3 Variety in Interorganizational Coordination

3.1 Introduction
In chapter one, it was indicated that the objective of this study - gaining insight through construction of theory - is sought by exploring theories from the discipline of information systems and theories on interorganizational coordination relations. The variety in information management was described in chapter two; this chapter will describe the variety in interorganizational coordination and offers a review of theories and frameworks explaining this variety. This is done by following the first step set out in the CAST method: identification of key concepts, key performance indicators, hypotheses, and, in general, the line of reasoning of existing theories or fragments of theories.

This chapter has the following structure: after an introductory exposé on the positioning of the theme of interorganizational coordination in organization theory (section 3.2), perspectives on interorganizational relations and interorganizational coordination are discussed from the angles of economic organization theory (section 3.3) and political organization theory (section 3.4). Section 3.5 offers a synthesis of these approaches and in section 3.6, conclusions are drawn.

3.2 Interorganizational relations in organization theory
In section 1.1.2, it was shown that the topic of interorganizational relations has gained a lot of attention in organization studies’ contemporary publications. The topic of interorganizational relations, though, has not been part of the discipline of organization theory from the beginning. In fact, until 1950, most organization theorists in most of their work assumed that it was possible to understand organizations apart from their environment, and that their important processes and events were internal to the organization (Scott, 1987). In the organization theories of Weber, Taylor, Fayol, Bernard and Mayo, the functioning and design of autonomous organizations is discussed, unconstrained by the environment in which they operate; organizations were seen as ‘closed’ entities.

However, over time, organization theorists shifted their attention from intraorganizational to interorganizational phenomena (Negandhi, 1969). Krupp
identifies three ways in which the topic of ‘environment’ has entered into organization theory:

- environment as externally constraining phenomenon for the functioning of organizations;
- environment as network, or ‘organizational set’, consisting of other interacting organizations; and
- the environment as a ‘super-organization’, in which the environment constitutes a whole, a collectivity in which the constituting organizations are not explicitly discerned (1961, p. 55).

Note that the third way in which environment is given a place in organization theory is subsumed under the heading of organizational sociology or even macro sociology rather than organization theory, because the focus is not on explaining the behavior of individual organizations.

Benson (1975) states that the emphasis on organizational environments as externally constraining phenomena has been established since the publication of Mill’s book *The Power Elite* in 1956. Since then, it has been increasingly recognized that organizational boundaries are both permeable and variable (Krupp, 1961; Scott, 1987). Selznick (1957), March and Simon (1958), Katz and Kahn (1978), Lawrence and Lorsch (1967), Thompson (1967) and Chandler (1962) have explored this field. As a result of the recognition of environmental pressure on organizational design and functioning, interorganizational analysis became popular.

A drawback of much of the research on environments of organizations, either focused on the environment itself or on the functioning of organizations in their environments, is the vagueness of the concept of ‘environment’. “The ‘environment’ figures prominently in almost all contemporary organization theory but is rarely defined in other than a residual way, as everything outside the boundaries of an organization” (Aldrich & Marshden, 1988, p. 369; see also Benson, 1975). The vagueness of the concept of environment has also been described as failure to operationalize hostility, dynamics and other aspects of the environment. And even if successful operationalizations are used, the expressiveness of these variables in organization theory is limited. For example, Aldrich (1979) uses the variables stability, homogeneity, concentration, environmental capacity (lean-rich), domain consensus, turbulence and mobility of organizations in order to characterize the environment. However, if organizations decide to change their relationships with the environment, they do not manipulate ‘stability’, ‘turbulence’, ‘homogeneity’ or ‘environmental capacity’, but they change contracts with partner organizations, change the technology used, or merge with partner organizations. So, much of the ‘classic’ interorganizational analysis does not address decision variables (see also Pfeffer, 1997, pp. 158-163).

Contemporary research has shifted its attention from focusing on ‘environment’ and ‘environmental forces’ to the second concept of ‘environment’: that is, to (less abstract)
Interorganizational relations are the recurrent, non-discrete transaction of resources between two or more organizations.

In the literature, a distinction is often made between horizontal, vertical and symbiotic relations (van der Zaal, 1997). Horizontal relationships are relations between organizations that compete with each other in obtaining similar resources and/or disposing of similar goods and services. In other words: horizontal relations are relationships between competitors. Horizontal relations are, as far as organizational research is concerned, the domain of strategic management. Vertical relations are relationships between organizations located in different stages of production service: that is, vertical relations are buyer-supplier relationships. Buyer-supplier relationships have been studied at length within the domain of industrial organization.
Symbiotic relationships exist among organizations that complement each other in the rendering of services. For example, the relationship between Compact Disc producers and manufacturers of hi-fi equipment is a symbiotic one. Another example is the relationship between computer software producers and hardware manufacturers (Alexander, 1995).

The distinction between the various types of interorganizational relations has, among other things, been proposed in order to clarify the fact that horizontal relations reveal more strategic or political flavor than other types of relations. In this view, horizontal relations are seen as a threat to the participating organizations (or, at most, a necessary evil), whereas vertical relations are considered to be an opportunity. However, van der Zaal (1997) has provided evidence that, to some organizations, horizontal relations are considered to be an opportunity, whereas there are also vertical relations that are perceived by the participating organizations as a threat. Moreover, many of the theories on interorganizational relations apply to all three kinds of interorganizational relations. Therefore, the distinction between horizontal, vertical and symbiotic relationships will not be sustained in this study.

Organization scholars’ focus on relationships between organizations is remarkable, taking into account the fact that the theme was ignored for a long time. However, current discussions of interorganizational relations have not relinquished organization studies’ insistence on an organization’s freedom to act independently; interorganizational relations are seen as devices that limit an organization because scarce resources and energy have to be invested in the maintenance of linkages with other organizations69. Following this logic, organizations never choose to become involved in an interorganizational relationship for purely voluntary reasons. Van de Ven (1976) stresses that every organization strains to maintain its autonomy, that is, it strives to avoid the situation in which the behavior of other organizations has ramifications for the focal organization. Autonomy here refers to the capability of organizations to choose the course of actions they wish to pursue (Van de Ven, 1976). Simon (1976) defines autonomy as a situation in which the organization’s decisions are not guided by the decisions of another organization, or in which it at least has the capability of independently examining the merits of such an imposed decision (Simon, 1976). The capability of independently examining merits must include the ‘right to the last word’ in accepting or rejecting a general rule imposed by another organization. In other words, organizations prefer not to be guided in their decision making by decision premises that have been set by partner organizations.

Parsons (1960) and Litwak and Hylton (1962) have, on the contrary, described situations in which organizations heavily interacted with other organizations; due to

69 Chisholm (1989) objects that because every organization operates in an environment constituted by other organizations, no organization is an autonomous entity and thus de-emphasizes the managerial possibilities to maneuver.
some of these interactions, instances of exertion of interorganizational authority did occur. In these cases, that might have occurred for a number of reasons (see Figure 1, p. 6); organizations accept that “(...) a general plan of operations will govern the activities (...) of the organization” (Simon, 1976, p. 10). Parsons (1960) and Litwak and Hylton (1962) described these situations with the term unstructured authority: situations in which parties voluntarily give up some valued conditions in exchange for similar concessions on the other side (Benson, 1975).

In general, authority refers to the situation in which one organization sets a general rule which permits the communicated decision to guide another organization’s choices without deliberating on its own part on the expediency of these premises (Simon, 1976). In the case of unstructured authority, modifications of agreements between organizations occur through (1) waxing and waning of resource allocation mechanisms and (2) changes in legitimization or shifting domains (Parsons, 1960). The organizations involved “intervene and extend their influence through association; they alter the resource landscape for themselves (...) and in the process can change the structure of [interorganizational relations]” (Van Alstyne, 1997, p. 4). If attempts by one organization to exert influence on another organization by using authority have succeeded, dependence between organizations exists (Pennings, 1981).

