Efficiency seeking behaviour in changing management control in interfirm transactional relationships

An extended transaction cost economics perspective

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Abstract

Purpose – This paper specifically seeks to explore the contribution of extended TCE-reasoning to our understanding of intended change in management control in interfirm transactional relationships.

Design/methodology/approach – The approach is theoretical of nature. After having outlined the essentials of TCE-reasoning and having critically reviewed the extant TCE-contribution to research in management control, this paper extends TCE-reasoning by incorporating the notion of trust into the analysis. Different sources of trust as well as the management control related impacts of trust are explored.

Findings – The paper develops propositions that, in the context of an interfirm transactional relationship, confront choices for alternative management control patterns with situational and institutional features.

Research limitations/implications – The paper particularly covers the overt instrumental level of management control in interfirm transactional relationships. Although the paper covers relational aspects, it does not provide a strong theory of the working of "soft controls".

Practical implications – An explanation of intended change could help practitioners to improve decision making at the level of their organizations.

Originality/value – The paper contributes to the extant knowledge by exploring the scope of TCE with regard to choices in the (re)design of management control patterns in interfirm transactional relationships.

Keywords Transaction costs, Trust, Control, Data handling, Change management, Intergroup relations

Paper type Conceptual paper

1. Introduction

Management control systems aim at influencing actors in order to enhance the effectiveness and efficiency of activities. This gives management control a strongly behavioural focus and a concern with the effect of behaviour on outcomes (Merchant and Simons, 1986). Though management control issues have been especially studied in the context of integrated organisations, there is a comparable set of problems in

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situations where independent organisations cooperate (Van der Meer-Kooistra and Vosselman, 2000; Speklé 2001). The cooperation as such also forms in some way or another an organisation, but then one in which diverging interests could exist that cannot be managed within a hierarchical context. Therefore, management control is not restricted to relations within organisations with various degrees of decentralisation of decision making. As Otley (1994, p. 293) already observed in 1994:

> ... the scope of the activity of management control is enlarged and it no longer confines within the legal boundaries of the organization.

A number of studies into the management control of interfirm transactional relationships have come into light (Franses and Garnsey, 1996; Gietzmann, 1996; Seal *et al.*, 1999, 2004; Van der Meer-Kooistra and Vosselman, 2000; Anderson *et al.*, 2000; Mouritsen *et al.*, 2001; Tomkins, 2001; Dekker, 2003, 2004; Van den Bogaard and Speklé 2003; Langfield-Smith and Smith, 2003; Hakansson and Lind, 2004; Cooper and Slagmulder, 2004; Dekker, 2004). From different perspectives these studies examine the roles of management control in interfirm transactional relationships.

This paper seeks to contribute to our knowledge of management control change by focussing on decision making resulting in the (re)design of efficient management control patterns in interfirm transactional relationships. It takes the perspective of an outsourcer who deliberately wants to decide about the design characteristics of a new management control structure in an outsourcing relationship. By implementing such management control patterns the decision making will entail organizational change. Once implemented, the management control patterns will influence the behaviour of people and therefore change practices. It can be expected that a rational decision to design and implement specific management control patterns rests upon their expected consequences in terms of changing behaviour and practices. In turn, these expected consequences are assumed to be contingent on situational as well as institutional features of the transactional relationship.

Therefore, the paper seeks to make its contribution by developing propositions that, from an efficiency perspective, confront the choice of a management control pattern with situational and institutional features of the interfirm transactional relationship. The paper is fully theoretical of nature and leaves the testing of the propositions for future research. The development of the propositions will be the result of an exploration of a "calculative choice"-perspective on management control as it stems from transaction cost economics (TCE) extended with theory on trust. This "calculative choice"-perspective emphasises the decisions of rational human actors. Their decision outcomes are supposed to reflect efficient solutions. We claim that such a perspective can add to our extant knowledge in that it clarifies intended change in management control in interfirm transactional relationships.

Our paper is organised as follows. In the second section, against the background of interfirm transactional relationships, the essence of TCE is outlined. Next, in order to account for the research gap we aim to fill, the TCE-contribution to our extant knowledge of management control within and between organisations is briefly and critically reviewed. Then by reference to the social embeddedness of interfirm transactions the notion of trust is incorporated in the analysis, leading to an extended TCE-reasoning. Following the extended TCE-reasoning three patterns of management control in interfirm transactional relationships will be derived. In confronting these patterns with situational and institutional factors in the context of the transactional relationship a number of propositions that can inform future research will be derived. The paper will end up by drawing some conclusions and by raising a discussion on the position TCE (as a branch of new institutional economics) takes compared to other (institutional) approaches towards interfirm control.

2. Transaction cost economics and the management control of interfirm transactional relationships

TCE explicitly queries the efficiency of various "governance structures" around transactions. As early as 1937 Ronald Coase asked fundamental questions about the raison d'être of the firm and the determinants of the boundaries of the firm (Coase, 1937). Other important contributions to TCE are those by Williamson (1975, 1985, 1991, 1996, 2000). Why are not all transactions concluded in the market and why do they sometimes take place within the boundaries of a firm? The answer is to be found in the existence of market-related transaction costs. Such costs can result from the search for a suitable contract party, from writing contracts and from monitoring and controlling the proper execution of contracts. The greater the uncertainty around transactions, the higher these costs will be. Uncertainty refers to the degree of specifiability of desired performance and predictability of the circumstances under which performance takes place (Speklé 2001). It directly relates to a major characteristic of human actors that TCE assumes, which is bounded rationality. A human actor intends to be rational but experiences cognitive constraints and, thus, is only rational in a limited sense. As Simon puts it, decision makers are "intendedly rational, but only limited so" (Simon, 1961, p. xxiv). The more uncertainty, the more human actors will experience their cognitive constraints. Decisions then have to be taken under conditions of imperfect information. Bounded rationality therefore is a "less than perfect" rationality. It is a weakened form of rationality, as people experience limitations in their knowledge and their information-processing capabilities, leading to the impossibility of making optimal decisions. In the context of the choice for a governance structure bounded rationality is linked up with incomplete contracts, because not all possible future actions and events can be foreseen.

