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HOW EUROPEAN TENDERING LEGISLATION AFFECTS SOFTWARE SELECTION: A BUYER'S PERSPECTIVE

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Abstract

European tendering legislation aims to enhance competitiveness by promoting equality, proportionality, transparency and non-discrimination. This legislation applies to the purchase of software packages by large public institutions. This study aims to clarify how this tendering legislation shapes software selection processes. By examining the selection of a strategically important software package at a professional service organization, this study provides initial evidence on how the decision-making process in software selection is affected by the tendering process in terms of the following dimensions: 1) juridification, 2) objectivity, 3) linearity, 4) formalization and 5) communication. The decision-making quality of this tendering process is evaluated from the buyer's perspective against functional, economic and political norms of rationality. From each of these rationalities, the tendered software selection process results in losses as well as gains. A notable finding is that tendering does not exclude political manoeuvring, with power and influence practiced in other ways.

Key words: Tendering, Software selection, Decision-making process, Functional Rationality, Political Rationality, Economic Rationality, Decision-making quality

1 Introduction

In recent years, the use of packaged software solutions has expanded in many organizations at the expense of custom-made systems. An important activity in relation to packaged software is the selection of the 'most suitable' software product. How the decision-making process that leads to software selection evolves in practice is relevant for both managers and researchers. The resulting decision quality can be evaluated against functional, economic and political norms of rationality (Koopman and Pool, 1990). According to functional rationality, a software package should be selected when it best meets the formulated requirements. According to economic rationality, the costs of decision-making, acquisition and maintenance should prevail whereas, according to political rationality, acceptability to the most important stakeholders forms the key selection criterion (Keil and Tiwana, 2006; Howcroft and Light, 2010).

A major external factor faced by public organizations within the European Union that influences this software selection process is the European tendering system (Rapczak et al., 2000; Watt et al., 2009). Public organizations have to tender, using specified procedures, for large software acquisitions. This obligation may have important implications for the decision-making process as well as for its outcome. Despite this, to our knowledge, there are no studies that address the question of how tendering affects the buyer's software selection process. Therefore, the aim of this paper is *to clarify how the European tendering system shapes the buyer's software selection processes and then to evaluate this in terms of functional, economic and political norms of rationality*. The theoretical contribution of this study is in the field of strategic decision-making processes in general (Shapira,

2002), and IS decision-making in particular (Boonstra, 2003). We study how tendering potentially affects strategic decision-making (Eisenhardt and Zbaracki, 2007) and the public organization's dealing with internal and external stakeholders during tendered decision-making processes. The effect of tendering on the selection of software, as compared to other products, is especially relevant given the large and potentially complex service component, an aspect that often involves some degree of co-creation between supplier and buyer. A distinctive quality of a software package is its inherent flexibility in that it has to be more fully integrated into the work environment than other purchases such as office equipment and coffee machines. Our contribution to information system understanding is in how tendering potentially affects the enactment of the rationalities underlying this critical software selection process. Functional rationality assumes that organizations are autonomous in their decision-making on strategic investments (Chau, 1994), while the obligation to tender potentially constrains this autonomy. Viewed from an economic rationality perspective, meeting the legal requirements of a tendering process may affect the costs of decision-making. The political rationality behind software selection may also be affected because tendering legislation regulates the process and communications between contractors and suppliers (Howcroft and Light, 2006), and this may lead to less, or adapted forms of, social political dynamics.

This study has a practical value since it promotes awareness among decision-makers on how tendering affects established ways of selecting software as well as the relationships with internal and external stakeholders. A better understanding of tendered decision-making could support practitioners in managing the tendered software-selection processes in ways that lead to better processes and outcomes. Further, the paper sheds some light on to the intended and unintended effects of tendering on software selection. These findings may stimulate policymakers to debate the practical effectiveness of the current tendering legislation.

The remainder of this paper is organized as follows. In the next section, we present some theory on software selection by distinguishing the three rationalities that serve as the analytical framework for this study. Then, in Section 3, we briefly explain the requirements under European tendering legislation when it comes to software selection. Following this, in Section 4, we discuss the research methodology and then in Section 5 describe the specific case studied. Next, in Section 6, we analyse this tendered decision process in terms of five inductively derived characteristics of the decision-making process. Finally, in Section 7, we reflect on the quality of the decision-making process and its implications for existing theory and practice.

2 Three rationalities of software selection

Much of the literature on software selection adopts a view that can be categorized within one or more of the following three rationalities: functional, economic and political. Each rationality includes distinct assumptions about the nature of organizations, their decision-making processes, and the norms used to evaluate those processes (see Table 1). Depending on the situation, these norms may be contradictory, but can also be complementary or supplementary.