Simon states that one of the uses of authority is that it achieves coordination. According to Alexander (1995), coordination is a property of decisions: a decision is coordinated if it takes all information into account and makes appropriately spontaneous adjustment. Note that this description views coordination as an end rather than as a means (as will be shown in sections 3.3 and 3.4, coordination brings about costs as well as benefits). This view of coordination sees interorganizational coordination as something to be achieved, not just a phenomenon to be analyzed.

Coordination is also defined as “the process of creating rules or norms for collective action” (Mulford & Rogers, 1982), or “informing each as to the planned behavior of others” (Simon, 1976, p. 72) in such a way that a general plan of operations will govern the activities of the organizations.

Simon distinguishes two modes of coordination: procedural coordination, which is the specification of behaviors of and relationships between organizations (it establishes the lines of authority and outlines the spheres of activity of each organization), and substantial coordination, which specifies the content of work to be done.

Summarizing, in this section a short overview of the position of interorganizational coordination and interorganizational relations has been presented. Various theories analyze interorganizational relations in terms of the key concepts ‘autonomy’ (of organizations involved), some sort of ‘dependence’ and the need to ‘coordinate’

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70 Simon is mainly concerned with intraorganizational coordination; the same analysis, however, also applies to an interorganizational setting.

71 Note that Simon refers to coordination as the essence of organizing.
exchanges between organizations. In the various theories, however, obviously incommensurable definitions are presented. At this moment, it is impossible to define these concepts or constructs in an uncontested manner. Therefore, in the following sections, an analysis is made of how the important concepts of autonomy, dependence and coordination are elaborated in specific theories. Furthermore, their interconnectedness in terms of hypotheses is discussed.

The analysis takes place with use of two specific theoretical perspectives that are often used to elaborate on interorganizational relations (for an overview, refer to Krickx [1991] and Van der Zaal [1997]). These theoretical perspectives are economic organization theory (especially transaction cost economics and property rights theory) and political organization theory (especially resource dependence theory). For every theory, a general introduction on the origins and content of the theory is first given and after that it is shown how the key concepts of autonomy and dependence are interpreted within the framework of the theory and how these key concepts relate to matters of coordination between organizations.

### 3.3 Economic Organization Theory

#### 3.3.1 Introduction

The sociologist Pennings asserted that “(...) interorganizational behavior has been the primary concern of economics, while sociology and other social sciences contributed little” (1981, p. 433). Economics has indeed contributed to the understanding of the way organizations, in general, function. “Probably therefore, economic models are growing in prominence in the social sciences generally, particularly in political science, sociology and organization studies. (...) In fact, one is hard pressed to think of many substantive areas in which economic models are not cited, even if only as providing an alternative hypothesis” (Pfeffer, 1997, p. 44). The economist Hirshleifer even predicted the takeover (‘economic imperialism’) of the whole of social science by economics (Donaldson, 1995).

Economic organization theory consists of a number of distinct theoretical streams that have been developed more or less independent of each other\(^{72}\). Therefore, in the

\(^{72}\) Several authors have categorized these streams in various ways. The categorization of de Vries (1992) is based on the specific contribution to the neoclassical analysis made in each of the streams, and, more specifically, what variables are made endogenous. Eggertson (1990), on the other hand, assumes that the agency stream is part of the larger transaction cost economics stream. Brynjolfsson (1994) states that neo-institutional economics is synonymous with the property rights stream, with agency theory and transaction cost economics as descendants of the property rights approach. Künneke (1991) discerns three categories of property rights theories: property rights theories applying different categories of property rights, property rights theories paying attention
following sections, firstly the development of economic organization theory is sketched (section 3.3.2). After that, in the sections 3.3.3 to 3.3.5, the emphasis and main line of reasoning within the various theoretical streams are discussed: transaction cost economics, the property rights stream and the agency stream. In section 3.3.6, the role of autonomy, dependency and coordination in neo-institutional economics is summarized.

3.3.2 The economic perspective on organizations

One fundamental starting point in the discipline of economics is the question *why organizations exist*. Previously, we have defined organizations as communities of agents. In these communities, agents are subject to authorities or procedures that guide their tasks. Based on the assumption that markets are very efficient ways of guiding agents in their tasks, it is possible to question the wisdom of both organizing individuals in organizations and organizing organizations in (relatively enduring) interorganizational relations. Whereas to the organization scientist an organization is a very self-evident subject of study, to an economist using the line of reasoning indicating that markets are always very efficient, an organization can be characterized as a ‘market failure’. Relationships between organizations are not part of the standard neoclassical economic analysis.

According to neoclassical economic analysis, firms exchange bundles of property rights in order to satisfy their needs. Firms are ‘(…) feasible production plans, presided over by a manager who, buying and selling inputs and outputs in a spot market, chooses the plan that maximizes owners’ welfare’ (Hart, 1995, p. 155). In this view, the firm is a monolithic economic actor. The basic economic argument, as formulated in the ‘theory of the firm’, is that markets are ideal for guiding firms in their tasks under the following conditions (Douma & Schreuder, 1992):

- There are large numbers of buyers and sellers;
- There is free entry and exit from markets;
- The industry is characterized by standardized, homogeneous products;
- Firms are viewed as holistic units;
- Firms are assumed to have a single objective;
- There is perfect information: every buyer and seller knows all relevant details;
- Buyers and sellers are characterized by maximizing behavior.

to different role patterns of economic actors (principals and agents) and property rights theories using the transaction as their basic unit of analysis.

73 For example, the question ‘why is there any organization’ is central to Coase’s critique of the theory of the firm (see, for example, Williamson [1975, 1985, 1995]).
The ‘theory of the firm’ lends itself to an elegant and general mathematical formulation and is very useful for analyzing how a firm’s production choice responds to exogenous changes in the environment (through a change in the price of goods or services). Furthermore, it is very useful for analyzing the consequences of strategic interaction between firms under conditions of imperfect competition (Hart, 1995). However, the theory – called rigorous but rudimentary by Hart (1995) – can only explain phenomena when the conditions mentioned above apply. In particular the condition of perfect information in markets has attracted much attention. In the model of perfect markets, all the relevant information is available and compressed in the price of a good or service. In this way, the price contains ‘sufficient statistics’. However, often there is uncertainty with respect to the future quality of the goods or services, especially if they are non-standardized or heterogeneous. Furthermore, information can be distributed unevenly among individuals or firms. The ‘theory of the firm’ has difficulties dealing with such - more realistic- assumptions.

As a reaction to the ‘theory of the firm’, institutionalists like Veblen, Commons and Myrdal have criticized the theory of the firm because it views human beings as ‘hedonistically calculating individuals’. They emphasized sociological, juridical and technological aspects in the study of behavior of firms, and forcefully condemned the ahistorical, asocial character of neoclassical economic analysis. The proponents of neoclassical analysis have responded to this critique by mentioning that institutionalists never developed specific institutional models and never identified key trade-offs; in fact, according to neoclassical theorists, institutionalists have formulated only very vague mechanisms (Williamson, 1995, p. 210).

However, the discussions and debates between institutionalists and neoclassical scholars inspired a group of so-called neo-institutional economists who, on the one hand, accepted the critique of neoclassical economic analysis but on the other hand explicitly endeavored for less heroic assumptions (such as those present in the theory of the firm). In general, they pursued a more realistic economic analysis. “Neo-institutional economics aims at generalizing neoclassical economics while retaining the ‘hard core’ of the micro economic paradigm, i.e. stable preferences, the rational choice model and equilibrium structures of interaction” (Neelen, 1993, p. 4).

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74 One of the more seditious consequences of mathematical elegance is that it “(...) provides status and makes it less accessible to the untrained, which lends it prestige” (Pfeffer, 1997, p. 54).
75 In the traditional model, there are no costs of enforcement and administration of rights (Künneke, 1991, p. 45).
76 Institutions may be defined as the humanly-devised constraints that structure political, economic and social interactions (Williamson, 1995, p. 211). Institutionalization, then, is “a process of crystallization of (...) norms, organizations and frameworks which regulate the process of exchange” (Alexander, 1995, p. 285).
Neo-institutional economic analysis builds upon the work of two Nobel laureates who have especially paid attention to the aspects of uncertainty and unavailability (or uneven distribution) of information.

