Contracts, trust and information systems innovation

Contratos, confiança e inovações em sistemas de informação

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Abstract

This paper discusses the use of contracts as the prevailing coordination mechanism in IS innovation processes in which an external provider is appointed. Drawing from a theoretical framework founded on systems theory, structuration theory and neo-institutionalism, this paper argues that IS innovations take place in a relatively weak institutional context, which accounts for the generalised preference for contracts over other coordination mechanisms (i.e. trust) as a means of governing interorganizational exchange. Based on secondary data, two constituent elements of the institutional context of IS innovations are analysed, namely the institutional aspects of the IT industry and the legal system.

Our argument has both academic and practical implications. Academic implications emphasize the importance of acknowledging the institutional dimension of contracts and trust. Regarding practice, the need for a better understanding of the role of contracts is suggested.

Keywords: Contracts , Trust , Informations Systems Outsourcing.

Resumo

Este artigo discute o uso de contratos como o mecanismo prevalente de coordenação existente nos processos de inovação de SI, em que um provedor externo é nomeado. A partir de um referencial teórico baseado na teoria de sistemas, teoria da estruturação e neoinstitucionalismo, este artigo argumenta que as inovações de SI ocorrem em um contexto de relativa debilidade institucional, o que explica a preferência generalizada pelos contratos sobre outros mecanismos de coordenação (confiança), como um meio de regular o intercâmbio interorganizacional. Com base em dados secundários, dois elementos constitutivos do contexto institucional de inovações de SI são analisados, sendo eles, os aspectos institucionais da indústria de TI e do sistema jurídico.

Os argumentos aqui apresentados têm tanto implicações acadêmicas, quanto práticas. As implicações acadêmicas enfatizam a importância de reconhecer a dimensão institucional dos contratos e da confiança. Em relação às implicações práticas, a necessidade de uma melhor compreensão do papel dos contratos é sugerida.

Palavras - Chave: Contratos, Confiança, Sistema de informação.

1. Introduction

Since the early days of computing, user organisations regularly contract out some of their IS activities. With the advent of outsourcing, the number and range of IS functions that can be provided externally has dramatically increased (GURBAXANI, 1996; WANG, 2002). The IT marketplace caters for every IT-related activity, from the simplest hardware maintenance to the more complex and sophisticated consultancy on IS strategy.

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The reasons why IS activities are left in the hands of external providers have been extensively explored in the IS literature. Fundamentally, organisations justify the use of external providers on economic and service expectations, the lack of the necessary skills, and the intention of focusing on their core competencies (LACITY; HIRSCHHEIM, 1993; LACITY; WILLCOCKS; FEENY, 1996). What is not questioned in the literature is why the relationship between the user organisation and the IT vendor is governed through a contract. The need for a contract has only been challenged by the literature on trust, which explores how under conditions of high complexity and uncertainty, partnership agreements can be more efficient than transactional ones (HENDERSON, 1990).

In essence, a contract is a mechanism for coordinating interorganisational exchanges. Another mechanism that serves the same purpose is trust. Both contracts and trust have some inherent limitations that make it either too risky or too inefficient to use them on their own. Indeed, a combination of both is often found in practice.

According to Bachmann (2001), when the institutional framework of a business relationship is relatively weak, and organisation will not find good reasons to trust its business partner, and will rely on its own power (contract) as a way to increase its control over the business partner, and hence to ensure he or she behaves in a desirable manner (*personal power*). Based on this theoretical proposition, we argue that the institutional arrangements that constitute the context of IS innovation processes are perceived to be weak. Therefore, the prevailing coordination mechanism selected by client organisations to govern their relational exchanges with IT vendors is personal power, in the form of a contract. We believe that this argument, which acknowledges the power and institutional dimensions of, as well as the risk involved in IS innovation processes, has meaningful implications for both practice and research.

The remaining of this paper is organised as follows. The next section reviews some of the literature on trust and contracts and discusses the main limitations of these two mechanisms for coordinating interorganisational relationships. Chapter 3 presents in more detail Bachmann's argument regarding the role of institutional arrangements as determinant of the prevalence of trust or power. Next, we explore some of the elements that constitute the institutional setting in which IT innovation processes take place and show why this setting may be seen as relatively weak. Chapter 5 discusses the implications of our argument for both research and practice. Finally, we conclude by identifying some of the major limitations of our work, as well as pointing in some directions for future research.

2. Contracts and trust in the literature

Within the IS field, the outsourcing literature is the one that has devoted more attention to the contract in the context of IS service provision. The complex nature of outsourcing deals has made some researchers aware of the importance of the contract to the performance of outsourcing ventures (KERN; WILLCOCKS, 2000; LACITY; WILLCOCKS, 1998).