Functional rationality of software selection – In the literature that accepts a functional rationality, the selection process is perceived as formal and linear. It is assumed that the selection will lead to the best technology fit for the organization (Howcroft and Light, 2010). Within this perspective, functional and technical requirements prevail. It is assumed that all the necessary information about the software's properties is available (Pollock and Williams, 2007). Studies within the functional tradition (Butler, 1999; Keil and Tiwana, 2006) propose prescriptive procedures to reach a best fit between the organization and the packaged software through a selection and implementation process that involves the following activities: 1) understanding the organizational requirements; 2) identifying and evaluating available packages against those requirements; 3) selecting, contracting and acquiring the package; and 4) customizing the software solution. This linear decision-making approach is in line

with the so-called ‘rational models of decision-making’, such as the classical models of strategic planning (Howcroft and Light, 2010).

Economic rationality of software selection – The economic rationality approach to software selection is not that dissimilar to functional rationality. Both assume that there is a single best solution, which can be objectively determined or even calculated. However, whereas functional rationality concentrates on the best technology fit, the economic rationality concentrates on the cost-effectiveness of the decision-making process and the selection of the economically most advantageous software package (Keil and Tiwana, 2006). This perspective focuses on minimizing the costs in the long run, and assumes that organizations are able and motivated to follow economic motives, even when other options are functionally superior or more acceptable for the most powerful stakeholders. Economic norms of rationality can be applied to evaluate and compare the costs of the decision-making process against alternative modes of decision-making, and whether the decision-making process facilitates the selection of the economically most advantageous offer.

Political rationality of software selection – According to political rationality, software selection can never be objective (Wilson and Howcroft, 2005). This is because different parties struggle to achieve goals in their own best interests and evaluation may serve to legitimize prior decisions. The purchasing organization needs to make trade-offs between different, sometimes contrasting, requirements (Keil and Tiwana, 2006). In the context of software selection, Wybo (2007) notes the power of suppliers to influence the purchasing organization. Suppliers are able to shape the expectations of the purchasing organization about their requirements and the extent of the fit. Furthermore, evaluation is influenced by the product promotions of suppliers. Purchasing organizations often rely on these promotions in evaluating the offers of suppliers. Political rationality can be used to evaluate the acceptability or the social legitimacy of the decision-making process and its outcome in the eyes of the most important stakeholders.

	Functional rationality	Economic rationality	Political rationality
View on decision-making	Central decision-making unit determines overall requirements and compares these with available software packages	Financial perspectives, profitability, costs and benefits drive the decision-making of managers and other participants	Negotiation process of multiple parties who use their power to achieve desired outcomes
Typical decision-making process	Software packages are compared and ranked based on objective criteria	Software packages are compared and ranked on economic criteria to select the economically most advantageous offer in the most cost-effective way	Software packages are assessed by a range of important stakeholders according to dissimilar criteria
Evaluation norms	Formulation of appropriate requirements to achieve the best technology fit	Costs of the decision-making process and whether the economically most advantageous offer is selected	Acceptability of the decision-making process and the outcome for the most important stakeholders

Table 1. Functional, economic and political rationalities and their norms to evaluate software selection processes

3 European tendering legislation

Within the European Union, tendering is required when a purchase of a software package by a public organization involves costs exceeding € 200,000. The associated legislation had four main objectives. Firstly, the legislation promotes *equality*: all potential suppliers must be treated equally. All suppliers

need to have a fair chance of winning the bidding contest. Second, the procedure must be *transparent*. This means that the purchaser has to share all the relevant information with the various potential suppliers and the public. Third, the requirements, as set by the tenderer, must be *proportional* to the procurement order. In other words, the requirements need to be formulated in such a way that suppliers can reasonably meet them. Finally, there is the *non-discrimination* principle that all members of the European Union (EU) must allow entry of products and services from other member states. The member states are expected to incorporate this European tendering legislation in their own national legislation.

A typical software selection tendering process includes the following six phases (Pijnacker Hordijk et al., 2009):

1 *Announcement* - During this phase, the tender documents are formally issued. These documents include the purchase and contract conditions, and the selection and assignment criteria. The announcement is made public in line with legal prescriptions.

2 *Application* - Suppliers have the opportunity to submit a bid. The purchaser replies to questions from suppliers in so-called Notes of Information. This involves anonymizing the questions and informing all the potential suppliers of the questions and answers. This is to enhance transparency and equality.