But additional to bounded rationality there is another major human factor which entails transaction costs. An important element in TCE is that economic actors may behave opportunistically: given the opportunity they are occasionally inclined to serve their own interests by using forms of trickery and deceit. (Potential) opportunism may incur high transaction costs, which may not only become manifest to an outsourcer in high prevention, security and conflict-solving costs but also in missed benefits (opportunities foregone), because the selected other party, secretly or barely visibly, unjustly monopolises advantages.

Williamson (1975) assumes, for expositional convenience, that at the beginning, there were markets. The existence of alternative governance structures is explained by transaction costs.

Market-based transaction costs may be expected to be high whenever transactions reoccur in an uncertain and complex environment with asset specificity. It is precisely the presence of transaction-specific assets that creates a fertile soil for opportunism, because such assets have no or hardly any value in another relationship. If the contractor has invested in specific assets the outsourcer may take advantage by unfairly forcing a price reduction. On the other hand, the contractor can unfairly take advantage of the situation, because he knows that the outsourcer will have to incur high costs in order to find and train a new contractual party. Such advantage taking is facilitated by the presence of information asymmetry, information asymmetry is a situation in which information relevant to the transaction is known to one or more parties but cannot costlessly be obtained by others (Williamson, 1975). Such a situation allows a party to use undisclosed private information.

Whoever will be able to get most out of this depends inter alia on the power relationships in the market. Differences in power will be reflected in asymmetry in switching costs. The least powered party will experience higher switching costs than the more powered party.

So, transactions characterised by a high level of asset specificity lead to interdependence between the parties involved and, thus, to vulnerability. Although before the market transaction was concluded there might have been a large number of potential market parties, after the conclusion of the transaction small number exchange relationships gradually develop. As a consequence of "small numbers" switching possibilities will decrease, thus weakening the high-powered pressure of exit threats.

To summarize: transaction costs of market transactions are not only caused by bounded rationality linked up with uncertainty, but also by potential opportunistic behaviour of boundedly rational economic actors. Such opportunism is related to asset specificity in transactions. Such asset specificity increases interdependence. It enhances the development of small numbers and therefore gradually weakens the pressure of exit threats. By exploring information asymmetry individual parties' can then take advantage of the relationship, thus causing transaction costs to the other party.

How can transaction costs be economised on? There are two main possibilities. One is to place transactions under the umbrella of an organisation (a hierarchy). Governance and control in a hierarchy rely on authority. A governing body will try to prevent and combat opportunism by seeking to avoid conflicts of interests and by trying to overcome information asymmetry. Within a hierarchy fixed compensation is usual. Rewards are not, or only to some extent, linked to the output of individual efforts. There is a lot of reliance on managerial discretion. In terms of Ouchi (1979) the dominant control mechanism in a hierarchy is a bureacratic mechanism. However, the hierarchy also entails costs: information processing, coordination and control do not come for free. Moreover, there is the risk of over bureaucratisation and inefficiencies because of the absence of market forces.

Another possibility is to opt for a "hybrid" (Williamson, 1991). Efficient institutional arrangements (governance structures) within the context of a market can be designed in order to coordinate activities and to prevent and/or mitigate opportunism. This diminishes the risk of over bureaucratisation and inefficiencies that is inherent in the hierarchy. Precisely these governance structures form the infrastructure for management control devices in interfirm transactional relationships. In terms of Ouchi (1979) the dominant control mechanism in a market is a market mechanism. But in the "hybrid" management control is not only based on the working of a market mechanism (which essentially is a mechanism of "rewarding"/"punishing" and of "exit threats"), but also on the working of a bureaucratic mechanism (with a dominant role for authority, regulation and control). So there is a certain mixture of incentives working on the basis of a market mechanism and of incentives working on the basis of a bureaucratic mechanism. Although a relationship between economically independent parties is not based on a hierarchical relationship, the deployment of hierarchy-appropriate (bureaucratic) control devices can be contractually arranged.

These arrangements reflect the parties' credible commitments to the relationship. In addition to these credible commitments parties can agree to use credible exit threats based on a market mechanism (for instance by agreeing to arrange competitive bidding rounds at a regular basis).