However, the outsourcing literature does not directly address the question of why contracts are needed. On the contrary, taking for granted the need for contracts, a considerable number of studies in the academic, practitioner and governmental outsourcing literature have sought to produce recommendations about the way such contracts should be negotiated, structured and managed –some examples are (ANG; TOH, 1998; CLARK; ZMUD; MCCRAY, 1998; WHANG, 1992) in the academic literature, articles in practitioners' magazines (BENTLEY, 2003; GILL, 2003a, 2003b), and publications by the British Central Computer and Telecommunications Agency (1994a, 1994b) and the Office of Government Commerce (2002) –.

Since we aim to explore the reasons why contracts are considered necessary in IS innovations that are carried out by an external provider, we decided to dig deeper into the IS outsourcing literature. The major theoretical foundations that have been applied to study IS outsourcing practices are rooted in the economic and management traditions. In this paper, one management theory – relational contract theory– and one economic theory – transaction costs theory – will be analysed to see how they explain the use of contracts in the context of IS outsourcing.

2.1 A management perspective

Some of the theories that have been used to analyse IS outsourcing from a management / organisational perspective are resource based theory and resource dependency theory (GROVER; TENG; CHEON, 1998; LACITY; HIRSCHHEIM, 1993), interorganisational relationship theory (IOR) (CHUNG, 2000; KERN; WILLCOCKS, 2000; KERN; WILLCOCKS, 2001), and more recently social exchange theory (SET) and relational contract Theory (RCT) (KEPPLER, 1998; KERN; WILLCOCKS, 2000; KERN; WILLCOCKS, 2001; LEE, 2001).

While most of these theories refer indirectly to contractual issues, RCT was selected here for deeper analysis, because it is the one that discusses more explicitly and comprehensively the role of contracts in the context of social exchange relationships.

According to Macneil (1980), specialisation of labour makes economic agents dependent on exchanges to have access to all the goods and services they need to carry out their normal operations. The awareness of the continuity of such exchanges in the future makes it necessary for both parties to have a contract to rule their exchanges. The contract serves to facilitate the ongoingness of the relationship over time, being at the same time embedded in the law.

RCT introduces relational contracts, which are different from discrete contracts (MACNEIL, 1980). While discrete contracts try to mitigate the risks associated to the uncertainty of the future through highly elaborate clauses, relational contracts are deliberately incomplete; hence, parties also need to use non-contractual mechanisms for coordinating their exchanges. Macneil argues that the behavioural aspects of the relationship – i.e. trust, cooperation – can fill such intentional contractual gaps.

RCT does not aim to question the existence of contracts. Instead, it seeks to overcome the limitations of traditional contracts by broadening the concept of contract to include behavioural and normative issues. Our exploration of RTC leave us with an unresolved question: since written contracts cannot cope with the uncertainty of the future and some extra coordination mechanisms are needed, why do organisations still need contracts? In other words, would it be possible to 'drop the contract' and rely exclusively on those extra coordination mechanisms to govern the exchange? Let us see if the economic perspective has an answer to this question.

2.2 An economic perspective

Many economic theories have been used to analyse the IS outsourcing phenomenon. Some of them are transaction cost theory (TCT) (ANG; TOH, 1998; AUBERT; RIVARD; PATRY, 1996; GROVER; TENG; CHEON, 1998; KERN; WILLCOCKS, 2001, LACITY; HIRSCHHEIM, 1993), agency cost theory (GROVER; TENG; CHEON, 1998; VITHARANA; DHARWADKAR, 2002), incomplete contract theory (BAKOS; BRYNJOLFSSON, 1993; RICHMOND; SEIDMANN; WHINSTON, 1992) and game theory (ELITZUR; WENSLEY, 1998). In this paper, the analysis of economic-based accounts of IS contracts will concentrate only on TCT, not only because this is the theoretical framework that has been used more extensively by IS researchers to study outsourcing practices from an economic perspective (LACITY; WILLCOCKS, 1995), but also because other theories, namely agency cost theory and incomplete contract theory, can be interpreted as consistent with the general propositions of TCT, extending them in some particular points.

As presented by Coase (1937) and Williamson (1975, 1987), TCT is concerned with two governance structures: the market and the hierarchy. The decision of whether an economic activity is contracted out or carried out internally depends on the specific combination of the production and the transaction costs of performing such activity through a market or a hierarchy, respectively. Markets have relatively lower production costs than hierarchies, mainly due to economies of scale, but their transaction costs are higher.

Transaction costs are a consequence of information asymmetries, which exist on both the vendor and the client side. TCT states that hierarchies are more efficient than markets when information asymmetries are high. If a market structure is nonetheless preferred, Williamson admonishes that organisations should opt between

sacrificing product features to reduce asset specificity or setting up an elaborate contract, to prevent the risks of dependence on the vendor and of vendor's opportunistic behaviour. However, on the basis of bounded rationality, TCT recognises that a contract cannot foresee all the possible situations that may arise between the parties.

Classical TCT provides a way out of the incompleteness of contracts. When uncertainty is so high that it becomes impossible to cope with it through a market or a hierarchy, a clan governance structure becomes necessary. This structure relies on trust as its primary coordination mechanism (OUCHI, 1980). More recent studies informed by TCT find that there is a need for trust even in markets and hierarchies (ADLER, 2001; McEVILY; PERRONE; ZAHEER, 2003).