3 *Selection of appropriate suppliers* – In the case of non-public tendering, the purchasing contractor has to select likely suppliers. In selecting ‘appropriate’ suppliers, the purchaser has to communicate the reasons for exclusion, the requirements and the selection criteria to all the potential suppliers.

4 *Enrolment* - The contractor invites the selected suppliers to enrol, and formally rejects the others. This is often referred to as shortlisting. The contractor collects the enrolment information, formulates a legal report and responds to questions from the suppliers.

5 *Assignment* - The enrolments are checked to ensure they meet the requirements. The best bid is then chosen and a legal report written. The rejected suppliers may raise objections within the ‘Alcatel standstill’ period of 20 days. The assignment decision should be based on the lowest price or on the most economically advantageous tender (MEAT). When using MEAT, factors other than only price are taken into account, such as technical and functional criteria. The criteria are weighted and the outcome determines the winning tender. The choice as to whether to use MEAT or the lowest price is to be made known in the announcement phase.

6 *Completion* - To conclude the tendering procedure, the contract has to be signed, the outcome published and the procedure evaluated. In addition to the tender documents, the contractor may issue a framework. This framework contains the terms a supplier needs to comply with when signing the eventual contract.

During the tendering procedure, informal contacts between suppliers and the contractor are prohibited. There are, however, some instances where suppliers are allowed to ask questions or raise objections, but these are always predetermined occasions and will be formalized and in a written form. Questions must concern the specific requirements and preferences, and other questions will not be considered. Further, suppliers are only allowed to approach designated individuals at the contractors, such as the project leader for tendering. Contacting others is prohibited. The ‘note of information’ process is such an occasion where suppliers are allowed to ask questions. Such questions must seek clarification of the proposed requirements and preferences as formulated by the contractor. The questions are anonymized and shared with all potential suppliers. All formal contacts have to be in the language requested by the contractor.

4 Research method

Research design – In this study, we have adopted the interpretive single case study approach (Walsham, 2006). A case study provides information to engage in theory development and refinement that can be used to fill gaps in existing knowledge (Eisenhardt, 1991). For us, a single-case study

enables an in-depth investigation into the decision-making process related to tendering for a software package. This concerned the selection of a Client Monitoring System (CMS), with the aim of replacing a range of organization-wide and departmental systems. With this new system, a single digital record of each client should become available to all professionals, as well as to managers and support staff.

Data collection – Initial access, in order to collect data for a larger research programme, was negotiated with the project group in 2012. This reported study is one of the projects within that programme. Over the course of twelve months, the research team visited the organization 31 times and interviewed various stakeholders. Data for this research project were primarily collected through interviews with staff members involved in the procurement and implementation of this system, where the tendering aspect was just one part of the interview. Further, six in-depth, semi-structured interviews exclusively on tendering were conducted with five interviewees. The selection of interviewees was based on their expertise and involvement in the tendering procedure as well as their knowledge of the entire implementation process. Moreover, the interviewees were intentionally selected from different backgrounds, e.g. IT, legal, professional and management, and included project leaders, IT staff members and representatives from the professional staff. The interviews were, in part, aimed at reconstructing relevant events and interpretations of the tendering process. Interviewees were encouraged to describe critical incidents and how they perceived the software selection tendering process. The interviews lasted between 60 and 90 minutes and were recorded and then transcribed. It is possible that the opinions and meanings given by the interviewees were reconstructed in the light of later events, and we attempted to neutralize this potential bias by also drawing on other materials. Here, access was granted to the electronic tendering tool where all official documents of the tendering procedure were stored. These documents included the contracts, lists of requirements, offers and evaluations. Triangulation was carried out by comparing the interview scripts with each other and with these internal documents. We asked the project leader responsible for the tendering procedure, as the individual with the most extensive knowledge of the tendering procedure, to check the descriptive data, and corresponding themes and patterns. This check was carried out immediately after completing the analysis and again in the final phase of the research. In addition, other project leaders were asked to verify factual information. These project leaders suggested written modifications as well as additional information and clarifications. This feedback led to the refinement of the themes and patterns. These refinements concerned the phases, the characterizations and the analysis. Finally, the themes were compared with the existing literature on packaged software selection, as described in the theoretical background section, to develop the analysis.

Data analysis – The first step in the analysis was to describe the phases followed during the software selection process. The next step was to identify and compare descriptions of the process used by the interviewees by coding accounts that characterized the tendering decision process. Both deductive and inductive coding strategies were employed. Examples of deductive codes are functional, economic and political rationality as discussed in Section 2. Inductive codes were developed from interpreting the data, leading to codes such as juridification and formalization. A comparison of the interpretations by two researchers of the accounts revealed recurrent themes that characterize different dimensions of the decision-making process related to tendering in this organization. Differences in coding were discussed, sometimes leading to adjustments in the coding schema. To stimulate the respondents to reflect on this tendering process, they were also asked to compare the tendering procedure as prescribed in the tender legislation with the procedure followed by the organization. Identified process deviations stimulated us to develop new ideas and perspectives. Once the process dimensions were assessed, they were evaluated against the three rationality norms.