3. Transaction cost economics and management control: the "state of the art"

TCE has been used to inform studies of management control within organizations. Swieringa and Waterhouse (1982) study the transfer-pricing problem between relatively autonomous organisational units through several theoretical lenses, one of which is TCE. Spicer and Ballew (1983) apply TCE to choices in the internal organisation. Designing an efficient governance structure within an organisation involves choices of employment relationships, organisational structure and incentive and measurement systems (management control systems). It is the interaction between these choices that determines the transactional efficiency of the hierarchy. Spicer (1988) develops an organisational theory of the transfer pricing process. Hypotheses developed on the basis of TCE particularly concern – in the case of internal transfers between divisional units and setting transfer prices – top management's role in the "make or buy" decision. Van der Meer-Kooistra (1994) studies the co-ordination of internal transactions at four multinationals, using hypotheses derived from TCE. In particular, the significance of the transaction's characteristics for the co-ordination methods is studied. Colbert and Spicer (1995) report on empirical studies of the theory of the transfer pricing process using a multi-case research design in integrated high-technology companies in the electronics industry in the USA. Speklé (2001) examines the potential of TCE to provide a cogent and comprehensive perspective for the explanation of management control structure variety (for transactions within the boundaries of an organization as well as for market transactions). He proposes:

> ... a framework that explicates the link between various archetypical configurations of control devices and the activities they are expected to control (Speklé 2001, p. 419).

Covaleski *et al.* (2003) extend the contribution of TCE within the management control literature. While acknowledging that the common focus of TCE is on informing control structure choice that serves purposive control in organizations, they state that control structure choice involves more than merely an instrumental focus on efficiency. Their basic message is, that a TCE-analysis should also incorporate legitimacy-seeking behaviour in control structure choice, thus broadening the concept of efficiency beyond the mere instrumental (Covaleski *et al.*, 2003, p. 438). Vosselman (2002) offers an economic explanation of the adoption and (re)design of archetypes of management control within an organization, particularly emphasizing management control of horizontal intrafirm relationships.

TCE also informed a number of studies in the control of interfirm transactional relationships.

Gietzmann (1996) raises the rather fundamental question why so many organisations are advised to adopt procedures that facilitate the forming of close cooperative relations with subcontractors and draws on transaction costs economics to answer it. Roodhooft and Warlop (1999) make a research note on the roles of sunk costs and asset specificity in outsourcing decisions. Anderson *et al.* (2000) study the effects of the adoption of new contracting terms and the early involvement of suppliers in the US car industry. Van den Bogaard and Speklé (2003) study a portfolio restructuring of Shell. They analyse that an intendedly hybrid control structure in fact strongly mimics the hierarchy in almost all fundamental aspects. This "intrinsically hierarchical" management control structure proves to be consistent with the high level of "asset specificity" at hand.

Other studies go deeper into the modelling of the control of interfirm transactional relationships. Modelling the control of interfirm transactional relationships as a basis for case study research some of these studies (Van der Meer-Kooistra and Vosselman, 2000; Dekker, 2004) take an interdisciplinary perspective, TCE being an important element in that perspective. Van der Meer-Kooistra and Vosselman (2000) complement insights from transaction costs economics with insights from a network approach and examine the control in outsourcing relationships in the field of industrial renovation and industrial maintenance. Langfield-Smith and Smith (2003) build on the Van der Meer-Kooistra and Vosselman (2000) model (and therefore draw on TCE) to examine how control mechanisms and trust are used to achieve control in a single case study of an electricity company and its outsourced IT operations. Dekker (2004) complements TCE with organization theory in order to inform his case study of a strategic alliance between NMA Railway Signalling and RIB (a task organization of the Dutch Railways). Using TCE and organization theory he identifies two control problems: the management of appropriation concerns (the problem of opportunistic behaviour that is central in TCE) and the coordination of tasks (a problem that has gained much attention in organization theory). Dekker (2003) also uses TCE and organization theory in a value chain analysis.

In conclusion we state that TCE informed several studies into management control within as well as between organisations. In the area of interfirm transactional relationships several distinctive questions were raised. Important questions regard the economic rationality of outsourcing *per se*, the roles of sunk costs and asset specificity in outsourcing decisions and the effects of the adoption of new contracting terms and of early supplier involvement. Furthermore, TCE was used to get a better understanding of the characteristics of the management control structure of the transactional relationship.

So far, TCE has not been explicitly linked to the issue of management control change. This lack of attention is connected to TCE's under emphasis on process (Mahnke, 2001). It does not focus on how governance structures are developing, but on why observed governance structures exist. This makes TCE inadequate to inform studies into the development of management control patterns in the course of the relationship. In neglecting processes of change it also does not provide a lens for viewing management control patterns as actors in other (complementary) processes of organisational change.

However, TCE's under emphasis on process does not mean that the theory is completely incapable of informing studies into management control change. TCE provides for intentional explanations (Vromen, 1995) for observed organisational forms. In an intentional explanation:

> . . . human behaviour is explained by reference to some goal or end that the agent(s) involved intend to bring about (Vromen, 1995, p. 127).

So, the theory is able to inform research into purposeful design of management control patterns. TCE apparently is able to explain intended change. This paper more fully explores TCE's potential to do so by generating propositions on the choice of management control patterns.

Not only has TCE been criticized on its lack of attention for process, it also has been questioned for its lack of attention for the relational aspects of the relationship (Mahnke, 2001). It ignores interactive relational processes at the level of the relationship that have the potential to provide for trust. This paper will fill up that gap. It will explicitly take interaction into account, thus providing for an extended TCE reasoning in the field of management control. In such extended reasoning trust is pivotal.

4. Trust as a control mechanism

In the analysis of hybrid governance of transactional relationships many authors (Sako, 1992; Zaheer and Venkatraman, 1995; Nooteboom, 1996, 2000; Nooteboom *et al.*, 1997; Das and Teng, 1998, 2001; Van der Meer-Kooistra and Vosselman, 2000; Bachmann, 2001) attach great importance to a third control mechanism, in addition to the market mechanism and the bureaucratic mechanism: trust. Bachmann (2001, p. 338) claims that in the hybrid form trust is even the dominant mechanism. This mechanism, which is closely related to the social mechanism as described by Ouchi (1979), cannot be derived directly from TCE, which can only accommodate a market mechanism and a bureaucratic mechanism.

