Resource Component/Reduced Resource Component scope and cost drivers
Supply	Degree of commoditization	Commoditized or tailored service	Commodity service: emphasis on competitive pricing with benchmarks, strategic tailored service: emphasis on quality
	Speed of market development	Fast or slow market development	Fast technology development: need for incentives to incur fast technological adoption

Table 1. Category Items for Classification of Context Factors of Pricing Model Selection

Two category items were chosen to measure the contextual factors of pricing model choice analyzed in this paper, i.e., business objectives and market characteristics (see Table 1). The classification of a company's business objectives was substantially motivated by strategic management literature (Porter, 1985) that claims that a company's competitive focus and willingness to take risks influences its market conduct and performance (i.e., competitive advantage). Category items measuring market characteristics were decomposed into demand- and supply-side variables: While the degree of volume stability and predictability and the degree of requirements volatility were derived for IT demand (uncertainty) characteristics, the speed of market development and the degree of commoditization were used as indicators for the IT supply side (e.g., Kouvelis & Milner, 2004).

Pricing model options were analyzed based on three dimensions (see Table 2) encompassing the dimensions pricing unit, applied rate, and price development (Cullen et al., 2005).

Pricing model dimensions	Description
Unit being priced	
Entire project/service	Pricing based on entire delivery, independent of volume or added value
Usage/volume	Pricing based on actual volume (e.g. number of transactions) in specific period
Business value	Pricing based on business value created
Rate applied	
Fixed	Pricing based on fixed periodical installments for the duration of the contract
Performance adjusted	Pricing depends on performance on pre-defined KPIs and incentive agreements
Benchmark adjusted	Pricing with periodic adjustment based on agreed benchmarks
Indexed	Pricing with periodic adjustments based on a fixed percentage or inflation rate
Supplier cost pkus	Pricing based on costs of services plus pre-negotiated provider margin
Price development/dynamics	

Linear	Linear volume-to-price relationship
Digressive	Decreasing growth rates for prices associated with increasing volumes ("price discounts")
Progressive	Increasing growth rates for prices associated with increasing volumes

Table 2. Category Items for Classification of Pricing Model Options

While the pricing unit specifies the scope of the work or service being priced, the rate describes how and how often the work or service is remunerated over time and whether the remuneration depends on external criterion or not. In this regard, pricing units can be divided into prices that are associated with the entire service or project, with the actual volume of consumption in a certain period, or with the business value created. In our interviews, we could identify 5 different pricing rate options. Fixed rates are applied if pricing is based on fixed periodical installments for the duration of the contract. Performance adjusted rates relate to pricing schemes where pricing depends on performance on pre-defined KPIs and incentive agreements, whereas benchmark adjusted rates represents a pricing option with periodic adjustments based on agreed external market or internal cross-departmental benchmarks. Indexed pricing rates orient themselves on periodic adjustments based on a fixed percentage or inflation rate. Finally, supplier cost plus rates are pricing constructs that are based on costs of services plus pre-negotiated provider margins. Last but not least, the price development dimension indicates how volume-effects impact outsourcing prices and creates incentives on the provider side. Finally, ITO deal performance variables were measured by collecting objective and perceptual data points according to suggestions in the literature (see Table 3). While the objective criteria should cover process-oriented performance indicators along the dimensions cost, time, and quality (e.g., Santhanam & Hartono, 2003), a perceptual criterion was introduced to assess the outsourcer's satisfaction one year after the ITO transaction. Due to confidentiality reasons, no absolute numbers for the performance criteria could be obtained. For that reason, objective performance criteria were classified according to the actual development of the respective variable, while the perceptual variable on overall satisfaction was rated on a 5-item Likert-scale. All classifications of ITO deal performance were based on aggregated statements by project team managers that had been involved in the ITO deals.