5 Case description

Context – Over the recent past, the organization had developed a vision on organizational IT that implied a move from fragmented information systems to a single integrated organization-wide architecture. This vision included the adoption of an organization-wide off-the-shelf client monitoring system to replace a wide range of departmental and individual legacy applications. Some of these were outdated and becoming difficult to maintain. The client monitoring system was to cover frontline operations such as account and service management, and also back-end support activities like planning. It would integrate departments and standardize operations. The system should provide the various professional groups involved, the management and the support staff with relevant client-related functionality such as order entry, decision support, professionals' notes, client documents and client history. In addition to the procurement of the system, the contract included support and maintenance of the implemented system. The organization opted for a commercial off-the-shelf system rather than an in-house customized development to reduce uncertainty over functionality and price.

Summary of the tendered decision-making process

The software selection project was divided into five phases.

Phase 1: Initiation - The project was initiated by the board of directors. They saw a need to investigate the possibility of an organization-wide client monitoring system. They asked the head of the IT Policy department to collect the necessary information.

Phase 2: Market exploration - This phase was intended to reach an understanding of the possibilities of client monitoring systems, and become familiar with suppliers in this market. To this end, staff members visited similar organizations to observe a range of client monitoring systems and to discuss them with users. A range of employees from within the organization were involved, including service professionals, managers and technicians. During this phase, the professional staff members developed a shared preference for one particular supplier. Two other potential suppliers had been major IT suppliers in the past and a fourth supplier was considered 'largely unknown'. Two other suppliers proposed partnerships with the organization to jointly develop the client monitoring system. The organization rejected these offers, since they preferred an off-the-shelf package.

Phase 3: Developing requirements - During this phase, a steering committee was formed together with the executing project teams. The steering committee consisted of representatives from various parts of the organization (e.g. professional service providers, research staff, support and secretarial personnel). The project teams were responsible for specific parts of the process. In addition, department-specific working groups covering the range of services delivered were formed to articulate system needs. They were asked to develop a list of critical requirements and preferences that should be reflected in the system's functioning and performance.

Phase 4: Starting the tendering procedure - Based on the inputs from the working groups, a list of more than 2000 requirements and preferences was formulated. In addition, the organization drew up an extensive draft contract for the eventual supplier. This contract was carefully put together since the organization wanted to minimize risks and uncertainties. In this phase, the tender documents were finalized and the announcement was published.

Phase 5: Evaluation: selection, enrolment, assignment and completion - The organization had expected four suppliers to apply. However, one supplier indicated that they did not agree with the proposed requirements, preferences and contracts. Another supplier expressed concerns regarding the proportionality within the proposed tender. The organization then invited these four suppliers to a face-to-face meeting. After that meeting, all four suppliers agreed to submit an offer. The four tenders were evaluated by staff members from various service departments. The developed electronic tendering tool automatically indicated the extent to which suppliers met the requirements. All 'requirements' (in contrast to 'preferences') had to be met. Suppliers would be rejected if any of the requirements were not met. If no supplier met all the requirements, the requirements would be reconsidered so that providers could rebid on the basis of the new requirements. In practice, one supplier failed to meet three of the 642 requirements and was automatically excluded. The initially

largely unknown supplier met all the requirements and was rated best on both price and functionality and so was declared the winner of the tendering procedure. After identifying the best bid, detailed contract negotiations started and the outcome was published.

The quality of the decision outcome and its acceptability to key stakeholders is difficult to assess as this will only become apparent over time: i.e. in its future use and customization, and ultimately in organizational performance. The scope of the current study is necessarily limited to the process quality. Thirteen additional interviews and meetings with internal stakeholders within the organization show that it is seen as a *fait accompli* to which not many people will openly object, even in this multi-professional climate. Informally, some still raise objections or voice doubts about the chosen supplier, but most accept that there is no turning back given the legal constraints and the huge financial risks involved. The general feeling seems to be that there are so many interests involved that it will be impossible to please everyone. Nevertheless, a sense of urgency is felt, as a project leader commented: “*It will succeed, because it must not fail*”.