Williamson (1993) does not see any active role for trust in a governance structure. The governance structure is considered to be a solution for problems of potential opportunism, which are viewed as behavioural risks. TCE assumes that these behavioural risks can be calculated beforehand, i.e. before an agreement is made. Subsequently, in order to mitigate these behavioural risks out of a set of known instruments or solutions a choice can be made in advance. This "calculative choice" is under the assumption of bounded rationality; decision makers experience limitations in their cognitions. Therefore, the contract will be left incomplete, leading to potential loss of an actor because of opportunism of the other actor that cannot be anticipated. But nevertheless, the incomplete contract is the most efficient form. Given bounded rationality, calculative choice behaviour is efficiency-seeking behaviour and not efficiency-optimising behaviour. The more uncertainty there is, the more "incomplete" the solutions are (incomplete contracting).

So, the probability of opportunism from the side of the other party is a risk that can be calculated beforehand. To the extent that parties do not think it necessary to design contractual solutions for calculable potential opportunism they apparently decide to trust each other. In this view, trust is an intangible asset conceived as accepted calculated risk, as the parties are of the opinion that the potential benefits exceed the potential costs (Gambetta, 1988; Coleman, 1990). According to Williamson (1993), this notion of "calculated risk" is more precise than the notion of "trust". The latter in his view adds nothing to the analysis, and, therefore, he suggests a moratorium on the term in the domain of economic transactions, which are calculative and governed by self-interest. He suggests to only use the term "trust" in the domain of personal ties, where trust occurs in a "deep" sense of "human passion" (Dunn, 1988, p. 74).

In conclusion we state that in Williamson's opinion trust and calculativeness belong to distinct relational areas. This is directly traceable to the "calculative choice"-perspective TCE takes. In TCE trust cannot be a solution in a governance structure. It cannot be an instrument that can be mobilized to prevent opportunism from occurring.

In the next section, however, we will demonstrate that trust can be part of the surroundings of a governance structure. Redundant as the term may be in explaining a governance structure *per se*, it will prove to serve an important function in explaining possibilities the social embeddedness of transactions offers in improving the acceptability of calculable behavioural risks.

5. The social embeddedness of a governance structure

5.1 Trust from the institutional environment

Within TCE it is acknowledged that the "calculative choice" of a governance structure will be influenced by the institutional environment of the transactional relationship, which consists of formal rules: constitutions, laws and property rights. This environment is to some extent designed by a government using instruments of legislation, regulation and distribution of power. In addition, the institutional environment consists of powerful umbrella organisations such as trade unions, professional organisations and accreditation bodies. The institutional environment itself is embedded in an institutional atmosphere, with its values, norms, customs, mores and traditions, and is linked to the concept of social embeddedness (Granovetter, 1985). In this atmosphere collectively accepted norms concerning business behaviour develop.

For a specific transactional relationship these constitutions, laws, property rights, (professional) organisations and norms perform a latent function of minimalising the risk of opportunism (Bachmann, 2001; Granovetter, 1985). Williamson (1993, 2000) in fact acknowledges that within the TCE-framework there is certainly room for social embeddedness. The institutional environment and the institutional atmosphere are important because they have the potential to economise on governance structures. They influence the transaction cost entailed by the various alternative governance structures: market, hierarchy, or a hybrid form (Williamson, 1993). And within a "hybrid" they influence the need for solutions based on both a market mechanism and a bureaucratic mechanism.

The institutional environment and atmosphere will contain sources that improve the acceptability of calculable behavioural risks. We label these sources as sources of trust. In the first stages of a transactional relationship the outsourcer can acquire or purchase contractual trust and/or competence trust. Sako (1992) distinguishes the two concepts in her comparative study into contractual relationship patterns in the UK and Japan. Contractual trust is based on moral values of honesty. "Keeping your word" is considered of great value. This trust makes one expect that the other party will honour the (possibly written) agreement. Such values are transmitted to individuals by means of processes of socialisation and education, and in fact form the precontractual basis for transactional relationships (Durkheim, 1947). The degree of contractual trust is thus derived from the institutional atmosphere of the transactional relationship – the relationship is embedded in this type of trust. Neu (1991, p. 245) refers to this form of trust when he claims that "in less than perfect markets, trust must exist prior to contracting". The extent of this trust can be considered in conjunction with elements from the institutional environment and atmosphere. Thus, for instance a refined system of contractual legislation or established professional bodies will facilitate contractual trust. Luhmann (1979) and Bachmann (2001) label this form of trust as system trust.

Though contractual trust is hence mainly system trust there will certainly be a person-related component. One person can be trusted more than another, simply because for the one "keeping your word" is more important than the other. In this connection past experience with a contract party or market reputation can be important indicators for the degree of contractual trust accorded to a potential party.

The extent of contractual trust will influence how detailed written contracts will be and also how much information is gathered after the conclusion of the contract. A high degree of contractual trust offers a possibility to write rather incomplete framework agreements, thereby decreasing the transaction cost of the governance structure.