Evaluation criteria for ITO deal success	**Categories for content analysis**	**Scale**
Objective data points		
Cost	• Change in run-rate costs	• 1=Decreased/2=Stable/3=Increased
	• (Initial) investments	• 1=Decreased/2=Stable/3=Increased
Service	• Service quality (improvement)	• 1=Decreased/2=Stable/3=Increased
	• Service flexibility	• 1=Decreased/2=Stable/3=Increased
Time	• Implementation time	• 1=Decreased/2=Stable/3=Increased
	• Service delivery time	• 1=Decreased/2=Stable/3=Increased
Perceptual data point		
Satisfaction of client company	Level of satisfaction with pricing arrangement 1 year after deal	Range from completely satisfied (5) to not satisfied at all (1)

Table 3. Category Items for Classification of ITO Deal Outcome

4.2.2 Procedures for deriving a fit matrix between context factors and pricing models

As recommended in research literature using the fit-as-gestalts approach (e.g., Ensign, 2001), a two-dimensional fit matrix (one dimension on the abovementioned business objective and market characteristics variables and another dimension on pricing model options) was developed. To prevent single source bias, we drew on 4 coders (2 IS practitioners and 2 IS researchers with high expertise in ITO) other than those described in section 4.2.1. As illustrated in Figure 2, different combinations of

business strategy variables, market characteristics, and pricing model options were classified into sets of internally fully consistent, somewhat consistent and fully inconsistent configurations.

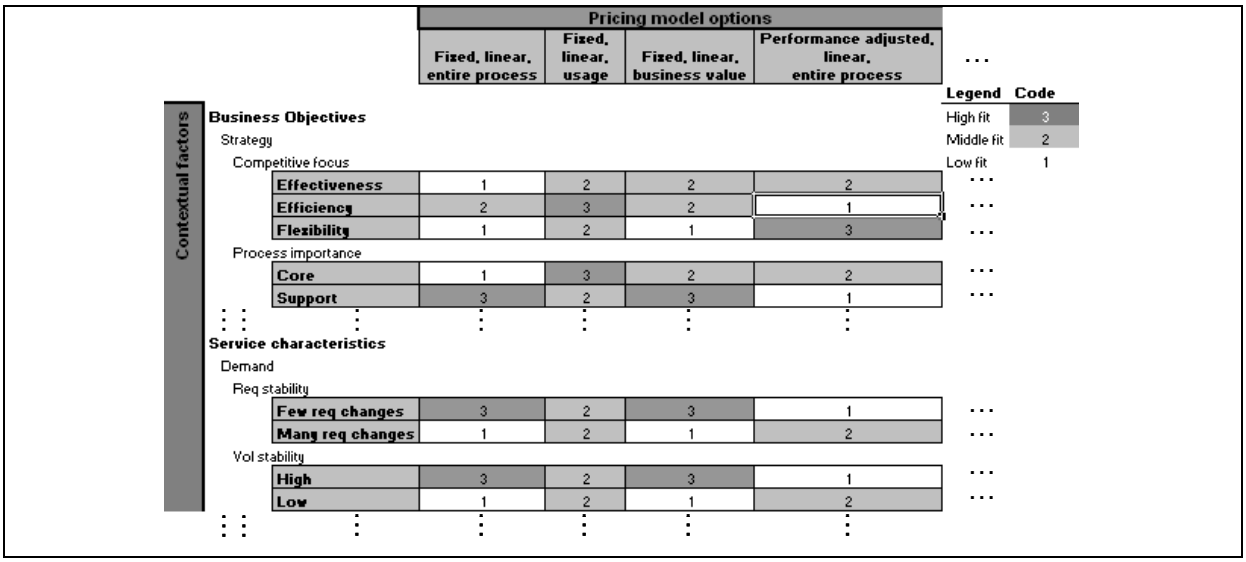

Figure 2. Excerpt from the Fit Matrix of Contextual Factors and Pricing Model Options

As an example, since fixed installments for entire IT service processes do not leave much room for adjustments during the ITO relationship, it is better applicable in stable environments. It also lends itself for the outsourcing of support rather than core processes that do not require highly customized incentive systems and thus focuses rather on efficiency than flexibility. Finally, this pricing model is considered to be rather associated with risk-averse outsourcing behavior which is often reflected in the fact that outsourcing companies wish to transfer all IT investments to the IT service provider upfront. In this regard, they do not run the risk of asset depreciation of (highly commoditized) IT investments. The final fit matrix was then used as a basis to classify the 60 ITO cases into different levels of fit between business objectives/market characteristics and pricing model respectively.