6 Analysis of the decision process

What are the experienced consequences of the European tendering procedure for decision-making over software selection in terms of its experienced process and outcome? The inductive data analysis revealed five decision-making process characteristics (Table 2) that, in the view of the interviewees, characterized the decision-making over tendering for this strategically important software package.

Decision-making process		Decision-making quality	
<i>Process dimensions</i>	<i>Experienced effects</i>	<i>Experienced drawbacks</i>	<i>Experienced advantages</i>
Juridification	High impact. Legal expertise functions as power base.	Legal issues distract from substance.	-
Linearity	Fully prescribed steps with some room for <i>ad hoc</i> additional activities.	No room for progressive insights.	Predictable phasing and activities. Consistency – sticking to self-developed demands.
Objectivity	Only explicit criteria taken into account. Checking against criteria by several people.	Cultural misfit between tendering and organization.	No room for personal preferences. Clear demands and valid selection. Transparency.
Formalization	Highly prescriptive steps, procedures and activities.	Slow progress; resource heavy.	Consistency, completeness, controllability.
Communication	Distant relationships, only formal communication.	Hard to develop mutual trust and shared understanding. Co-makership impossible.	Fair and equal distribution of information.

Table 2: Experienced effects on the buyer’s side decision-making process and quality

Juridification: a legal game

All the interviewees saw how a tendered software selection process leads to juridification. They spontaneously mentioned the legal aspects of the procedure, e.g. “*It’s a juridification, the process has become far more juridified.*” [PL3]. Moreover, the documentation shows that, in the information note,

one-third of all the questions from suppliers concerned legal issues. Above all, juridification was seen as a reason to buy or develop legal expertise. Not only the organization, but also all but one of the potential suppliers, hired legal advisors, or used in-house lawyers. Due to its lack of legal expertise, one supplier violated numerous rules and proved incapable of complying with the procedure. These experiences may explain why one project leader evaluated the process as follows: “*The tendering procedure was above all an enormous legal hassle*” [PL1]. Another even claimed: “*I do not know any process that improves when lawyers become involved*”, and a representative of the professional staff added: “*I’m fed up. We’re stuck with the legislation.*” [SP]. The general feeling could be summed up as “*if we had not been bound by tender legislation, we could have done this much quicker*” [IT staff]. Nevertheless, positive effects of juridification were also mentioned: “*tender legislation forces you to stick to your self-developed requirements*” [PL2] and “*an advantage of the legislation is that it is a clean process*” [IT staff]. Within the imposed legal boundaries, the organization manoeuvred to satisfy internal and external stakeholders without running the risk of a lawsuit or other major problems. Project Leader 3 stated: “*Once you are forced to comply with legislation, you seek as much freedom as possible*”.

Linearity: a blueprint straightjacket, but open to ad hoc extra activities

The documentation shows that the decision-making process of this software selection was linear and strictly divided into the prescribed phases of the tender legislation, from requirement definition through to evaluation and choice. While the activities and sequence in the blueprint were strictly followed, a few activities were added during the process based on unforeseen events. For example, after the tender announcement (phase 4), Supplier A sent an e-mail to the board of directors. This message indicated that the requirements were far too complex and that they were considering not submitting a bid. This was a shock for the organization, particularly since this was the professional staff’s ‘preferred’ supplier. A project leader was asked to resolve this problem: “*We made a legal emergency plan, a so-called conformity table. This is nowhere to be found in the tender legislation. It was a creative solution by some lawyers to ensure that enough suppliers remained*”. The lawyers, from an independent law firm, claimed that this was an ‘*appeal to escalation*’ and that this was allowed when the proportionality principle was in jeopardy. Further, a project leader evaluated the linearity negatively: “*Insane, a legally sealed process*” [PL2]. Thus, despite the linear plan, a few extra activities were added to the blueprint along the way although these did not involve any cyclic activity in the sense of returning to previous steps.

Objectivity; clean and rational choices within a highly complex legal playing field

The involved professional’s impression was that “*this process was much more objective. Criteria are determined and scored, without prior knowledge of the outcome. The outcome was different from what we had hoped*” [SP]. Despite this objectivity, some interviewees characterized the procedure as a ‘*legal game*’, a qualification not immediately associated with ‘objectivity’. The buyer and especially the suppliers needed to acquire or develop sufficient legal knowledge to be creative within the legal boundaries. Supplier A clearly lacked such an understanding, and this ultimately seems to have resulted in exclusion, or to put this slightly differently: this was not their game. The programme’s management wanted to establish organization-wide support by involving the major stakeholders in the development and assessment of the requirements. From this perspective, the tendering legislation fitted the organization well: establishing functional requirements and an accompanying contract was one of the most important considerations. The tendering legislation provided the programme’s management with a tool to achieve their goals despite opposition from the professional staff. “*An advantage of the legislation is that it is a clean process that removes personal preferences*” [IT staff]. “*It’s a prescriptive, rational and analytical process, which is very different to our field, where emotions, clients and professional autonomy are important*” [PL1]. According to another project leader, this is evident in the functional quality of the outcome: “*the selected supplier was much better on price and functionality*” [PL2].