However, using trust as a coordination mechanism is not straightforward. Clans require the existence of common values and beliefs as well as traditions, which develop through a long period of socialisation experienced by clan members[2]. Such common values and beliefs create some behavioural responses that reduce opportunistic behaviour, or in Ouchi's terms, maintain a low level of goal incongruence. Trust can effectively replace contracts as a coordination mechanism *only if* goal incongruence is low enough. In any other case, some kind of contract (market or hierarchy) is needed (OUCHI, 1980).

Based on TCT, one can argue that although IS innovations are intrinsically complex and uncertain, in the presence of high goal incongruence between client and vendor, the market arrangement must be accompanied by a detailed contract.

However, there is an element in this explanation that we do not find satisfactory. Informed by TCT, IS scholars have shown an increasing interest in partnering approaches (KEPPLER, 1998; WILLCOCKS; KERN, 1998; ZVIRAN; AHITUV; ARMONI, 2001), where trust is obtained by diminishing goal incongruence. (WILLCOCKS; LACITY, 1998; KERN; WILLCOCKS, 2000). However, there is no suggestion that contracts should be replaced by trust, as Ouchi proposes. In fact, when researchers propose trust, they recommend using the contract to build the foundations of trust (KERN, 1997; WILLCOCKS; CHOI, 1995).

Our original question, albeit modified by TCT's terminology, remains unanswered: if there are mechanisms through which interorganisational goal incongruence can be reduced to an acceptable level, facilitating the formation of a clan structure, why do IS researchers and practitioners insist on using contracts for outsourcing ventures?

We were unable to find an explicit answer to this question in the main theoretical propositions of TCT. However, Ouchi (1980) seems to imply that a stable setting is a precondition for the effectiveness of a clan structure.

3. Trust or contract: the role of the institutional framework

The literature on trust refers to the relationship between power and trust. From a client perspective, power is seen as a way of gaining control over the vendor to discourage it from behaving opportunistically (BACHMANN, 2001). Our understanding of contracts is very similar to this definition of power, and hence we decided to assimilate contracts to power, to the extent that they both aim to increase the level of control one party has over the other. In the following paragraphs we will summarise the argument of Bachmann (2001), who in our view provides a compelling account of this relationship.

[2] The literature on trust presents more aspects of trust that limit its usefulness as an interorganisational coordination mechanism. Firstly, trust *per se* does not ensure trustworthiness. It has been argued that personal trust can be built on erroneous judgements (McEVILY; PERRONE; ZAHEER, 2003) and that, although trust can mitigate the risk of opportunistic behaviour, it cannot eliminate it. Therefore, trust inherently involves a certain extent of risk (ADLER, 2001; BACHMANN, 2001), which affects its potential efficacy. Moreover, building trust is a tacit, subtle, slow process (ENGLISH-LUECK; DARRAH; SAVERI, 2002), which output is fragile (McEVILY; PERRONE; ZAHEER, 2003). While trust is built incrementally over a series of perceived events, it can be broken instantaneously (ENGLISH-LUECK; DARRAH; SAVERI, 2002). The breakage of trust produces enormous emotional damage to the trustor (BACHMANN, 2001), making it extremely difficult to rebuild it (ALLEN *et al,* 2000).

Bachmann argues that although trust and power coexist, one of them will always be predominant; he starts by recognising that risk is inherent to trust, as trustees can always behave differently from what is expected from them, producing undesired results to the trustor. Hence, "trustors constantly try to find good reasons for believing that the risk they are prepared to accept is low". Such good reasons are found in the institutional framework in which interorganisational exchanges operate – *system trust* – . In some contexts institutional arrangements are weak, and hence a firm will be less inclined to take the risk of trusting a business partner. Instead of relying on the other party's good will, this firm will use its power to try to ensure that the business partner avoids undesirable behaviour – *personal power* –. Yet, power also carries some risks; even under the threat of sanctions, actors can still show undesirable behaviour. Bachmann argues that firms will choose power to coordinate their interorganisational relationships because "they will often find it easier to bear the risk of open conflict than the risk of misplaced trust. Power may generally be the second best choice, but it is a good choice if trust seems not affordable."

Finally, Bachmann argues that this behaviour is institutionally rather than rationally grounded. The economic and the management perspectives studied in the previous chapter are rooted in assumptions from the rational choice paradigm, and hence fail to understand the institutional properties of trust and contracts. For example, TCT naively believes that the parties to a relationship can deliberately make use of trust in order to achieve their desired results: depending on the level of uncertainty, frequency of interaction and asset specificity firms will device appropriate mechanisms to mitigate opportunistic behaviour, or rely on trust to reduce transaction costs. Ouchi (1980) appears particularly optimistic about the possibility that goal congruence can be created, leading to a clan structure. Moreover, from a rational choice perspective, contracts are the result of a negotiation in which both parties are led by their own individual interests of wealth maximisation (MACNEIL, 1980); therefore, contract negotiation is essential to the establishment of the balance of power between the parties. An institutionalist perspective does not deny the importance of contractual negotiations, but it also acknowledges that contracts, being embedded in a legal system, can only be understood in the larger institutional context they belong to.