Competence trust refers to the expectation that the potential supplier will have the necessary technical and managerial competences. This form of trust can also be sourced from the institutional environment of the transactional relationship. For instance, certification of suppliers by professional organisations can provide trust. It is also possible for certain suppliers to acquire a certain reputation in the market. Reputation can become an asset that can be bought in the market. An outsourcer can weigh this purchase against extra costs of inter alia information exchange, which may arise when competence trust has to be gradually developed in the relationship. The transaction cost connected to the gradual development of competence trust in the course of the relationship can thus be weighed against the cost of contracting a party with a good reputation.

5.2 Trust from interactive processes

Although it has not been emphasised in the TCE literature, a source of trust can also lie in the non-contractual interactive, cognitive processes between the outsourcer and the contractor. These processes also carry the potential to diminish the probability of opportunism and, therefore, the need for instrumental design and use of control instruments. At the level of the transactional relationship in the interactive processes between the outsourcer and the contractor goodwill trust can emerge. This is the third form of trust distinguished by Sako (1992). Goodwill trust is based on the expectation that parties have an open commitment towards each other, which can be defined as the willingness to do more than can formally be expected (Nooteboom, 1996; Das and Teng, 2001).

This "more" may involve concrete activities, but also the provision of information. In the first case the contractor also carries out activities that were not explicitly requested. The contractor then shows that he feels committed to the performance of the outsourcing firm and that he is ready to do more than was agreed. Trust-creating behaviour will then be demonstrated in activities increasing the contractor's vulnerability with respect to the outsourcer and vice versa (Gambetta, 1988).

When there is such a development of goodwill trust parties are willing to be "in one another's debt". There is a temporary lack of balance between tasks performed and rewards received (quid pro quo). An example might be that a contractor is helping out an outsourcer in case of a need situation, for instance in case unexpected disturbances emerge, without wanting to get paid for it. Sometimes an even exchange is not even appreciated, since it is interpreted as a quiet hint that the party wishes to terminate the relationship.

The development of goodwill trust could also involve the provision of information. In a relationship there will initially be a certain degree of goodwill trust, arising from former transactional or amicable relationships. Goodwill trust can develop by means of information exchange and then causes the information flow to congeal. This will be illustrated in the next section.

5.3 Trust and information exchange at the level of the transactional relationship

According to Wicks *et al.* (1999) growing trust will be accompanied by a decrease in the exchange of information. According to them there is an *inverse relationship* between the willingness and readiness to trust and the need for information. In this (static) view, trust is an alternative to the provision of information. In a more dynamic perspective the relationship between information exchange and trust is, however, much more complex. An increase in trust may be accompanied by an increase in information exchange but also by a decrease or stabilisation. Tomkins (2001, p. 170), for example, supposes that because commitments are less extensive at an early stage of a relationship "there will be a lower need for either trust or information". When the relationship matures and commitments become much more intensive the need for trust and information will increase. Tomkins argues that less information will be needed when trust intensity becomes established at higher levels in later stages of the relationship. We add that what is involved here is not "ex post" (accountability) information gathered by the outsourcer about actions performed and/or their results; the contractor could easily view such a demand for information as lack of trust. An atmosphere of strong accountability does not fit well with the creation of trust, whereas an atmosphere of open commitment does. Therefore, it is important that information is provided voluntarily and informally by the outsourcer and the contractor in order to increase the transparency of the activities or competences. In this way information exchange is helpful in creating trust. Especially in the upswing of a relationship this form of information exchange can fulfil an important function. During later phases the situation may change: from a certain moment in time the level of trust may be so high that this information exchange and information sharing can come to a stand still. This situation, in which after the conclusion of the contract it becomes gradually clear what competences actors have, what they are in fact doing and whether they can be trusted, bears similarities to what Speklé (2001) arguing from a transaction cost-theoretical analysis, refers to as "exploratory control". In "exploratory control" control is:

> . . . expectedly engaged in creating and preserving information sharing and in (re)adjusting and (re)aligning perceptions on progress (Spekle, 2001, p. 431).

The common knowledge that gradually emerges allows parties to "recognise the quality of performance when they see it" (Speklé 2001, p. 431).

In practice, information exchange in the context of management control cannot be dissociated from information exchange in the context of the required coordination of activities, referred to by Tomkins (2001) as "mastering of events". In a situation of "exploratory control" there is a continuing interaction between actors. Through the pooling of information a learning process develops in which the quality of decisions and actions is enhanced. However, viewed from a transaction cost-theoretical angle this pooling of information cannot be taken for granted. According to TCE the seeking of self-interest will at any rate play a certain role and may cause a certain bias in the exchange of information (Speklé 2001). An honest and open exchange of information may be frustrated by incompatibility with the self-interest of the actors. Information asymmetry could emerge: a situation in which information relevant to the transaction is known to one or more parties but cannot costlessly be obtained by others (Williamson, 1975, pp. 31-7).

What suggestions are made by transactions cost economics to prevent information asymmetry in these exploratory control situations? Speklé (2001), arguing from a transaction cost-theoretical perspective, states that in these situations informal systems are the best option. A rigid delineation of responsibilities coupled with a tight definition of duties and competences (e.g. a strongly formal governance structure) is counter-productive, because this frustrates a joint problem-solving attitude. Within these situations of "exploratory control" opportunism is best mitigated by the creation of mutual dependence between actors. A supervisory body could take a supportive attitude in establishing and maintaining interaction in personal face-to-face contacts. In fact, in a process of continuous interaction with the trustor the trustee can arrive at a stage where the "trustee recognizes and accepts the validity of the trustor's needs, choices and preferences" (Maguire *et al.*, 2001, p. 290). Here we witness a really solid form of "goodwill trust" in which opportunism remains absent because of intrinsic convictions and values.