Formalization leading to perceptions of an inefficient process

All the interviewees commented that tendering for the software required attention to be given to organizational rules and procedures to cover all the activities of the process since these needed to comply with the tendering legislation. This was felt as a decrease in informal behaviours associated with strategically important decisions and large investments. A project leader expressed it as: “*it forces us to document everything and to make conscious choices*” [PL1], which accords with the following perception “*the process is very prescriptive, rational and analytic*” [PL2]. Nevertheless, there were some informal influences on the decision-making process. Early in the process, during the market exploration phase before the tender was announced, potential suppliers were identified. Supplier A appeared to be the best option and the professional staff were especially very enthusiastic. A representative explained: “*I really preferred Supplier A. If they had been chosen, it would have been much easier to get the professional staff involved. The look and feel of A’s package was much better. Their way of doing things and the embedded knowledge in the firm was superior*”. Suppliers B, C and D were also considered as good. Two other potential suppliers, E and F showed an interest in tendering but these were considered inferior to the other four and there was a lack of a positive feeling. Although this was never formally articulated, and not even voiced in so many words, it was known that the board of directors and the steering committee both agreed on excluding supplier E and F. The impressions held of the various suppliers were based on the market exploration and presentations made by the suppliers. The views of the board of directors and steering committee seemed to be heavily influenced by the ideas and opinions of the medical staff. Evaluations of the formalization were predominantly negative; with interviewees indicating that tendering through a formalized decision-making process becomes inflexible, expensive and lengthy. A project leader noted, “*If we had not been bound by the legislation, it would have certainly gone much faster*” and an IT staff member commented, “*It’s a waste, because it is so expensive and time consuming*” [IT staff]. Some of the leading professionals clearly agreed, “*It’s a waste of money. I wanted it to go much faster and more efficiently, it’s an enormous bureaucracy*” [SP] and “*It feels like a straightjacket, that’s a disadvantage*” [PL1], and another nuanced, “*If we had more freedom, we wouldn’t be so strict in the requirements*” [PL3]. Project Leader 3 further remarked, “*Why all the effort to fill out this enormous document?*” Despite the formal procedures and criteria, the organization could still choose to be rigid with candidates they wanted to exclude, or a little more flexible with those they wanted to keep in.

Communication characterized by distant and impersonal relationships

A final emerging theme was that tendering forces the relationship between the contractor and suppliers to become more impersonal and distant than it had traditionally been. This was seen by the interviewees as peculiar and a consequence of the tendering process, “*Normally, we would have been in conversation*” [PL1]. The lack of a gradual development of mutual trust and shared understanding is reflected in the selection of Supplier D as the successful bidder. As an IT staff member stated, “*In my opinion, Supplier D came as complete surprise*”. Another IT staff member explained this as follows: “*We need to have a shared feeling with the suppliers, but this is very difficult if we comply with tender legislation*” [IT staff]. Moreover, developing a partnership with the organization, the relationship that Suppliers A and B were seeking, was difficult within the tender legislation. The tendering procedure was seen as making a lasting relationship difficult since mutual trust could not be developed during the early stages. This is reflected in an answer to the question on how tendering affects the start of the client-supplier relationship, “*if you could behave loosely and speak more freely, then you would have had a totally different understanding*” [PL3]. The relationship difficulties have paradoxical connotations as reflected in the following statements: “*that is the difficulty: to develop requirements that force the potential supplier to be a partner*” [PL3] and, “*without tendering it would have been another supplier*” [PL3]. In that sense, the principles of equality and non-discrimination in the legislation were certainly upheld.

7 Reflection on the decision-making quality

The case study presented here aims to *clarify how the European tendering system shapes a buyer's software selection processes and to evaluate this in terms of functional, economic and political norms of rationality*. In the previous section, it was shown how insiders experienced the tendering as bringing not only juridification but with it a highly formalized, strictly linear selection process, characterized by impersonal communication and distant relationships between suppliers and buyers, and driven by objectified considerations, criteria and choices. As the previous section also showed, the insiders' evaluations of the five dominant decision-making characteristics were multifaceted. In the introduction, we argued that, in evaluating the quality of decision-making, one needs to take account of the functional, economic and political norms of rationality that are all in play. These rationalities are complementary to the extent that all three are based on arguments that may be seen as legitimate in a business environment. However, in their practical application, they can lead to conflicting norms.