4.2.3 Instrument validation

To assess objectivity, reproducibility, and inter-coder reliability in respect of our content analysis, two reliability scores were calculated for the contextual factors, pricing models, fit relationships (that were coded based on the fit matrix) and ITO deal performance variables. First, we computed Krippendorff's alpha on a random sample of 15 ITO deals (25% of the full sample), because it is general accepted to be the most relevant measure of agreement among multiple coders (Hayes & Krippendorff, 2007). Second, Cohen's kappa was calculated (Cohen, 1960) which, despite its drawbacks, is still considered as the 'measure of choice' in the measurement of intercoder reliability (Dewey, 1983). Krippendorff's alpha and Cohen's kappa exceeded the recommended minimum values of 0.70 and 0.60 for all coded variables. Since all reliability scores substantially exceeded the recommended values, the coding instrument was deemed reliable.

5 EMPIRICAL RESULTS

5.1 Descriptive results – Analysis of sample and pricing model selection

In half of the ITO cases analyzed, parts of the IT infrastructure (e.g., mainframes and servers or user helpdesks) were outsourced. In the other half of cases, functions related to IT application development and maintenance were outsourced either to captive (i.e., in-house) or non-captive IT providers. 45% of

the ITO cases investigated are motivated through an efficiency-based business strategy, 30% by growth-related aspects (such as growth through new products, countries, etc.), and only a fourth by flexibility. 50% of ITO relationships between client companies and providers are based on contracts where the provider owns 100% of the IT assets. 25% of the analyzed ITO arrangements are designed in a joint venture, 25% in a way where the outsourcer holds a dominant equity stake in the cooperation. In accordance with the findings of Cullen et al. (2005), few companies utilize the wide range of pricing options along the dimensions unit, rate, and dynamics (see Table 4). Most common pricing models are fixed-based or performance-adjusted based on the entire service or the consumption volume. Only few companies exploit the opportunities of linking the outsourcing price to benchmarks or indices. We could also identify only three cases where a supplier cost plus pricing model was applied, which is surprising, since it is a common and widely used pricing model in outsourcing of e.g., payment services in the banking industry. Similarly, ITO deals were rarely based on the business value created through the ITO deal. The distribution between linear, digressive, and progressive price-volume interdependencies in ITO deal contracts was almost even.

Units being priced	**# of deals (%)**	**Rate applied to unit**	**# of deals (%)**	**Price dynamics**	**# of deals (%)**
Entire process/project	30 (*50*)	Fixed	24 (*40*)	Linear	21 (*30*)
Usage (e.g., transactions, volume)	27 (*45*)	Performance adjusted	18 (*30*)	Digressive	21 (*35*)
Business value (e.g., fund value)	3 (*5*)	Benchmark adjusted	9 (*15*)	Progressive	18 (35)
		Indexed	6 (*10*)		
		Supplier cost plus	3 (*5*)		

Table 4. Pricing Model Characteristics in Sample

5.2 Explanatory results – Analysis of fit

5.2.1 Insights into the impact of fit variables on ITO deal success

Most notably, the relatively low average values for the fit variables captured in our sample indicate that client companies have not put much emphasis on the alignment between business objectives, market characteristics and pricing models in the past. However, when assessing the inter-construct correlations of the fit variables and the performance criteria, we found a high correlation between the fit variables and satisfaction as well as cost and service variables showing that these alignment relationships do indeed matter. The results in Table 5 show significant relationships to satisfaction as well as cost and service dimensions, but not to the time variable. To have another indication for the strength of the relationship, Cramer's V was evaluated for the different χ^2-tests (see Table 6). The closer the values are to 1 on a scale between 0 and 1, the bigger the strength of the relationship. The Cramer's V of the business objective fit variables associated with satisfaction, cost and service are bigger than those of the market characteristics fit variables. Propositions 1 and 2, which suggested that gestalts of business objectives and market characteristics with pricing model choice are positively associated with ITO deal performance can thus be supported for satisfaction, cost and service and must be rejected for time.