However, there may be situations in which it is impossible to share or exchange information, even in the course of the relationship. The tasks could be too specialized or too complex. This could lead actors to make arrangements on the boundaries of the actions or their outcomes. By specifying the boundaries actors try to prevent undesired actions or outcomes of actions from occurring. Speklé (2001) labels this as "boundary control".

5.4 The economics of trust: some conclusions

Viewed from an economic perspective it can be claimed that exploratory control (which is relational of nature) and the trust put into it as well as resulting from it becomes more efficient as uncertainty increases. In terms of an efficient management control structure design this implies a "lean" structure; there is little emphasis on instrumental design and parties create space and conditions for decision making and acting "along the way". In such situations no detailed contracts can be drafted, and in the course of time refinements and changes in agreements could be made. As trust grows among parties, expectations will increase that parties will act in the interests of the joint undertaking and that revisions, if any, will be made to the satisfaction of both parties. This has a favourable effect on transaction costs.

6. Patterns in management control of interfirm transactional relationships

On the basis of the analysis so far we claim that from the perspective of the outsourcer management control in interfirm transactional relationships can have three basic patterns: a market pattern, a bureaucratic pattern, and a relational pattern. Two of these patterns contain "high powered" incentives: a market pattern and a bureaucratic pattern. These patterns have a high potential to discipline the contractor. The third pattern only contains "low powered" incentives, because it is not primarily the designed or chosen control instruments within the governance structure that control the actions, but the trust stemming from the institutional environment – and atmosphere of the transactional relationship as well as from the non-contractual, interactive processes between the outsourcer and the contractor.

The three patterns of management control regard interfirm transactional relationships. Within these transactional relationships at least three phases can be distinguished: a contact phase or exploratory phase, a contract phase and an execution phase (Van der Meer-Kooistra and Vosselman, 2000). In the contact phase control has to support the search activities for a suitable partner, in the contract phase the contract is drawn up and in the execution phase transactions take place and the parties will control whether the activities and output are in accordance with the contractual rules.

In a market pattern of management control the market mechanism is dominant. During the exploratory phase of the relationship the search for a suitable contractual partner is supported with competitive bidding: a large number of market parties can compete for the order. During the contract phase little effort will be spent on writing detailed contracts. For the more strongly the market mechanism operates, the more information is contained in the price set in the market. In a more or less perfect market there is no or hardly any need for supplementary information. The quid pro quo of the outsourcer (the price to be paid) is directly related to the output of the supplier's production process. In the execution phase the outsourcer's assessment and evaluation will be restricted to this output (in terms of quantity, quality and delivery time). Moreover, there will periodically also be competitive bidding. Other market parties can make a bid, which disciplines and stimulates the current supplier(s) to perform their work effectively and efficiently. Credible exit threats are at work here.

In a bureaucratic pattern a bureaucratic mechanism is dominant. The presence of (technical) standards, norms and rules specified by the outsourcer is essential. Strict monitoring, evaluation and adjustment of activities are directly related to this mechanism. In the exploratory phase the outsourcer will seek extensive information about the competences of potential parties. Potential contractors are selected on the basis of specified criteria. Prior to this, they submit a quotation in a framework of well-described procedures. During the contract phase detailed contracts are written. Various possible future circumstances are specified and the potential consequences for the transactions are described. Concerning the outsourcer's quid pro quo the agreement is made that it will be based on realised activities or their output. In the execution phase there will be frequent performance measurement and assessment, not only of the output but also of the activities of the contractors. There is, in other words, an extensive ex post information flow to the outsourcer.

In a relational pattern neither credible bureaucratic tools nor credible exit threats are of substantial importance. Social embeddednes is crucial. Principles of reasonableness and commitment will dominate the relationship. In the exploratory phase of the relationship system trust stemming from the institutional environment will be important; the suppliers will be selected on the basis of systems trust and/or on the basis of earlier business contacts (repeated transactions). In the contract phase there will be no detailed contracts; there is much reliance on contractual trust. More detailed agreements will be made in the course of time. There will only be a tenuous link between the outsourcer's quid pro quo and the activities of the contractor or the output of these activities. There are for instance lump sum payments. Moreover, the contract partners will agree upon risk sharing. The outsourcer will create conditions that foster a cooperative attitude and an atmosphere of open commitment during the execution phase. In the execution phase control instruments are focused on the further development of competence and goodwill trust. There is exploratory control using an informal organisation and intensive face-to-face interaction. There is pooling of information, but as the information generates common knowledge and a certain level of trust the information flow will gradually decrease.

Table I summarizes the three control patterns and the phases of a transactional relationship.

7. Efficiency-seeking behaviour in structuring management control in interfirm relationships: some propositions

In order to guide future empirical research based on the theoretical analysis in this paper we will formulate a number of propositions that could be tested in practice.

A "calculative choice"-approach towards management control patterns in interfirm transactional relationships implies the assumption of an outsourcer's efficiency-seeking behaviour regarding the structuring of management control. Following our analysis so far, our main case proposition is twofold. First, outsourcers who seek for efficiency in the management control structure of interfirm transactional relationships are expected to match the control structure with the features of the transactional relationship. Second, they are expected to be aware of the potentialities of the embeddedness in the institutional environment of the management control structure as well as of the potentialities of interactive processes between the outsourcer and the contractor on diminishing the probability of opportunistic behaviour (and, therefore, to economise on transaction cost).