Evaluation in terms of functional norms of rationality

Tendering forces a purchasing organization to make decisions based on explicit objectified requirements and criteria. The resulting tendencies are mutually reinforcing and overlap considerably. Juridification leads to formalization that, in turn, leads to distant and impersonal relationships. Juridification requires the organization to acquire specialist legal knowledge as the procedure is legally complex. Personal preferences, first impressions of suppliers, and all kinds of emotions become less important when tendering legislation steers the selection process. Contracts and other formal communication channels become the main means of expression. The interviewees did not seem to doubt the 'correctness' of the selected package in terms of meeting the articulated requirements. Some interviews and informal conversations also show that some internal stakeholders remained unconvinced and foresaw problems. Tendering invokes a tendency to use organizational rules and procedures in all the activities of the process and to shape it in a linear fashion. This accords with a functional rationality within which reality is seen as known and predictable. Under such conditions, the buyer is able to plan ahead, to describe requirements and to prescribe conditions, and then to evaluate offers based on these requirements and conditions. The tendering rationality is thus dependent on the epistemological assumption that knowledge can be objectively articulated and shared (Burrell and Morgan, 1979). While such an assumption may accord with much mainstream IT literature, it is vehemently contested by others (see Hirschheim and Klein, 1989).

The provision of a strategically important software package has not only product but also service characteristics and, especially in service delivery, trust seems to be a critical success factor (Johnson and Grayson, 2005). In the process studied, a service is being provided in terms of configuration and customization, building interfaces, instructing the buyer, providing new releases and updates and other 'after sales' services, including maintenance and support. These are crucially important and require consideration of 'softer' criteria such as responsiveness, cultural fit and sector expertise. Can these informal requirements be 'captured' and objectively evaluated, or do they need more subjective approaches? An unanswered question is whether evaluating the product and service characteristics of an offer are equally facilitated and represented in the tendering decision-making process.

Evaluation in terms of economic norms of rationality

Tendering was seen as increasing process costs in three ways: the legal expertise that had to be hired in or developed; the time involved (including waiting times); and the many steps, many participants and detailed procedures involved. As there was only one opportunity to formulate requirements, many were very specific to ensure completeness, and the process demanded at least four supplier bids against which these criteria were evaluated. These legal technicalities took much energy and attention, and this was not always regarded as instrumental. With hindsight, some interviewees noted that a shortlist of requirements would have been beneficial, an approach other organizations in their field had used. However, it was also known that these organizations had faced major implementation problems and this led to some acceptance of the very extended and intensive approach taken. Our findings are in

line with ones in the construction industry (e.g. Wong, Holt and Cooper, 2000) that, on the client side, the 'lowest price' is not necessarily the principal criterion and that product-specific criteria are also taken into account, although lowest price is still the underlying philosophy. In our situation, the chosen supplier's solution was cheaper than that of the initially favoured supplier, and so the economic quality of the decision seems appropriate despite the process costs and the reality that fundamental uncertainties and post-contract risks on both sides remain.

Evaluation in terms of political norms of rationality

In retrospect, it seems that the tendering legislation offers various options to exert power and to function in the best interest of important stakeholders that have to accept the decision outcome and be kept on board during the process. Clearly, the strict juridification caused a reaction. Given the imposed boundaries, the organization seemed to manoeuvre in order to satisfy internal and external stakeholders without running the risk of a lawsuit or other major problems. Deviations from the procedure were a result of conscious choices by project leaders and the programme management. They had to find a compromise that satisfied powerful internal stakeholders and complied with the tendering legislation. Where the decisions were made, and by whom, was not always straightforward. However, it is clear that decisions based on a hierarchical authority were made in order to gain control over the process and the outcome. The accounts show how political manoeuvring persisted, such as in the timing of excluding suppliers that did not fulfil all the criteria. This political activity was partly based on various sources of power (French and Raven, 1959) and on influence mechanisms (Kipnis, Schmidt and Wilkinson, 1980; Yukl et al., 1992). Expertise, in terms of legal knowledge, becomes a dominant power source. This is in line with findings elsewhere that non-compliance remains a problem but that this is explained more by purchaser's lack of familiarity with the rules rather than by a perceived inefficiency in the rules or by supplier resistance. Formal authority is still exerted, but only at distinct phase-bound moments and within the legal constraints of tendering. If project managers are aware of informal leaders in the organization, they tend to adjust implicitly to their wishes. Moreover, as arbitrary interventions or changing one's mind halfway through a tendering process is impossible, it seems important to get powerful actors, who have to accept the software package, on board at an early stage. In terms of influence mechanisms, with the exception of rational persuasion, soft influence mechanisms (such as inspirational and personal appeals) are replaced by harder, more overt and coercive mechanisms (such as legitimating tactics and pressure). This seems to be a consequence of all attempts at influence having to be channelled into explicit procedures and choices. However, harder, more coercive, forms of influence have been reported as less effective (Molm, 1997).