4. The institutional framework of it innovations

Since institutions act in a latent manner, we believe that rather than the *actual* strength of the institutional arrangements, it is their *perceived* strength what affects the selection between power and trust. Based on Bachmann's argument, In this chapter we aim to show that, in the context of IS innovation processes, there are reasons to believe that client organisations perceive institutional arrangements as weak, and therefore, they opt for coordinating IS innovations through personal power, exerted through a contract. To support our argument, we will analyse some components of the institutional framework in which IS innovations take place.

For reasons of accessibility to research sources, we decided to narrow down our analysis to the context of the UK. We are fully aware that this decision prevents us from generalising our findings to other institutional contexts. However, we believe that it is in the nature of institutional analyses to focus on one particular country or industry, since results are dependent on contextual issues (AVGEROU, 2001; DIMAGGIO, 1991).

We have decided to study the IT industry and the legal system as the main constituent elements of the institutional context, because we consider them more stable and more widely acknowledged among neo-institutional theorists as part of the institutional framework.

4.1 Institutional analysis of the it industry

DiMaggio (1991) introduces two processes in the construction of an organisational field, structuration and professionalisation. Structuration is the process of making an organisational field distinguishable within a specific society. Professionalisation further contributes to the structuration of an organisational field: "the creation of an organisational field is often intertwined with the efforts of the workers of the field to define a profession and increase their own authority".

In the following paragraphs we aim to assess the level of structuration and professionalisation of the IT industry in the UK. We believe that the IT industry has achieved a high level of structuration but only a low level of professionalisation. We argue that the relatively low level of professionalisation is one of the reasons why client organisations may unconsciously feel that the IT industry is institutionally weak, and thus opt to rule their interorganisational relationships with firms in this industry through a contract.

Structuration of the it industry

DiMaggio suggested four dimensions of structuration, which are analysed below.

Increases in the density of interorganisational contacts – i.e. specialised conferences, advisory activities, etc. –

Specialised conferences within the IT industry are almost as old as the industry itself (ALT, 1987; SMITH, 1991). Additionally, the industry has witnessed a significant increase in consolidation strategies designed to enhance the participants' strategic positioning in the IT marketplace (CURRIE, 2000; CURRIE; SELTSIKAS, 2001). Consolidations have taken place world-wide in the form of mergers and acquisitions, joint ventures and strategic alliances. IT is a business unit of growing importance among many consultancy firms, including leading names such as the Big 4, Accenture and McKinsey. These are clear examples of the increase in the interactions across the industry.

Increases in the flow of information, in the form of publication of books, journals and directories

There has been a substantial increase over the last five decades in the number of publications in all the areas related to information technology, at both the academic and the commercial level (ALT, 1987; COCHRAN, 1987; SMITH, 1991). Commercial publications are not only addressed to IS professionals but also to the general public, aiming to inform them about the latest advances in technology as well as train them in specific topics of the field.

Emergence of a centre-periphery structure

In the UK's IT industry, a small number of very large companies dominate a large portion of the market. There is evidence that companies like EDS, IBM and Accenture in the IS outsourcing business, and SAP in the ERP business, have formulated strategies to enhance their centric position, placing barriers to competitors. Two examples are EDS's moves towards vertical integration within the defence industry (CURRIE, 2000) and SAP's launch of Mysap.com, to extend their ERP services to medium size companies (CURRIE; SELTSIKAS, 2001).

Collective definition of a field

People both inside and outside the industry are aware of the existence of a particular field of business activity that specialises in software and other computer related services. Indeed, within the IT industry distinguishable sublevels of specialisation are not new, such as Internet service providers, telecommunications and network infrastructure providers, hardware vendors, software houses, IT consultancy providers, and outsourcing vendors (CURRIE; SELTSIKAS, 2001; KERN; KREIJGER; WILLCOCKS, 2002).

From this succinct analysis, it is clear that the IT industry has achieved a high level of structuration as an organisational field, characterised by high density of interorganisational interactions, a substantial flow of information, a centre-periphery structure, were the position of actors at the centre is being enhanced, and a collective awareness of the existence of the field.

Professionalisation of the IT industry

Continuing with DiMaggio's framework, we now analyse the five dimensions involved in the process of professionalisation of an organisational field.

Production of university-trained experts

This is the dimension in which the evidence of the professionalisation of the IT industry is more compelling. Many universities in the UK offer a wide range of undergraduate and graduate programmes aiming to build future practitioners' technical and managerial skills.

Creation of a body of knowledge

The IT industry has produced over the years a significant amount of specialist knowledge (see, for example, the vast amount of methodologies for systems development). The specialist nature of this knowledge has accounted for the view of assimilating IS knowledge to professional knowledge (AVGEROU, 2002), and IS specialists to *organisational professionals* (SCARBROUGH, 1999).