The first is Herbert Simon. With his ‘behavioral theory of the firm’, Simon asserted that human beings are rational in a necessarily limited way. Therefore, according to Simon, it is principally impossible for individuals to optimize their welfare. As a coping mechanism, individuals seek organizations that enable satisfying outcomes for individuals (transformation of ‘intractable to tractable’).

The second is Ronald Coase. His works were later popularized in the writings of, among others, Williamson (1975, 1985). Coase emphasized that information is not costless and that organizations are alternatives to markets in the sense that organizations, with authority and procedures, economize on information costs like searching costs, costs of drafting agreements, enforcement costs and monitoring costs. Thus, markets as devices to direct activities of actors can be supplemented by or, in case of extreme uncertainty or information asymmetry, replaced by hierarchy. Clarke and McGuiness describe markets and hierarchies as follows: “The difference between these systems rests on the use of conscious authority in the direction of resources. In the market system specialized and diverse resources are coordinated by ‘impalpable forces’, in ways that make no use of conscious authority: in other words, as by an ‘invisible hand’. In contrast, the firm involves, in some way, the use of conscious authority or the ‘visible hand’ of an entrepreneur” (cited in Künneke, 1991, p. 30).

Summarizing, the ‘theory of the firm’ is a mathematically elegant theory explaining the behavior of buyers and sellers in free and open markets. The theory, however, holds a number of seditious assumptions on the prices as ‘sufficient statistics’ and on characteristics of products, which are supposed to be homogeneous and standardized. Simon and Coase addressed these flaws. Simon pointed at the impossibility of including all information in decision making, while Coase tried to express informational problems in economic quantities of benefits and, especially, costs.

Their comments were, later on, elaborated into a new discipline, which is referred to here as economic organization theory, which consists of a number of streams. Benefits and costs of information (and uncertainty) are specified differently in various streams of economic organization theory. Agency theory studies the role of information and information asymmetry in economic relations. Transaction cost economics studies costs of exchange relations between separate organizations and within organizations. Property rights theory analyzes various kinds of user rights pertaining to scarce goods between actors in various institutional arrangements. These various streams within economic organization theory differ to such a considerable extent that until this point, it is

Note that both the ‘theory of the firm’ and neo-institutional economics lack attention to a role for government: implicitly it is assumed that juridical arrangements do not affect resource allocation (Künneke, 1991, p. 45). De Vries states: (…) economics can do without juridical issues, but not the other way around” (1992, p. 43).
impossible to indicate the role of autonomy, dependence and coordination and the relations between these constructs. Therefore, firstly, autonomy, dependence and coordination are discussed within each of these separate economic organization theories (see Figure 21). The way these three constructs are dealt with in economic organization theory at large is postponed until section 3.3.6

<table>
<thead>
<tr>
<th>Economic organization theory</th>
<th>Elaborated in section …</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency theory</td>
<td>3.3.3</td>
</tr>
<tr>
<td>Transaction cost economics</td>
<td>3.3.4</td>
</tr>
<tr>
<td>Property rights theory</td>
<td>3.3.5</td>
</tr>
</tbody>
</table>

Figure 21: Overview of economic organization theories

3.3.3 Agency theory

Some of the weaknesses of the ‘theory of the firm’ are addressed in the so-called principal-agent theory, which introduces conflicts of interests between different economic actors through the inclusion of asymmetries of information or observability problems (Hart, 1995). Principal agent theory has therefore an historical antecedent in the works of Barnard, who described the essence of organizing as the transformation of conflict systems (in which no jointly consistent objectives are present) into cooperative systems (with common objectives). But whereas Barnard emphasized the use of devices such as psychological incentives and identification mechanisms, principal-agent theory focuses on reward structures.

In general, agency theory has been elaborated in two distinct directions: the principal agent theory and the positive theory of agency. Principal agent theory is a mathematically-oriented, normative and, in general, non-empirical approach in which the emphasis is on the study of reward structures. The positive theory of agency is a far less mathematical, empirical approach in which the emphasis is on the study of costs of governance in various relationships. The following discussion of agency theory mainly pertains to positive (i.e. empirically oriented) agency theory.

The main line of reasoning is as follows. Firstly, it is recognized that “(…) the firm is not an individual (…) The behavior of the firm is like the behavior of a market, i.e., the output of a complex equilibrium process” (Jensen & Meckling, 1976, p. 311). In this process, three roles are identified: “(…) that of having interest in an enterprise, that of having power over it and that of acting with respect to it” (Berle & Means, 1932, cited in Künneke, 1991, p. 69). Agency theory assumes that in many organizations, these roles do not rest with one person, the entrepreneur, but are dispersed over various persons: the owner, the manager and the employee, respectively. In agency theory, it is assumed that their motives and interests are not necessarily consistent with each other.

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78 Also referred to as ‘analytical’ agency theory.
and not necessarily consistent with the profit maximization behavior of the firm as a whole.

In general, cooperation between parties requires any one of the following conditions (Baiman, 1982, in: de Vries, 1992, p. 63):

- all parties honestly share all information;
- all parties act in the manner agreed upon, that is, each member implements the action rule he is assigned (see below); and or
- all parties agree on a set of individual action rules and a method of sharing the uncertain outcome resulting from their individual actions such that no one can be made better off without making someone worse off.

Agency theory focuses on the situations in which the above conditions are violated. For example, in practice, information sharing and trustworthy behavior are not always in the interest of all the parties involved. Furthermore, it is hard to require compliance with information sharing and trustworthy behavior. Agency theory in essence being an economic theory, the divergence of interests is expressed in terms of costs. The money equivalent of the reduction of welfare as a result of the divergence of interests is termed residual loss. This residual loss can be decreased by exertion of control in the form of control by incentive, control by persuasion or control by authority. However, by exertion of control, enforcement costs are incurred. The total agency costs, resulting from information asymmetry and divergent behavior, consist of enforcement costs and residual loss, whereas there seems to be a trade-off between these two cost components. Originally, agency theory focused on the conflict of interest between owners and managers. The basic hypothesis of agency theory is that if one party (e.g., the agent, manager) acts on behalf of another (the principal, owner), both parties strive to minimize agency costs. They do so by considering the marginal values of (1) enforcement costs and (2) residual losses, and structure their relations in such a way that appropriate compensations can be paid in every conceivable state of the world.

The problem of conflict of interest between owners and managers makes agency theory an organization theory explaining intraorganizational phenomena, in which no attention is paid to interorganizational relations. However, the theory can also be applied to organizations, one acting on behalf of another, for example, a municipal housing company acting on behalf of a municipality (Neelen, 1993) or a liner agent acting on behalf of a shipping company (van der Zaal, 1997). In this rendition of agency theory, interorganizational relations are analyzed in terms of the divergence of interests between organizations, and it is hypothesized that organizations devise governance

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79 There are economists who claim that control by authority (imposing rules) and control by persuasion (recommending a course of action) changes the costs and benefits of disobedience and thus can be seen as special cases of control by incentive.

80 In fact, the ‘theory of the firm’ also recognizes owners and managers, but assumes that there is no conflict of interest between these roles (see section 3.3.1).
mechanisms (bilateral agreements, authority relations) in such a way that agency costs are minimized.

Agency theory enriches neoclassical theory significantly by relaxing some of the closed-world assumptions in the theory of the firm and, in general, by pursuing a more realistic analysis. However, seen from the perspective of organization theory at large, agency theory fails to answer the question of what constitutes a firm (or what determines authority relations). The interorganizational rendition of the theory recommends optimal reward structures between organizations X and Y, but fails to specify whether such a reward structure is accomplished by retaining separate organizations X and Y, or whether X and Y should merge with X gaining authority over Y, or Y gaining authority over X (Hart, 1995). Furthermore, de Vries (1992) has shown that much of the theoretical expressiveness of the agency theory is diminished when one organization does not strictly operate on behalf of another. In general, agency theory “can make no predictions about the nature and extent of the firm” (Hart, 1995, p. 156) and, therefore, we will now turn to other streams within economic organization theory.