Below we will operationalise our main case proposition into six testable propositions. The odd numbers regard the matching of control structures with the

	Market governance pattern	Bureaucratic patttern	Relational pattern
Exploratory phase	"Competitive bidding"	Preselection of potential bidders; quotation procedures; detailed selection criteria	System trust; trust on the basis of friendship, reputation or earlier business relations
Contract phase	No detailed contracts; payment based on standardised output	Detailed written contract; Payment based on real activities or their output	System trust; framework agreements; weak link between payment and activities or their output
Execution phase	"Ex post" measurements restricted to output; periodical "competitive bidding"	Frequent performance measurement and evaluation; extensive "ex post" information flows	Intensive interaction; pooling of information; informal organisation; open commitment; gradual cessation of information flow

Table I.
Control patterns and phases in a transactional relationship

features of the transactional relationship. The even numbers regard the importance of social embeddedness in efficiently structuring management control.

Following TCE reasoning seeking efficient control structures will imply a preference for "high powered" incentives (of a market and/or bureaucratic nature). But whether an outsourcer can and will opt for a control structure with high powered incentives depends on the features of the transactional relationship, especially uncertainty and asset specificity. We assume frequency not to be a discriminative feature in our analysis, because a transactional relationship will involve recurring transactions.

When uncertainty is high and therefore the programmability and measurability of the activities are very low to absent, outsourcers can only opt for a relational pattern of management control, keeping instrumental design of control tools to a minimum. The continuation of the relationship will be of great value to the outsourcer. In many of these relational patterns there will be a high degree of transaction specific investments (asset specificity) and, hence, a strong mutual dependence between the contractual parties. There will often be "business process asset specificity" including components of "human asset specificity" as well as procedural "asset specificity" (Zaheer and Venkatraman, 1995). "Human asset specificity" is about knowledge, skills and experience tailored to the outsourcer's needs. Procedural asset specificity involves knowledge of and experience with the workflows and the operational processes at the outsourcer, which can be invested in through training and learning by doing. Parties are highly dependent on each other.

This brings us to our first proposition:

P1. An outsourcer will choose for a relational pattern (and thus for limited instrumental design) in the management control structure of the transactional relationship whenever uncertainty, and asset specificity are high.

Outsources that (have to) opt for a relational control pattern are assumed to draw on the institutional environment in order to diminish the probability of opportunism. The institutional environment of the relational control pattern is in the first place characterised by an imperfect market, where parties are mutually fully dependent on each other. These imperfections will be accompanied by asymmetrically distributed information and knowledge among parties, but reputation and/or previous experiences install a confidence that this will not be abused. The more powerful actor will deliberately not use his power to dominate the relationship and will transparently signal that in interactive processes between the outsourcer and the contractor.

This leads to *P2*, which is as follows:

P2. Given the choice for a relational control pattern an outsourcer will draw on the institutional environment, past experience with the contractor and/or interactive processes to diminish the probability of opportunism.

In situations with low or moderate uncertainty in the surroundings of the transactional relationship outsourcers can opt for a management control structure with "high powered"-incentives. This implies contractual instrumental design of credible exit threats and/or credible commitments and control devices.

When uncertainty is low, outsourcers have the option to choose a market pattern in the management control structure. The measurability of the (output of) the activities will hardly cause any problems. There is little uncertainty about future circumstances and possibilities. There will be frequent repetition of transactions. Moreover, there is no or hardly any "asset specificity". The "bargaining power" is symmetrically distributed among the parties, for the environment of the transactional relationship is in the first place characterised by a "market" without real imperfections, where the risk of becoming fully dependent on each other is low.

Therefore, *P3* is as follows:

P3. An outsourcer will choose for a market pattern in a management control structure (and thus for "credible exit threats") whenever there is a low degree of asset specificity and uncertainty is low.

Given the circumstances that surround a market pattern of management control (i.e. the possibility to flexibly adapt and the ability to switch to another party at low costs) the outsourcer will not feel any need to draw on the institutional environment, past experience with contractors and/or interactive processes as sources of trust. Therefore, *P4* is as follows:

P4. Given the choice for a market control pattern an outsourcer will not draw on the institutional environment, past experience with the contractor and/or interactive processes to diminish the probability of opportunism.

When uncertainty is moderate, outsourcers can opt for a bureaucratic pattern in the management control structure. In this situation, the future circumstances are more or less foreseeable. The frequency of transactions is high. As the nature of the transactions will not change greatly in the course of the relationship and is relatively easy to specify in advance, the measurability of the activities or their output will not cause any problems. That is why the outsourcer will use control instruments which are aimed at direct intervention. There is moreover asset specificity, but less so than in a relational pattern. The specificity is not of the strong "business process or human asset specificity" type, but rather a type that can be protected by contractual rules, such as "physical asset specificity" and "dedicated assets". The institutional environment of the transactional relationship is characterised by market imperfections and an institutional environment, which is less relevant and has less latent influence on the behaviour of the actors than with a relational pattern. The contract contains the rules and procedures, which structure the relationship. The bargaining power will be to the advantage of the outsourcer. The outsourcer can impose sanctions to the contractor. There will be no or hardly any risk sharing.

Therefore, *P5* is as follows:

P5. An outsourcer will choose for a bureaucratic pattern in a management control structure (and thus for "credible commitments and controls") whenever there is moderate to high asset specificity and uncertainty.

As the outsourcer employs bureaucratic instruments on the level of the transactional relationship the power of the institutional environment and atmosphere is less relevant. It is important that the institutional environment and atmosphere should further the reputation of the contractor, in the sense of leading to competence trust and contractual trust.