Yet, the knowledge produced by the IT industry presents two major problems for it to be unquestionably assimilated to more traditional professional knowledge. Firstly, compared to other fields, technical knowledge in the domain of IT advances extremely fast (WASSERMAN, 1996). Secondly, much of the knowledge held by IS professionals is tacit, and hence not amenable to commodification (ALAVI; LEIDNER, 2001; CIBORRA, 1999). To the extent that standards can be understood as frozen, commodified knowledge, the very nature of IS specialist knowledge hinders one of the most valuable potential contributions of professionals to the institutionalisation of a field, which is the creation of accepted standards for the industry[3].

Organisation of professional associations

Professionals of the IT industry are not represented by a single professional association. However, the British Computer Society carries a relatively stronger institutional weight in UK, followed by the Institution of Electrical Engineers. Based on their members' specialist knowledge, professional associations should serve the purpose of producing and safeguarding the standards of practice and the norms of conduct of the profession they seek to represent (DIMAGGIO; POWELL, 1991).

The IS professional associations mentioned above have not been able to fulfil this function in a way that increases the level of institutionalisation of the industry. Although all of them have codes of practice that should be followed by their members, they cannot set standards or exert control over non-members, which is the case, for example, of the Law Society (ROWLAND, 1999). Therefore, the ability of IS professional associations to ensure the quality of the work done by their professional community as a whole is more limited than that of their counterparts in other professions.

Consolidation of a professional elite

The need for special training and skills, the existence of norms and standards imposed by specialist knowledge, and the safeguarding of such norms and standards by professional associations spawn a sense of elite in professional groups, which arguably gives legitimate power to the possessors of this knowledge (SCARBROUGH, 1999). Doctors and lawyers are classic examples of professional elites. On the whole, IT practitioners have not managed to consolidate professional elites. They do develop informal networks (SCARBROUGH, 1999) to enhance their career opportunities and provide advice to each other, just as elite groups do, but these networks lack the social status found in professional elites.

Increasing the organisational salience of professional expertise

Within some sectors of the IT community, having brains and a hands-on approach to IT work seems to be more appreciated than professional expertise in the traditional sense of the term. This is the particular case of hackers,

3 It may be argued that standards applicable to IT currently do exist, either directly or indirectly. The IT infrastructure library –ITIL-, administered by the Office of Government Commerce, is even recognised worldwide. Project management standards, such as those by the American based Project Management Institute – PMI – or by the Association for Project Management – APM – in the UK are also good examples of standards applicable to IT. However, their popularity is relatively recent, and if one takes into account that ITIL has had three official versions in less than ten years, and the PMBoK has had four official versions in less than fifteen years, their stability as "frozen knowledge" can raise some questions. Moreover, they are recognised as ***non-enforceable*** **best-practice.**

who are portrayed more like software wizards with little or none university education or formal training in software development, an adolescent life-style and questionable ethics (CARMEL, 1997). Carmel describes hackers as icons of Western contemporary popular culture, such depiction does not seem to contribute to the IT industry appearing more professionalised in the eyes of businessmen.

The low level of professionalisation of the IT industry, and its impact on the institutionalisation of the field are not novel ideas. Scarborough (1999) argues that IT specialists are not classic professionals but *knowledge workers,* whose relative autonomy has more to do "with their labour-market position and the opaque and unpredictable nature of the work they do rather than the institutional power of the profession.". Furthermore, Carmel refers to the immature stage of the software industry comparing software developers to craftmen (1997).

Our main contribution is not in pointing to the weak professionalisation of the IT industry but in linking this institutional weakness to the use of contracts as preferred governing mechanisms in IS innovation processes. We sustain that the hacker culture, the relatively lower social status of IT practitioners compared to classic professionals, and the lack of enforceable general standards and norms are all latently perceived by social agents. Decision-makers in organisations will unreflectively make use of their appreciation of the institutional characteristics of the IT industry as a whole, and not finding enough 'good reasons' to trust it, will be inclined to exert their power through a detailed contract.

4.2 Institutional analysis of the legal system

The legal system can produce a disposition towards trust provided that the trustor believes in the ability of the former to effectively impose sanctions on the party that behaves opportunistically. In the case of IS innovation processes, these sanctions will normally be economic, aiming to compensate the client for the damages caused by the vendor's poor performance. Therefore, an issue that is crucial for assessing the relative institutional strength of the legal system in this context is the extent to which it is capable of making the IT vendor liable for any damages caused to the client. We studied how the court, as the most distinctive embodiment of the Anglo-Saxon legal system, imposed pecuniary sanctions in cases related to IS innovation processes. Our empirical evidence was collected from legal cases as well as interpretations made of them in the legal literature[4]. We sought to select cases that are considered important in the legal literature – i.e. by setting a precedent or departing from one –.