<table>
<thead>
<tr>
<th>Economic organization theory</th>
<th>Autonomy</th>
<th>Dependence</th>
<th>Coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Theory</td>
<td>[not explicitly mentioned]</td>
<td>[not explicitly mentioned]</td>
<td>the mechanism (profit sharing agreement/hierarchy) that minimizes sum of residual loss and enforcement costs</td>
</tr>
</tbody>
</table>

Figure 22: Autonomy, dependence and coordination in economic organization theory (1/3)

3.3.4 Transaction cost economics

Transaction cost economics focuses especially on the application of various governance mechanisms in and between organizations (Reekers & Smithson, 1996). In general, transaction cost economics is inspired by two questions Coase asked himself. The first one, assuming that markets are superior to hierarchies, is why even large, vertically integrated organizations have managed to survive over time, since, reasoning from an evolutionary perspective, one would assume that hierarchies are, in general, not efficient and are thus unable to pass the filter (competition) that lets through only efficient (fitting) organizational forms? Hart asserted that the ‘theory of the firm’ fails to explain the occurrence of ‘organization’: “[m]ore subtly, neoclassical theory begs the question of what a firm is” (Hart, 1995, p. 155). The second question is, given the fact that

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81 Governance mechanism is synonymous with ‘institutional arrangement’ in the transaction cost approach.
hierarchies have obviously managed to survive, why isn’t all production carried out by one big firm?

Transaction cost economics assumes many of the conditions stated in the ‘theory of the firm’ (see section 3.3.2). Recall that according to the ‘theory of the firm’, the focus is on firms: profit-optimizing, holistic organizations that buy inputs and sell outputs on spot (short-term) markets. These transactions (buying and selling) occur because “(…) a crucial value of transaction relations lies in complementarity of knowledge, competence and access to other resources” (Nootenboom, 1993, p. 5).

One condition that transaction cost economics does not assume is the condition of perfect information. Rather, bounded rationality is assumed (see also section 3.3.2). According to transaction cost economics, firms are therefore incapable of (1) judging changes ex-ante in supply and demand (novel and perhaps more attractive customers and suppliers appearing on the scene), (2) foreseeing change in productive competencies, and (3) monitoring the partner’s actions.

One of the consequences of bounded rationality is that firms participating in transaction relations are not able to anticipate all kinds of circumstances in contractual arrangements. In fact, initial contracts are inevitably incomplete. Especially if transactions do not take place in spot markets, but rather if their completion takes a period of time, unforeseen circumstances result in the need to renegotiate terms of the trade, resulting in adjusted formality and/or detail of contracts, or exchanging or retracting of hostages (Nootenboom, 1993).82

It is the assertion of transaction cost economics that in markets, negotiating and renegotiating the terms of the trade yields costs, so-called transaction costs. Some of these costs occur before transactions take place (ex ante), and some of them after the transaction has taken place (ex post). “Specifically, ex ante costs include (1) search and information costs; (2) drafting, bargaining and decision costs; and (3) costs of safeguarding an agreement. Ex post costs of contracting include (1) monitoring and enforcement costs (2) adaptation and haggling costs (3) bonding costs and (4) maladaptation costs” (Mahoney, 1992, p. 566). Hart (1995) summarizes the concept of transaction costs as haggling and learning costs. Note that transaction costs ‘by default’ result from private ordering (settling disputes involving two parties, which involves opportunity costs of devoting time and energy to productive ends). In excess of private ordering, court ordering may be called for by means of ‘ultimate appeal’. The latter is an activity that can make haggling and learning especially expensive.

Assuming bounded rationality, transaction costs are an inevitable by-product of transactions in markets, and result from uncertainty and information asymmetry, or in

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82 An example of exchanging hostages is to invite specialists from the partner organization to stay at the focal organization’s facilities. The information gathered by the specialists, which is of value to the organization possessing it, serves as the hostage here.
general from lack of transparency in markets. This lack of transparency, though, is not a real problem, because ongoing interactions between organizations are expected to modify parameters like price, quality and quantity even if both timing and impact of circumstances is unpredictable (according to Williamson, this is due to a process of 'spontaneous adaptation').

According to transaction cost economics, it is possible to decrease transaction costs by giving one party authority over the terms of the trade (Williamson [1995] refers to this situation as 'induced adaptation'\(^{83}\)). In this situation, however, other costs are incurred: costs of errors and costs associated with administrative rigidity (Williamson, 1995; Hart, 1995), or, in short, bureaucratic costs.

So, markets ('spontaneous adaptation') and hierarchies ('induced adaptation') are governance mechanisms that yield various advantages and disadvantages and hence, result in various benefits and costs. Williamson (1985, 1995)\(^{84}\) identifies attributes which describe the advantages and disadvantages:

- Incentive intensity (elicitation of effort to adapt to changing circumstances); and
- Ease of adaptation (ease of making uncontested bilateral adaptation\(^{85}\)).

In general, spontaneous and induced adaptation can be described in terms of these attributes (Figure 23).

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Weight</th>
<th>Induced Adaptation ('hierarchies')</th>
<th>Spontaneous Adaptation ('markets')</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incentive intensity</td>
<td>a(_1)</td>
<td>0</td>
<td>+(^{86})</td>
</tr>
<tr>
<td>Ease of adaptation</td>
<td>a(_2)</td>
<td>+(^{87})</td>
<td>0</td>
</tr>
</tbody>
</table>

**Figure 23: Comparison of governance mechanisms**

A strong assumption, according to Williamson, is that 'incentive intensity' is a valued attribute (Williamson, 1995): in the trade-off depicted in Figure 23, a\(_1\) >> a\(_2\). Therefore,

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\(^{83}\) It is a peculiar thing that Williamson (1995) refers to markets and hierarchies as 'spontaneous adaptation' and 'induced adaptation', respectively, while the line of reasoning in transaction cost economics is static (for an elaboration, refer to the discussion of 'Dynamics' in section 3.5.3). However, the precise dynamics are not elaborated in economic organization theory.

\(^{84}\) The characterization of governance mechanisms with these characteristics is open to discussion. Williamson presents these characteristics "(...) without pretending to be exhaustive" (1995, p. 198). However, in order to illustrate the line of reasoning of transaction cost economics, the characteristics are maintained for the moment.

\(^{85}\) Either by administrative fiat or by third-party arbitration or court ordering. "Hierarchies tend (...) to use administrative fiat while markets resort to the courts for arbitration" (Van Alstyne, 1997, hypertext quotation).

\(^{86}\) Although there is reliance on (costly) court ordering.

\(^{87}\) Although there is reliance on (costly) bureaucratic controls.
According to the line of reasoning in transaction cost economics, the market as a governance mechanism is favored over the hierarchy. The rationale is that the transaction costs that are yielded in markets are less than the costs that occur in the alternative of the hierarchy (i.e., bureaucratic costs).

Up to this point in the line of reasoning, neoclassical analysis is somewhat enriched by taking transaction costs into account, but the analysis' results remain unchallenged: the 'survival' of large, vertically-integrated organizations is not explained. However, apart from the departure from the 'perfect information' assumption, transaction cost economics introduces the notion of asset specificity. The condition of asset specificity refers to the situation in which organizations make relation-specific investments, that is, invest in assets that are specific to certain transactions and that cannot easily be re-deployed to other uses. Examples of asset specificity are site specificity (transactions have to be completed at a fixed location), physical asset specificity (transaction requires specialized equipment) or human asset specificity (transaction requires specialized human knowledge).