P6 will be as follows:

P6. Given the choice for a bureaucratic control pattern an outsourcer will only to a small extent draw on the institutional environment, past experience with the contractor and/or interactive processes to diminish the probability of opportunism.

8. Conclusion and discussion

Basically, as a part of new-institutional economics, TCE is concerned with explaining and predicting different ways of organising transactions. Williamson's main case proposition is, that economic organisation has the purpose and effect of economising on transaction costs. According to this proposition, governance structures "are aligned with transactions in such a way as to effect a transaction cost economizing result" (Williamson, 1996, p. 17). Given this proposition, TCE gives intentional explanations for observed governance structures. TCE explains assumed calculative choice of rational decision makers that strive for efficient solutions. It is supposed that the choice for governance structures rests upon its expected consequences (effects).

TCE therefore enabled us to see elements and patterns in a management control structure as the products of calculative choice behaviour based on technical-rational considerations. It proved that TCE provided us with a strong theoretical background for developing propositions on calculative choices an outsourcer seeking efficiency in the management control structure of the transactional relationship would make. Transaction cost reasoning shows that features of the transactional relationship are crucial in choosing for a certain pattern in management control. Moreover, the institutional environment of the transactional relationship, repeated relationships and interactive processes at the level of the transactional relationship have the potential to economise on the transaction cost of the management control structure.

This paper contributes to the extant knowledge by exploring the scope of TCE with regard to choices in the design of management control patterns in interfirm transactional relationships.

A TCE-approach proves to emphasise contractual solutions in the form of credible commitments and credible exit threats. In doing so, it covers the overt instrumental level of management control in interfirm transactional relationships. Empirical testing of the derived propositions could be very helpful in validating our theory. An empirical exploration of this instrumental level is important, especially when actors in modern society give evidence that they increasingly value instrumental and tight control (Lampel, 2004).

Of course, there also are limitations to an (extended) TCE-approach. As we concluded, TCE is particularly equipped to inform research into the instrumental side of management control. However, (extended) TCE is not equipped to fully inform research into the "soft" side of management control. Although TCE acknowledges the potential of social embeddedness (and thus of trust) to economise on transaction costs by allowing for a relatively lean management control structure it does not give much insight into the way(s) in which trust is built and maintained at the level of the transactional relationship. (Extended) TCE points to the significance of informal systems, of structural flexibility, of the creation of mutual interdependence, of "face-to-face" communication and of information sharing, but it does not provide us with a strong theory of the working of "soft controls" including the building and maintenance of trust. It does not give much inside into the more covert side of management control. Therefore, it does not consider more covert systems of social norms. We submit that in many contemporary interfirm relationships that are characterised by high levels of uncertainty and asset specificity, the soft side of management control with an emphasis on learning and trust becomes increasingly important. Soft controls could complement or even might have to substitute for hard (instrumental) controls, which means that implicit agreements complement or even substitute explicit agreements and contracts.

Because of its insufficiency for the understanding of soft controls a TCE-approach also downplays potential "crowding out effects". Crowding-out effects emerge when the use of hard controls undermines intrinsic motivation. Intrinsic motivation generates cooperative behaviour just because the actors value the activities by themselves. The work content itself provides satisfaction or utility (Osterloh and Frey, 2004). Although Williamson (1975) admits the existence of intrinsic motivation, he leaves it aside just because it is difficult to control. Therefore, he believes that control structures should be designed as if people were entirely selfish. This, however, can easily lead to crowding effects (Frey, 1997). The crowding theory of motivation (Frey, 1997; Frey and Osterloh, 2002) analyses the dynamic relationship between extrinsic and intrinsic motivation. As a result of the use of hard controls people can shift their attention from the activities themselves towards the external interventions (rewards), thus attaching less value to the activities themselves. Therefore, the conditioning on hard controls reduces the voluntary commitment towards the interfirm transactional relationships. Particularly in situations that are characterised by high levels of uncertainty and asset specificity and that therefore need soft controls, the intervention with hard controls can have damaging effects. It can (partly) drive out "organizational citizenship" (the willingness to cooperate) that takes the form of helping behaviour, organizational compliance and civic virtue. And it is precisely this organisational citizenship that accounts for the relatively low amount of free riding in organizations, compared to what orthodox economists would expect (Simon, 1991). People seem to be prepared to subdue individual interests for the sake of the whole.

The relevance of the crowding-out effect is supported by much empirical evidence (Frey and Jegen, 2001, for a comprehensive overview). There also are certain conditions that have the potential to generate "crowding-in" effects that increase intrinsic motivation. An important condition is perceived autonomy, but perceived competence and social relatedness also matter (Osterloh and Frey, 2004).

In sum, the crowding theory of motivation suggests that the use of hard controls can have negative effects, particularly in situations that ask for a relational control pattern. This underlines Argyris' (1964) suggestion that strict control has a paradoxical effect and calls for a more strong theory of soft controls that respect and even reinforce intrinsic motivation. As trust is underlying soft controls it will be essential to gain more understanding of the ways in which trust is build and in the ways in which hard contractual controls relate to trust building processes. Although the (dynamic) links between trust and hard management controls have started to be questioned (Wicks *et al.*, 1999; Tomkins, 2001) there hardly is any understanding or evidence on the (dynamic) links between hard controls and soft controls (see Lampel, 2004, for a notable exception). Future empirical research is recommended here.

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