St. Albans city and District Council v International Computers Limited ICL

This case is concerned with a contract for software development. The software generated erroneous calculations related to council tax, causing economic losses to the Council. The appeal judge held that all software contracts are "subject to an implied term that the program will be reasonably fit for i.e. reasonably capable of achieving the intended purpose". To him, ICL was in breach of this implied term, and thus it was made liable for the damages caused to the Council. In his view, reasonable fitness means that that the system should serve the purpose for which it was acquired, as specified in the users' requirements document. This interpretation has influenced other decisions, in which there is also an understanding of software contracts as containing an implied term of reasonable fit.

South West Water Services Limited SWW v International Computers Limited ICL

Among IT vendors it is common practice to use limitation of liability clauses for trying to limit their liability for economic damages caused to their clients (WARCHUS, 1999, 2000). However, under the Unfair Contract Terms Act (UCTA), such clauses are not enforceable when it is found that they were part of the seller's standard terms *and* they are clearly unreasonable (KEINAN, 2000; WARCHUS, 2000).

[4] Since IS research is not familiar with this source, our use of it should be seen as exploratory. The use of data related to IS litigation in this paper shall not be seen as an attempt to study IS failures, nor as a means to test a theoretical proposition in extreme situations such as legal actions. Legal cases were studied only to gain some understanding of the institutional properties of the courts regarding IS, and hence assess the relative strength / weakness of them to enable dispositional trust in the context of contracted out IS innovation processes.

In this case, SWW purchased a piece of packaged software from ICL. For the customisation of the software, SWW relied on a back-to-back agreement between ICL and the software producer. During the proceedings, it was discovered that such agreement did not exist. We take the case when breach of contract and use of the seller's standard terms have already been decided. Having considered the circumstances at the time the contract was signed, the judge found no evidence that the plaintiff was willing to share the risk of the project. Hence, he decided that the limitation of liability clauses, which aimed to pass the economic risk of the project on to the customer, were clearly unfair and unreasonable.

Pegler Limited v Wang (UK) Limited

This case is related with the purchase and customisation of a software package. Again, we are concerned with the applicability of limitation of liability clauses. The judge found that Pegler agreed on the limitation of liability clauses presented to them because they believed that the level of fit of the system to their needs was high, and thus they thought that the project posed low economic risk. During the hearings, it was found that Wang had overstated the system's level of fit. Since at the time of the contract Pegler could not know the system's real level of fit, the judge held that these terms were unreasonable and unenforceable.

Watford Electronics Limited v Sanderson CFL Limited

This last case is also about packaged software. Sanderson accepted that it had breached the contract and that the limitation of liability clauses were part of their standard terms of business, but it appealed against the first decision, according to which such clauses were unreasonable, and hence unenforceable. The appeal judge held that since Watford themselves had their own standard terms regarding liability, and they had been able to negotiate a reduction in price and the inclusion of a clause in which Sanderson committed itself to use their best endeavours to "minimise any losses that may arise from the contract", it was clear that Watford understood that the project implied some risk and that the limitation of liability clauses allocated Watford part of this risk. Hence, the judge found Sanderson's standard terms reasonable and enforceable.

These decisions illustrate some aspects of IS projects that seem to be misunderstood by the courts. In St. Albans case, the judge assimilated reasonable fitness to compliance with the users' requirements document. From the systems development literature, we know that for many reasons this document is not, and shall not be seen as an accurate representation of the system to be, nor of the users' expectations (MATHIASSEN; STAGE, 1992; PARNAS; CLEMENTS, 1986). Therefore, when the court regards this document as an exact representation of the future system and attaches liability to its compliance, it is overlooking the real nature of this document, and passing (unfairly) the entire risk of the development process on to the seller.

Regarding liability clauses, when courts have held that the these terms are unreasonable, they have done so on the basis that either the customer was not obliged to share the project's risk or they were induced to believe that the system's level of fit was higher. When courts make vendors liable for both direct and consequential economic losses caused to customers, they are overlooking the fact that, apart from the technical risks, modern IS projects carry some business risks, which many times are significantly higher than the technical ones (FEENY; WILLCOCKS, 1998; ROCKART; EARL; ROSS, 1996).

In this sense, our last case shows a significant shift in the court's understanding of IS contracts. In the judge's view, the customisation of a software package is a risky process, and hence IT contracts are bound to reflect the way the parties decide to split that risk. To him, standard terms regarding limitation of liability are only unreasonable where it is clear that such negotiation did not take place. The judge also understood that this risk is twofold; while the seller is more able to assess the risk of the system not doing what it was supposed to do (*direct losses*), only the buyer is in the right position to assess the business risk of not achieving the expected increase in profits (*consequential losses*). Therefore, he considered reasonable that the vendor tried to limit its liability concerning consequential losses.

Implications

The fact that from the selected cases, three out of four were won by IS user organisations raised some concerns in us about the strength of our argument. Put in a different way, if courts tend to protect consumer's rights even

at the expense of IT vendors' financial health, why are courts not 'institutionally strong enough' to provide trustors with the good reasons they need to initiate business exchanges primarily on the basis of system trust?