Because of the inclusion of bounded rationality and asset specificity, different conclusions in transaction cost economics are yielded (as opposed to the 'theory of the firm'). Transaction cost economics states that in the situation of asset specificity, organizations are locked into each other (at least to some extent) and relinquish some of their freedom to act independently. "Transaction cost economics maintains that the condition of bilateral dependency varies systematically (indeed, is defined by) the condition of asset specificity" (Williamson, 1995, p. 198). A situation of asset specificity (Williamson, 1985, p. 95) is also referred to as a 'lock-in' (Williamson, 1985, p. 53), a situation characterized by 'sunk costs' (van der Zaal, 1997, p. 77), or a situation that resembles a 'small numbers exchange relationship' (Williamson, 1975, p. 26).

In the case of 'asset specificity', organizations are increasingly susceptible to opportunistic behavior of other organizations: the partner organization may choose to 'defect', that is, pursue a golden opportunity. The behavior of an organization actually defecting from a relationship with a partner-organization is referred to as 'opportunism'.

An important consequence of opportunism in the presence of 'asset specificity', according to transaction cost economics, is that the organization considering

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88 Asset specificity was in fact not introduced by Coase or Williamson, but by Klein, Crawford and Alchian (1978).
89 Opportunism by the partner organization confronts the focal organization with the loss of the sum of (1) the sunk costs of the relationship and (2) the costs to search and bind a new partner.
opportunism\textsuperscript{90} may try to renegotiate terms of the contract with its partner organizations, thus raising transaction costs.

An important hypothesis in transaction cost economics and a forceful assertion in the works of Williamson is that in the case of asset specificity, adaptation to changing circumstances in markets (‘spontaneous adaptation’) - for example by renegotiating terms of the trade and/or exchanging or retracting of hostages - is prohibitively expensive. In the trade-off depicted in Figure 23, the transaction costs are hypothesized to exceed the bureaucratic costs of a hierarchy. Therefore, assuming optimizing behavior, hierarchies are hypothesized to be better able to deal with asset-specific investments. “As a condition of bilateral dependency builds up (…), forms of organization that are better able to effect uncontested adaptability have more to recommend them – incentive disabilities notwithstanding” (Williamson, 1995, p. 198).

The premise of the transaction cost approach is that by analyzing transaction costs, one can discover how transactions can be handled efficiently: in an unstructured market-oriented setting in which independence is stressed, or in a structured hierarchical setting, or in intermediary settings. Also, it is stated that the relative costs of markets, hybrids and hierarchies change as the level of asset specificity (dependence) changes (Figure 24). It is the analysis of the concept of ‘asset specificity’ that especially enriches the line of reasoning in transaction cost economics as opposed to the line of reasoning in the ‘theory of the firm’.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure24.png}
\caption{Governance costs (adapted from Williamson [1995, p. 199]).}
\end{figure}

The line of reasoning of transaction cost economics shows in which cases markets are relatively superior to hierarchies, and enriches neoclassical economic analysis by

\textsuperscript{90} For the decision whether or not to ‘defect’, the relative value of a partner organization is taken into account. Relative value of a partner organization to the focal organization may include matters of efficiency, development capacity, flexibility, adherence to specifications, value as a source of knowledge, international presence, etc. (Nooteboom, 1993).
identifying mechanisms that yield opposite conclusions, thus potentially explaining the occurrence of existing partnerships between organizations.

<table>
<thead>
<tr>
<th>Economic Organization Theories</th>
<th>Autonomy</th>
<th>Dependence</th>
<th>Coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Theory</td>
<td>[not explicitly mentioned]</td>
<td>[not explicitly mentioned]</td>
<td>the mechanism (profit sharing agreement / hierarchy) that minimizes sum of residual loss and enforcement costs</td>
</tr>
<tr>
<td>Transaction Cost Economics</td>
<td>state that, in the absence of asset specificity, elicits intensive incentives</td>
<td>state induced by asset specificity(^91)</td>
<td>the mechanism (market mechanism, hierarchy or intermediate forms) that minimizes governance costs(^92)</td>
</tr>
</tbody>
</table>

Figure 25: Autonomy, dependence and coordination in economic organization theory (2/3)

A conceptual flaw of transaction cost economics is the vagueness of the various costs incurred by having or dispensing with authority. Fischer has asserted that by issuing suitably specified transaction costs, almost anything can be rationalized (Brynjolfsson, 1994). Or, as Hart has demonstrated, in transaction cost reasoning it is still unclear by what exact mechanisms opportunism is reduced if transactions are carried out in hierarchies. “First, even if we accept the strategy of explaining governance structures in efficiency terms, the literature has not examined the possibility that authority opens up new avenues for opportunism. Hence, on the transaction costs school’s own criterion for good organizational design, we still lack a full explication of the efficiency advantages generated by authority relations” (Dow, 1987, cited in Pfeffer, 1997, p. 51)\(^93\). Boone and Verbeke (1991) identify various types of bureaucratic costs: costs resulting from ‘complexity’ and costs associated with agency problems (especially in multidivisional organizations).

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\(^91\) See Williamson (1995), who states that dependence varies systematically and is indeed defined by the condition of asset specificity (quotation in this section).

\(^92\) This is probably most vividly expressed in Figure 24.

\(^93\) In the view of Jensen and Meckling, the firm itself is conceived as a nexus of contracts. However, this theory cannot explain why a nexus disbands (autonomization) or why a nexus decides to merge with another nexus (merger).
Concluding, transaction cost economics sheds some light on market failure as a result of the occurrence of the condition of bounded rationality. However, no convincing, rigorous explanation is provided for the question of how introducing authority mitigates this failure (Grossman & Hart, 1986; Boone & Verbeke, 1991). This latter weakness is addressed in the property rights approach.

3.3.5 Property rights theory

The theory of property rights, although it is often portrayed as a multidisciplinary theory, is discussed here under the heading of economic organization theory because it has very clearly visible parallels with agency theory and transaction cost economics. It is based on maximizing behavior (like the *theory of the firm*), emphasizes incentive issues (like agency theory) and emphasizes costs of contracting (like the transaction cost approach). Its distinctive characteristic is the focus on the problem of what exactly differentiates a hierarchy from a market-based contractual agreement, and how ownership of assets affects organizational behavior.

The property rights line of reasoning resembles the line of reasoning of the transaction cost approach. The emphasis, however, is different. Transaction cost economics seems to focus on Coase’s first question of why hierarchies exist (i.e., analyzes market failures), while property rights theory seems to seek an answer to Coase’s second question: why not all production is carried out by one firm (i.e., studies non-market failures)\(^9^4\). Transaction cost economics therefore has many characteristics of a theory of markets, whereas property rights theory has many characteristics of a theory of administration. In the scientific study of public administration, property rights theory has, among other things, been applied to studies of:

- efficiency of legislation (that is, exogenous attenuation of property rights);
- influence of liability on economic behavior;
- state intervention and economic behavior\(^9^5\); and
- activities of individuals in various property right structures (Künneke, 1991).

Property rights may be defined as “(... the sanctioned behavioral relations among men that arise from the existence of goods and that pertain to their use. These relations specify the norms of behavior with respect to goods that each and every person must

\(^9^4\) This is partly due to the fact that property rights theory is a multidisciplinary theory, influenced by disciplines like law and policy science. Transaction cost theory, moreover, is an extension of economic theory. Killian and Wind (1998) argue that deviation from the market mechanism provides the starting point of research for economists, whereas social scientists (specifically, policy scientists) are more interested in studying withdrawal from hierarchical coordination.