8 Discussion

The goal of this research was to contribute to the field of IS decision-making, and more specifically to software selection processes. The theoretical contribution of this paper has been in deepening understanding of the influence that tendering legislation has on how organizations select strategically important software packages. In conceptualizing tendering legislation's influence on packaged software selection, we drew on three rationalities derived from Koopman and Pool (1990). In this respect, the study also adds to the work of Howcroft and Light (2010), Pollock and Williams (2007) and Tingling and Parent (2004) by shedding light on the grey area between functional, economic and political rationalities. The tendering legislation emphasizes juridification, formalization and a distant relationship between contractor and supplier, and this would seemingly decrease the influence of power, emotions and partnering. At first sight, tendering typically represents a bureaucratic model of decision-making (Koopman and Pool, 1990) because the tendering legislation requires a centralized authority and formal decision-making. Nevertheless, social and political aspects continue to shape the selection process and have the potential to significantly alter the outcomes of the process albeit through other influence mechanisms than previously.

In the first instance, formalization, distant buyer-supplier relationships, linearity and objectivity all push the actors towards the use of harder influence mechanisms at the expense of the softer tactics (Kipnis et al., 1980). This may be regrettable given that the former are usually reported as less effective (Yukl and Bruce, 1992; Molm, 1997) Secondly, we also observed that the tendering legislation offers opportunities to deviate from the stated procedure, creating room for political manoeuvring. We also saw that legal knowledge - how to 'play the game' - becomes vital for all the actors involved. Legal knowledge thus becomes a critical source of power (French and Raven, 1959) that enables manoeuvring that is political in nature but seemingly within legal boundaries. To summarize, while the tendering legislation is intended to enforce the exclusive use of functional and economic norms, we found that political rationality continues but in a different guise.

Juridification involves a costly formalization of the process. In this respect, juridification goes against economic rationality. In terms of economic rationality, the crucial question is whether the enforced competition for the lowest-priced offer compensates for the vastly higher process costs in terms of time and resources. Juridification also runs counter to functional rationality because it leaves no room for progressive learning during the process. More fundamentally, the ontological assumption underlying such juridification is a world characterized by heterogeneity and conflict that requires an imposed order and coercive measures. Conversely, a functional view assumes homogeneity and harmony (Burrell and Morgan, 1979; Hirschheim and Klein, 1989). The introduction of tendering legislation implies that these assumptions are unrealistic: that to rule inequality out and install fairness, i.e., create a situation that fosters functional norms of rationality, the costly process has to be accepted. Therefore, tendering legislation, if appropriately used, might serve as a tool to achieve outcomes contrary to the preferences of powerful stakeholders. The outcome of a tendering procedure should have a flavour of objectivity and formal legitimacy that discourages further objections.

Limitations and future research – The study's outcomes and its contributions need to be viewed in the light of its limitations, which also point towards future research opportunities. First, the number of expert interviews was limited, although we did complement these with other data sources. Second, since the expert interviewees were all employed or hired by the buyer, the suppliers' viewpoints are not, or at best only indirectly, included. Third, a comparable case that did not follow the European tendering framework was not available as a basis for comparison. Consequently, the effect of the tendering framework could not be directly measured. Our approach was interpretative, in the sense that the experts' frames of reference served as a basis for comparison. The interviewees had views on how it might otherwise have gone based on previous experiences if they had not been forced to conform to European legislation. Further, the interviewees often compared their decision-making with that of other organizations in their field. Some of these firms took a very different approach, seemingly based on a different mix of rationalities.

Future research could test this study's conclusions on the way that tendering changes the decision-making process and quality. Studying other cases could verify the findings. Secondly, since the suppliers' viewpoints were not included it would be interesting to study their position, their views and their influence on the decision-making processes. Thirdly, there was little evidence of the influence of the wider context covering the industry, intermediaries (consultants) and product development. In future research, more attention should be given to this issue, particularly because consultants can have a significant influence on the process. Finally, recent studies (Howcroft and Light, 2010) arguing that requirements are continuously evolving raise the issue as to how changing requirements are reconciled, or clash, with the linear selection process induced by the tendering legislation.

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