There are two answers to this question. First, we have said that the outcome of using courts is inherently uncertain. Judicial decisions concerning IS actions depend on too many factors, some of them clearly regulated by law, but some others left entirely to the judge's opinion. Indeed, the courts have recognised that judging on what is fair and reasonable bears some resemblance with an exercise of discretion since there is room for multiple interpretations of the facts (see Watford Electronics Limited v. Sanderson CFL Limited, paragraph 30). Dispositional trust, as opposed to calculative trust, is never based on probability assessment. So, even when the probability of winning is high, the fact that the recovery of economic losses cannot be assured even where damages have been effectively caused, is enough good reason not to trust courts, and prefer personal power.

The second answer has to do with the way institutions interact. The fact that the courts have, as we have shown, little understanding of IS innovation and its commercial implications, accounts for their unpopularity with the IS community (SEDDON, 2000). This feeling is shared by lawyers specialised in IT, who know about the specific complexities of IS projects (ENDESHAW, 1997; SEDDON, 2000; SENTER, 1984). It seems reasonable to us that solicitors and IT practitioners, witnessing this lack of understanding, act together as a 'hybrid network' – of professionals and knowledge workers– that passes the message about the inconvenience of using courts. Since this message-passing occurs at an institutional / tacit, as opposite to rational / explicit level, we find plausible that user organisations, influenced by their IT and legal advisers, consider sensible to avoid the use of courts, even though the evidence shows that in most cases the courts are somewhat biased towards them.

To sum up, we have said that neither the IT industry nor the legal system is institutionally strong enough to be seen as a source of dispositional trust. The low level of professionalisation of the IT industry, the inability of the legal system to ensure that, if suffered, economic damages can be recovered, and the lack of prestige of the courts among the IT practitioners community are at the core of the relative weakness of the institutional arrangements that constitute the context of IS innovation processes.

5. Discussion

We have argued that due to their weak institutional context, IS innovation processes for which an external provider is appointed will show a prevalence of personal power over trust as a means to coordinate the interorganisational relationship. Such power is usually exerted through a contract. There are two important implications of this argument. Firstly, since this perspective provides us with the benefit of neo-institutional ideas, as opposed to rational-choice ones, it allows us to question the current understanding of both trust and contract as coordination mechanisms. To what extent can organisations instrumentally build contracts or trust in order to make them suit their own needs? We believe that there are institutional limits to the scope of action of an organisation when dealing with contracts and trust. Secondly, since institutional change is a slow and not-fully rational process (POWELL; DIMAGGIO, 1991), contracts are unlikely to be replaced by trust in the foreseeable future. Hence, they need to be accepted and understood more readily in practice. Below, we analyse these implications in more detail.

5.1 Institutional aspects of trust and contracts

There is an increasing appreciation in the IS outsourcing literature of the importance of trust as a coordination mechanism. However, informed by theories rooted in the rational choice paradigm, the IS outsourcing literature fails to notice the dispositional dimension of trust, recognising only its calculative dimension.

Overlooking the dispositional nature of trust has serious limitations. Since personal trust cannot be produced in the enormous quantities that it would be required in highly complex socio-economic systems (ZUCKER, 1986), and the institutional context of IS innovations is not propitious for the existence of substantial amounts of system trust, it becomes unlikely that the advantages of trust as a coordination mechanism can be obtained.

Regarding contracts, also based on rational choice ideas, the IS outsourcing literature has made a significant effort to study how contracts and contracting practices can mitigate risks and enhance outsourcing results. An institutional perspective lets us see that contracts are part of a broader institutional context and have some institutional properties themselves. When this institutional dimension of contracts is acknowledged, our understanding of the role of contracts in IS innovation processes is substantially increased. In other words, not only is contracting a taken-for-granted, self-sustaining commercial practice, but contracts also help reproduce and institutionalise some other commercial practices, which pass unnoticed, as if they were necessary (AVGEROU, 2002), unless the rise of conflict and eventually the intervention of a third party dare to challenge them (MARCH; OLSEN, 1989). This is clearly the case of seller's standard terms and conditions, the inclusion of the technical specifications into the contract, an entire agreement clause and the limitation of liability clause, etc. Some of these practices have been more succeesful in becoming institutionalised than others.

Although such kind of practices are used as a means for creating and sustaining structures of power that are beneficial to those who create them; they determine the *rules of trade* (ALLEN *et al,* 2000), that does not make them a bad thing altogether; they make contracting a quicker and easier process. Much of the social power of institutions resides in their ability to sustain action, to help human actors get their tasks done without having to ask questions about such tasks. Without institutionalised organisational practices, the 'way-things-are-done' would be constantly challenged (CIBORRA; LANZARRA, 1994) and organisational performance would not achieve acceptable levels. If contracts had to be written afresh for every business deal, the writing process would become overly costly and lengthy, and hence contracts would be considered an extremely inefficient coordination mechanism. Moreover, institutions can be and indeed are challenged every so often, not by individuals but by other institutions with which they interact (AVGEROU, 2002; MARCH; OLSEN, 1989), as we have seen in the analysed cases.