\(^9^5\) A typical property rights claim is provided by Alchian: under public ownership the costs of any decision or choice are less fully trust upon the selector than under private property.
observe in his daily interactions with other persons, or bear the costs of non-observance. (…) The prevailing system of property rights in the community is, then, the sum of economic and social relations with respect to scarce resources in which individual members stand to each other” (Furubotn & Pejovich, 1974, p. 3). Künneke presents another definition: “the legally allowed alternatives of resource allocation” (1991, p. 54). Hart and Moore (1990) summarize that a property right ultimately is the ability of an owner to exclude others from the use of his or her asset. Künneke mentions the example of ownership of a dwelling and how this involves a number of property rights:

“(a) the right to use the asset (…) (b) the right to appropriate the returns from the asset and (c) the right to change the asset’s form and substance” (Furubotn & Pejovich, 1974, p. 4). These rights are also referred to as usus, the right to occupy it, usus fructus, the right to let it, and abusus, the right to reconstruct or eventually sell the house, respectively (Künneke, 1991, p. 58).

Property rights theory “(…) views the firm as a set of property rights” (Hart, 1995, p. 160). So, an organization is characterized by the (nonhuman) assets under its control. The owner may adapt the assets with cost-saving or quality-enhancing features and may appropriate the benefits of these adaptations. This may occur directly, by generating an income out of it or, indirectly, by allowing others to use the asset embodying these innovations in exchange for an increased compensation, specified in a contract between owner and user of the asset.

The parallel with transaction cost economics is clearly visible in property rights theory’s treatment of bounded rationality. According to property rights theorist Brynjolfsson (1994), it is impossible to write a comprehensive, long term contract that governs the terms of the trade in every conceivable state of the world. Initial contracts are incomplete (Brynjolfsson, 1994): “(…) the quasi rents from the investment cannot be divided up appropriately in advance” (Hart & Moore, 1990, p. 1120). Property rights theory states that the right to choose the aspects not covered by contracts resides with the owner of the asset: the owner is residual claimant. “Each of the parties will have certain rights under the contract, but its incompleteness means that there will remain some ‘residual rights’ that are not specified in the contract. When these rights pertain to the use of an asset, the institution which allocates these residual rights of control is property ownership” (Brynjolfsson, 1994, p. 1647).

Property rights theory even states that if physical capital is important, control over nonhuman capital can lead to control over human capital (also referred to as organizational capital), because it is hard for employees to find a substitute for this capital in the short run.

Note that residues of property rights not only refer to monetary gains (residual usus fructus property rights, profits), but also to residual usus and abusus property rights. For example, if a contract says nothing about maintenance of a specific piece of machinery, the ‘owner’ retains the right to decide on maintenance (Brynjolfsson, 1994).
In fact, property rights theory identifies two categories of property rights, designated rights and residual rights (Grossman & Hart, 1986). By means of a contractual relationship, only designated rights are transferred from one party to another, leaving residual rights unchanged. Now, a situation of assets under shared control arises (Van Alstyne, 1997). Ownership, on the other hand, gives access to designated and residual rights. Thus, under the condition of bounded rationality, the owner of an asset always has an incentive to invest in an asset, or, more generally, in an interorganizational relationship, because even in the case of a circumstance that has not been specified in the (incomplete) contract, over which haggling over the terms of the trade occurs, the owner possesses ex-post bargaining power by means of threatening to withhold the assets otherwise. Property rights theory concludes that under a condition of bounded rationality, organizational behavior is not only determined by reward structures as specified in contracts, but also by asset ownership.

In transaction cost economics, common control is seen as a way of reducing the consequences of opportunistic behavior (the transaction costs that can arise, Hart & Moore [1990]). As property rights theory clearly has visible parallels with transaction cost economics, the basic line of reasoning of property rights theory resembles the mechanisms of transaction cost economics, although the terminology is slightly different. As in transaction cost economics, the focus is on the advantages and disadvantages of various governance mechanisms, and markets are contrasted with hierarchies. In markets, production is characterized by a series of transactions between autonomous organizations, so that residual property rights are dispersed over these organizations. In hierarchies, property rights are attenuated: one party gains authority over the whole transaction. In fact, the basic transaction cost economics trade-off (see Figure 23, p. 90) is elaborated. It is hypothesized that advantages incurred by authority will not outweigh the disadvantages of decreased incentive intensity (see also section 3.3.4).

As in transaction cost economics, there is a condition in which this does not apply; this situation is referred to as complementarity of assets (caused by asset-specific investments). In the case of complementary assets, each party can withhold the asset under its control and the haggling over the terms of the trade that occurs if organizations decide to do so increases transaction costs significantly. Property rights theory hypothesizes that in the case of bounded rationality and complementary assets, cost savings resulting from integration will, in fact, outweigh the costs incurred by decreased incentive intensity.

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98 Also referred to as integration. Here, integration refers to the inclusion of autonomous organizational parts in a common hierarchy or firm, or the degree to which ownership and property rights vest with a central office (Van Alstyn, 1997). At this moment, its meaning is different from the meaning of information systems integration as defined in chapter two. See chapter five for more details.
In the line of reasoning of transaction cost economics, the mechanism that is responsible for suppressing transaction costs is simply embodied in the phrase “a boss can tell a worker what to do” (Hart, 1995, p. 164). It hardly needs argumentation that this phrase represents a caricature of what actually happens in organizations, especially if professionals dominate these organizations (as in professional bureaucracies). Property rights theory provides an explanation of how hierarchy mitigates transaction costs, and thus, why hierarchies are better able to deal with complementary assets, in a more sophisticated way than is embodied in the phrase ‘a boss can tell a worker what to do’. This explanation is based on the incentive intensity for employees and emphasizes that in the case of asset specificity, it is in the self-interest of the employees to behave in the way the boss tells them to (their incentives are more intense).

The explanation can be illustrated using an example. In the example below, we will illustrate that incentive intensity affects the behavior of owners of firms (in other words, asset owners), but also, more realistically, that it affects the behavior of employees who do not own assets but (in the absence of complete labor contracts) can bargain for a part of the surplus generated by their efforts.

Firstly, let us focus on the behavior of owners of two organizations X and Y that are involved in the production of a good that does not require complementary assets. Owners of organizations X and Y face intensive incentives to invest in assets because - being owners - they can appropriate the gains from these investments. This changes, however, if assets are complementary. Owner X knows that owner Y is able to bargain for a part of the value generated by X’s investment by means of threatening to withhold the complementary asset, and owner Y knows that owner X is able to do the same thing with the value generated by Y’s investments. In the absence of complete contracts, this situation confronts both X and Y with decreased incentive intensity. By means of common control over assets, incentives are restored because the possibility of holding up complementary assets is excluded and in all cases of redistribution of property rights (X buying Y’s assets, Y buying X’s assets, and X and Y being co-owners) incentives are restored.

Secondly, it is possible to show that incentive intensity also applies to employees working with assets. Although employees are not owners, they can bargain for benefits in any form: higher wages, promotions, or even more leisure time or on-the-job consumption.

Employees working with the assets face incentives to engage in, for example, an on-the-job training program because their value will rise and they will be able to bargain with the asset owner for benefits as described above. In this situation, the marginal value created because of the on-the-job training program is, in the long run, expected to be divided among the asset owner and employees.

Now consider a situation in which complementary assets are involved. The same employees engaging in an on-the-job training program face degraded incentives because they have to bargain with the asset owner, who, in his turn, has to bargain with the partner-organization, suggesting a split of the marginal value between employees,
owner and partner-organization. Consequently, the employees’ share of gains will typically be lower and so their incentive to acquire new skills decreases.

The incentives for the employees are restored, however, if the complementary assets are placed under common control. In this situation, the employees bargain directly with the owner of the asset, suggesting a split of the marginal value between employee and owner.

Thus, in a case of (1) incomplete contracts and (2) asset specificity, incentives for employees are more intensive under common control than under separate ownership.

This line of reasoning explains how the occurrence of complementary assets enables the owner of the complementary asset to bargain for a part of the marginal value created by employees working with the original asset (by threatening to withhold the complementary asset otherwise), thereby suppressing the employees’ incentives. This situation is an example of a market-failure (caused by ‘hold-up’ power, exercised by the complementary asset’s owner) that suppresses incentive intensity in markets.