		Spearman rho correlation (*N=60*)					
	Mean (*S.D.*)	BO PM fit[1]	MC PM fit[1]	Satisfaction[1]	Cost[1]	Service[1]	Time[1]
Level of Fit between business objectives and pricing model	1.63 (*0.37*)	1,000	0,213	0,689(**)	-0,589(**)	0,601(**)	-0,144
Level of Fit between market characteristics and pricing model	1.75 (*0.44*)	–	1,000	0,590(**)	-0,531(**)	0,439(*)	-0,027
Satisfaction	3.02 (*0.93*)	–	–	1,000	-0,399(*)	0,412(**)	-0,112
Cost	2.15 (*0.54*)	–	–	–	1,000	-0,351(*)	0,154
Service	1.96 (*0.33*)	–	–	–	–	1,000	-0,302

Time	2.35 (*0.58*)	–	–	–	–	–	1,000

[1]All composite factors were measured as a non-weighted additive index of corresponding items; *p<0.05; **p<0.001

Table 5. Correlation Matrix for Fit and Performance Dimensions

Pearson χ^2	*Satisfaction*	*Cost*	*Service*	*Time*
Fit between BO and Pricing Model Config.	χ^2=27,394 (**p<0,001**) C's V = 0,926	χ^2=19,000 (**p<0,05**) C's V = 0,689	χ^2=26,571 (**p<0,001**) C's V = 0,815	χ^2=4,486 (n.s.) C's V = 0,335
Fit between MC and Pricing Model Config.	χ^2=18,549 (**p<0,05**) C's V = 0,695	χ^2=17,125 (**p<0,05**) C's V = 0,615	χ^2=15,714 (**p<0,05**) C's V = 0,627	χ^2=8,655 (n.s.) C's V = 0,465

Table 6. χ^2 -analysis Results on the Relationship between Fit Variables and Performance Criteria

6 DISCUSSION

Several relevant implications can be drawn from this study's results. First, the study at hand illustrated that contingency/configurational theory is a valid conceptual approach for providing exploratory insights into the selection of pricing models in ITO transactions. Furthermore, as our analysis of the 60 ITO deals has shown, rigorously aligning business objectives and market characteristics with pricing configurations is often neglected, although it has tremendous impact on important dimensions of ITO deal success. For that reason, companies should more rigorously configure ITO contracts based on the fit with crucial context variables. Second, our results also extend previous research (e.g., Gopal et al., 2003; Lacity & Willcocks, 1998) by identifying that business objectives, which are aligned with the pricing model, can be considered as the stronger driver of ITO deal success than market characteristics, affecting satisfaction, costs, and service quality to a greater extent. Interestingly, a high alignment of context variables and the pricing model were positively related to satisfaction and service while it was negatively associated with cost. Time as third objective performance criterion analyzed in this study could not be shown as being significantly affected by high alignments between contextual factors and pricing model attributes. This result is maybe due to the fact that implementation and delivery time are aspects that are rather affected by contract modalities other than the pricing model (e.g., outsourcing migration plan), operational governance mechanisms (such as SLAs and steering committees) as well as IT provider capabilities.

Third, the outcomes of this study are also highly relevant for practitioners, as they provide concrete guidelines for the configuration of ITO deals. According to our empirical results, we recommend as preparation for ITO deals that outsourcing client companies may follow a 4-step approach to increase the probability for a successful transaction outcome. First, it should answer the questions "What do we want to achieve?" to analyze internal drivers towards outsourcing and clarify quantitative and qualitative business objectives and "How does stability look like for demand and supply?" to understand the internal demand and external supply of the service intended for ITO. Second, it should define the preferred pricing model given business objectives and market (service) characteristics to test different pricing option combinations. Third, it should create an internal cost baseline to find the lowest possible internal cost of providing the desired service quality including possible opportunities for improvement. Finally, based on these results, it should negotiate with vendors to find the best combination of pricing model and cost level.

Although the existing research study fills a gap in ITO research, it has several shortcomings that can be addressed in future research studies. Theoretically, the study has focused on two drivers of pricing model selection. Other important antecedents, such as management expertise, path dependencies, culture, or leadership style, should be included to investigate the relative importance of each driver. In

addition, although the fit matrix was developed based on the coding of 2 experienced IS academics and 2 IS practitioners, future studies have to validate the postulated fit relationships on a broader empirical basis. Last but not least, our study has drawn its data from a convenience sample of ITO mega-deals provided by a management consultancy. Although we have cross-validated the statements by the consultants with interviews with actual client project managers, future studies should attempt to get access to more representative and larger ITO deal samples from unbiased sources.

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