With these ideas in mind, it is clear that there is a limit to the extent to which contracts can be enhanced to mitigate risks and improve IS outsourcing performance. Contracts are seldom designed entirely by the parties, they rely on standard clauses to speed up and facilitate the contracting process. Since it is accepted commercial practice to use the vendor's standard terms, it is not unlikely that some of these clauses may have effects that are contradictory to the client's original intentions. Additionally, through implied terms and statutory law, contracts have implications which the parties may not even be aware of. In short, a contract is not what a party thinks it signs, it is not even what it actually signs, it is a fuzzy amalgam of mutual business intentions, commercial practice and judicial interpretation.

5.2 Reinterpreting the role of contracts

Contracts are seen as 'necessary evils' among IT practitioners. In the words of a former IT Director of the UK Inland Revenue, "The contract is a bit like a nuclear deterrent. You need one and you have got to have a framework, but if you've got to use it you are probably in trouble" (extracted from WILLCOCKS; KERN, 1998). In other words, the IT practitioner community feel that the best contracts are those that never leave the drawer once they are signed. We believe that this interpretation needs to be challenged.

Firstly, this interpretation has to do with the link between contracts and power: contracts are a materialisation of power, and to many people, power is the dark side of an otherwise objective and rational organisational life (MINTZBERG, 1983). Yet, power is intrinsic to all social relations, IS innovations included (KEEN, 1981; MARKUS, 1983; SILVA; BACKHOUSE, 1997).

Secondly, we believe that practitioners' view of contracts as a necessary evil is based on wrong grounds. IT practitioners believe that contracts, apart from being unavoidable, can lead to undesirable side effects if they are not properly drafted. However, we question whether all these effects are a consequence of the contract. In organisations lacking the necessary knowledge and skills to carry out IS innovations on their own, project risks might be seen as contractual risks, when in fact they are intrinsic to IS innovation. If the innovation 'fails', it is interpreted as if the contract could not cope with the risks of project overruns or system's lack of fit with users' expectations, as the case may be. Naturally, being coordination mechanisms, contracts can help mitigate the risks just mentioned, but that is different from stating that a poor contract causes such risks. In our view, much of the frustration of IT practitioners with contracts is rooted in this confusion.

6. Conclusion

The main contribution of this paper is that it gives a theoretical foundation to the prevalence of contracts in IS innovation processes, by means of linking a theoretical proposition originated in organisational science with our own analysis of the institutional framework in which contracted out IS innovations take place. We have argued that this institutional framework is relatively weak, and thus contracts will tend to prevail over trust as the preferred coordination mechanism. The implications of this argument were discussed in the previous chapter. In this section, we would like to acknowledge some of the limitations of our work, as well as point to some directions for future research.

First of all, we limited the study of the institutional arrangements to the UK context. Thus, we are aware that our conclusions cannot be generalised beyond this context. However, we believe that institutional studies need to be set in a specific context and that our choice matches the context of much of the IS outsourcing literature. Hence, we believe that our conclusions are on the whole relevant for the academic community they are addressed to.

Secondly, we drew on legal cases for the study of the legal system. We have already said that since IS research is not familiar with this source our use of it should be seen as exploratory. The legal system, as part of the institutional context, has some effects on interorganisational exchanges. This system acts essentially as an institution, which makes its effects more latent than explicit (JEPPERSON, 1991). Therefore, we decided to study IS litigation as a means of making such effects 'visible', and hence improving our understanding of the institutional context in which IS innovations take place.

Thridly, this paper is based on research conducted some years ago. Although an effort was made to update the analysis of the institutional properties of the IT industry, it might not entirely reflect the current state of the industry. Moreover, there might be more recent legal cases useful for the purposes of the analysis of the legal system. However, it was not possible to gain access to the appropriate sources for finding such data.

Finally, this work relies exclusively on secondary sources. Our argument is based on the idea that there are reasons to believe that user organisations may *perceive* the institutional arrangements in which IS innovations take place to be weak. We drew on several sources to explain why we believe this to be the case. However, we did not crosscheck our argument against the *actual perception* of IS user organisations about the relative strength of this institutional context. The main reason that led us to omit fieldwork was that institutions and the way they operate pass largely unnoticed by human actors (POWELL; DIMAGGIO, 1991). Therefore, we decided that it was more straightforward and beneficial for our work to rely on existing interpretations of the constituent elements of the institutional context. Moreover, we believe that the operationalisation of this kind of empirical research is rather complex (BARLEY; TOLBERT, 1996). Since we are not experienced researchers, a poor operationalisation was a risk that we did not consider wise to take. We are convinced that in the future this work can greatly benefit from empirical research into the perception of IS user organisations about the institutional framework of IS innovation.

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