Property rights theory hypothesizes that complementary assets in markets suppress incentives for employees working with these assets, and that this decreased incentive intensity offsets the traditional superior incentives in markets. Furthermore, it is hypothesized that bringing complementary assets under a common hierarchy restores the intensity of their incentives because employees working with the assets have to negotiate with only one party (the ‘unified’ owner of the complementary assets). The phrase ‘a boss can tell a worker what to do’ is replaced by the phrase ‘rental cars are driven less carefully than cars driven by their owners’ (Van Alstyne, Brynjolfsson & Madnick, 1995).

Note that property rights theory’s answer to the question of by what exact mechanism hierarchy mitigates contractual failure is still a caricature, but perhaps not such an unrealistic one (Hart, 1995).
### 3.3.6 Autonomy, coordination and dependence in economic organization theory

In this section, the contributions of agency theory, transaction costs economics and property rights theory with respect to the relationship between autonomy, dependence and coordination are synthesized. Because of the criticism of the use of agency theory for our current purposes (see section 3.3.3), this synthesis is largely based on the contribution of transaction cost economics and (for the larger part) property rights theory.

In section 3.2, it was noted that organization theory in general claims that organizations strain to *maintain autonomy* and avoid situations in which the behavior of other organizations has ramifications for the focal organization. According to the line of reasoning of economic organization theory, organizations exerting the *usus, usus fructus* and *abusus* property rights in an unbounded manner face intensive incentives to perform well. That is, autonomous organizations, accessing other organizations’ assets and allowing other organizations access to their own assets through short-term (‘spot market’) contracts, are hypothesized to pass the evolutionary
filter of market competition. However, this only holds under a number of assumptions, among other things the assumption of perfect information. All economic organization theories discussed in sections 3.3.3 to 3.3.5 are based on the assumption that perfect information either does not exist or that perfect information is prohibitively expensive to gather (the bounded rationality assumption). Consequently, organizations are confronted with uncertainty, circumstances that had not been anticipated in contracts with other organizations. So, if circumstances occur that have not been foreseen, adaptation of contracts will have to take place. Consequently, costs are incurred: so-called transaction costs. Despite the fact that adaptation to changing circumstances may be effortful and transaction costs are incurred, it is assumed that intensive incentives yield successful adaptation. Even in the presence of uncertainty and hence transaction costs, organizations are assumed to be able to renegotiate terms of trade in such a way that, in the long run, all organizations involved benefit equally well.

The situation changes, however, if investments have been made in capital that can only generate rents in conjunction with specific (either human or non-human) assets of the partner organization (‘asset specificity’ or ‘complementary assets’). In these situations, organizations are confronted with a lock-in effect. In such a case, the threat of withholding complementary assets by a partner-organization means that a focal organization’s decision premises are no longer fully determined autonomously. Hence, dependence occurs as a result of ‘asset specificity’. Dependence is seen as a threat because organizations that are ‘locked-in’ are vulnerable to possible opportunistic behavior by the partner organization (see also van der Zaal, 1997). It is hypothesized that organizations try to avoid asset-specific investments, or, if this is impossible, only engage in cooperation with partner organizations using asset-specific investments if the focal organization “(…) has a more or less well grounded belief, in the form of a subjective probability, that Y will cooperate in the sense of not misusing such dependence. This belief may be based on (perceived) available opportunities for misuse on the part of Y, Y’s incentives towards misuse, and Y’s propensity to employ the opportunities” (Nooteboom, 1993, p. 11). In the case of asset specificity, autonomy of organizations also refers to the possibility of opportunism.

Organizations may allow for the possibility of opportunistic behavior by partner organizations by anticipating such behavior in contracts. In this way, contractual arrangements limit both organizations’ autonomy. However, assuming bounded rationality, it is either impossible to anticipate all states of the world (a Simonian interpretation of bounded rationality) or prohibitively expensive (in a Coasian interpretation); contracts are necessarily incomplete. The characteristic of bounded

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Note that concepts like ‘sunk costs’ and ‘asset specificity’ are problematic because imperfect information renders full anticipation of consequences in contractual arrangements impossible. Assuming perfect information, though, anticipation is possible and these concepts are not problematic any more.
rationality and hence incompleteness of contracts is crucial in economic organization theory. Thus, economic organization theory, especially transaction cost economics and property rights theory, focuses on the opportunity costs of autonomy: “the cost to the individual of preserving autonomy” (Douglas, 1995, p. 98). In situations of dependence, these costs increase. It is this feature especially that differentiates economic organization theory from neoclassical economic analysis.

Economic organization theory states that although bringing two separate organizations under common control by means of hierarchical coordination yields costs of reduced intensive incentives and increased administrative rigidity, these costs may be outweighed by the benefits of avoiding ‘haggling costs’ (see Figure 24, p. 92). As complementary assets held by separate organizations are a cause of haggling, it is hypothesized that a net improvement can be realized by integrating assets under a common hierarchy, thereby removing possible hold-up situations (see section 3.3.5).

A key tenet of economic organization theory is that it identifies positive and negative consequences (in terms of costs) of various governance mechanisms in various circumstances. Assuming optimizing behavior of organizations, it explains why organizations accept being limited in the course of action they wish to pursue (e.g. accepting procedural coordination, either by detailed contracts or by accepting hierarchical control; in both ways, transaction costs are decreased).

Often, economic organization theory is viewed as having a preoccupation with the market-versus-hierarchy theme. In section 3.3.4, it was shown that the market versus hierarchy comparison is more likely to be conceived as a continuum. Negotiations between organizations result in contracts that consist of elements that are characteristic of markets as well as elements that are typical of hierarchies (de Vries, 1992). The alternative of semi-structured interorganizational relations is a novelty in the works of Williamson (van der Zaal, 1997). “Whereas I was earlier of the view that transactions of the middle kind were very difficult to organize and hence were unstable, (…) I am now convinced that transactions of the middle range are much more common” (Williamson, 1985, p. 83).

In Figure 27, the position of autonomy, dependence and coordination in economic organization theory at large is summarized. This summary is based on previous summaries on the position of autonomy, dependence and coordination in agency theory, transaction cost theory and property rights theory (Figure 22, Figure 25 and Figure 26, respectively). The summary of economic organization theory focuses somewhat more on transaction cost theory and property rights theory because agency theory lacks a full explanation of relationships between organizations if one does not strictly operate on behalf of another organization (see section 3.3.3).
<table>
<thead>
<tr>
<th>Economic Organization Theory</th>
<th>Autonomy</th>
<th>Dependence</th>
<th>Coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>state in which property rights are exerted with respect to assets in an unbounded manner, which elicits powerful incentives to perform well</td>
<td>state in which assets can only be made productive in association with other assets</td>
<td>the mechanism that optimizes incentives for participants involved</td>
</tr>
</tbody>
</table>

Figure 27: Autonomy, dependence and coordination in economic organization theory (synthesis)

3.4 Political Organization Theory

3.4.1 Introduction

As the statement by Pennings indicates (this volume, p. 82), economic theories have been widely applied to the study of interorganizational relations. However, economics is not the only perspective used. Developments in political science, policy science and sociology have resulted in the emergence of what is referred to here as political organization theory (see also Klijn, 1997). Political organization theory has proven to be a rival theory to economic organization theories. Political organization theorist Jerry Pfeffer and economic organization theory proponent Oliver Williamson have fueled a vigorous debate between political organization theory and economic organization theory. Williamson noted that “[e]conomic and sociological approaches to economic organization have reached a state of healthy tension” (1995, p. 207). Pfeffer has stated that “there is evidence that both institutionalization and power theories of organizations occasionally are more successful than some presumption of rationality or efficiency explaining organizational structure” (1997, p. 52), whereas he stated, with respect to economic organization theories, that the dominance of economic organization theory in the larger field of organization theory does not rest on a readily identifiable set of empirical successes. Williamson, on the other hand, repeatedly quotes March’s statement that, for organization theory, power is a disappointing concept100.

100 The debate is not only a debate in organization science. Donaldson (1995) explicitly grounds political organization theory in the New Left ideology, whereas economic organization theory is assumed to originate in the conservative ideology of the New Right (Ter Bogt, 1998).
3.4.2 The political perspective on organizations

Political organization theory originates in the works of Homans, Levine and White, Emerson, Zald, Benson, and Pfeffer. A key reference for the political organization theory is Pfeffer and Salancik (1978). They have explicitly positioned their work as being opposite to prior organizational analysis that focused internally and ignored the political dimension (Donaldson, 1995): “[m]ore traditional views of organizations underemphasize the importance of power, conflict, and non-bureaucratic procedures” (Tushman, 1977, p. 207). According to Parsons, in political organization theory “(…) the orientation is the maximization of total command of facilities in the social system held by one actor, individual or collective, relative to the others” (1951, p. 550). Political organization theory, being the study of legitimate power, was particularly vigorous in the early 1970s (Pfeffer, 1997). Since then, attention to power and politicking has diminished. Pfeffer, one of the key theoreticians on political organization theory, stated a number of reasons for this decline and concluded in 1997 that “[p]ower as a topic also suffers from the problem of being politically incorrect. (…) Considerations of domination and force, of getting one’s way against opposition - which is, after all, a part of most definitions about power 101 – perhaps are better left out of sight of discussion.” (1997, p. 155).

However, because of its value for interorganizational analysis (Pfeffer and Salancik’s theory has many characteristics of an interorganizational theory: six of the ten chapters of their work are about interorganizational matters like mergers, joint ventures, cartels, etc.102) and the ‘rediscovery’ of political organization theory by authors working in the discipline of information systems (Holland & Lockett, 1994; Bensaou & Venkatraman, 1996; Klein, 1996; Schwarzer, Zerbe & Krcmar, 1997), political organization theory is discussed here.

3.4.3 The mechanisms of political organization theory

Political organization theory belongs to the so-called interorganizational theories that claim to explain the development of interorganizational relations and provide recommendations for their design. In fact, the starting point of political organization

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101 Emerson (1962), for example, defines the power of X over Y as the amount of resistance on the part of Y which can potentially be overcome by X.
102 Donaldson (1995) even claims that because of phenomena addressed in political organization theory, Pfeffer and Salancik’s work is more a theory of (corporate) strategy than of organizational structure. However, Donaldson does not point out on which grounds he differentiates structure theory from strategy theory. For this moment, therefore, we subsume political organization theory, including Pfeffer and Salancik’s theory, under the heading of organization theory.

103
theory\textsuperscript{103} is that the behavior of organizations can only be explained in relation to enironing organizations.

In political organization theory, organizations are viewed as "(…) political entities: coalitions of interests and demands emanating from within and outside organizations. (…) Boundaries within organizations change, participation in decision domains varies, and decisions are differentially important. Under these conditions, organizations can be viewed as loose structures of interests and demands, competing for organizational attention and resources, and resulting in conflicts that are never completely resolved" (Narayanan & Liam Fahey, 1982, pp. 26-27). These coalitions attempt to acquire and maintain resources by interacting with other coalitions, each with its own preferences and objectives\textsuperscript{104}. Here, ‘resources’ refers to social legitimacy, information and physical and monetary resources.

Thus, the focus is not limited to the functioning and design of the ‘internal’ organization, but rather stresses the management of relations. Tushman (1977) assumes that (1) to understand the behavior of organizations, one must understand the dynamics and relationships between organizations; (2) organizations may not be equally powerful over different issue areas (and the distribution of power and status over organizations may change over time); (3) organizations will act to limit the uncertainty they are facing; and (4) the greater the differentiation between organizations, the greater the potential for interorganizational conflict.

A key statement of political organization theory is that "(…) in general, organizations will tend to be influenced by those who control the resources they require" (Pfeffer & Salancik, 1978, p. 44). Pfeffer and Salancik state ten conditions that affect the extent to which an organization will comply with control attempts:

1. The focal organization is aware of the demands;
2. The focal organization obtains some resources from the social actor making the demands;
3. The resource is a critical or important part of the focal organization’s operation;
4. The social actor controls the allocation, access, or use of the resource; alternative sources for the resource are not available to the focal organization;
5. The focal organization does not control the allocation, access, or use of other resources critical to the social actor’s operation and survival;

\textsuperscript{103} In the remainder of the discussion, resource dependency theory is assumed to be synonymous with political organization theory, unless other authors than Pfeffer and Salancik are explicitly quoted.

\textsuperscript{104} Here, clearly the assumption of methodological individualism is violated. Instead, the view on organizations as held by March and Simon (1958) is more or less followed (‘individuals in organizations engage in transactions and exchange contributions for inducements’).
6. The actions or outputs of the focal organization are visible and can be assessed by the social actor to judge whether the actions comply with its demands;
7. The focal organization’s satisfaction of the social actor’s requests are not in conflict with the satisfaction of demands from other components of the environment with which it is interdependent;
8. The focal organization does not control the determination, formulation or expression of the social actor’s demands;
9. The focal organization is capable of developing actions or outcomes that will satisfy the external demands; and.

Furthermore, political organization theory hypothesizes that if the environment, which consists of other, possibly linked organizations, changes, the focal organization faces the prospect of either coping with the changed environment (and thus safeguarding the acquisition and maintenance of resources) or not surviving. Coping with the environment, according to the line of reasoning of political organization theory, includes the question how organizations react to their environment (Pfeffer & Salancik, 1978; Donaldson, 1995; Pfeffer, 1997; see also the discussion in Williamson, 1995). However, reverse causality – how organizations can influence the environment – is also taken into account. In this way, the basic mechanism of political organization theory resembles the reasoning of emergent perspective (see section 1.2.1). “If the organization and the environment must be mutually compatible, then either the organization can change or the environment can be changed” (Pfeffer & Salancik, 1978, p. 107). In fact, managers are assumed to have three roles. Apart from the symbolic role, in which a manager is rewarded when things are going well and fired “(…) as a way of altering appearances, thereby removing external pressure, without losing much discretion” (Pfeffer & Salancik, 1978, p. 264), there are both the responsive role and the discretionary role. The responsive role is the role of processing of and responding to the environment, and of implementing adaptation. The discretionary role is the role of actively modifying the environment.

Political organization theory does not assume a deterministic line of reasoning as in Burns and Stalker (1961), but rather hypothesizes that organizations are not slavish followers of the demands of the environment (Pfeffer & Salancik, 1978; Haselhoff, 1977). The rationale for this position is that environments of organizations consist of a variety of other organizations, including organizations that are mainly concerned with legal, political or juridical aspects, including but not limited to governmental organizations\(^\text{105}\), accrediting organizations, regulatory bodies that were established by agreement of the focal organization itself, etc. Consequently, the demands that an

\(^{105}\) The fact that the environment consists of other organizations, including government agencies, funding organizations, etc. may be seen as a step forward in comparison to the situation in which a very abstract concept of environment is assumed (see section 3.2).
organization faces are often in conflict with one another and even if organizations were able to comply with these conflicting demands\textsuperscript{106}, the path dependence of individual responses constrains organizations in its future actions, including responding to other demands. This suggests that organizations cannot survive by responding completely to every environmental demand: such a form of ‘compliance’ is “a loss of discretion, a constraint, and an admission of limited autonomy. To the extent that the focal organization is subject to successful external influence attempts, it places itself in a situation in which its long-term survival is threatened” (Pfeffer & Salancik, 1978, pp. 94-95). Wamsley and Zald state that organizations typically shield off their technological cores from the environment: “Since organizations exist to accomplish work, the organizational polity must protect and insulate the technological core from external contingencies (…), that would disrupt task accomplishment” (1973, p. 72; see also Thompson, 1967; Homburg & Gazendam, 1997).

The possibilities for actively managing the environment are more or less captured in the conditions that affect the extent to which an organization will comply with control attempts. In general, Pfeffer and Salancik mention two courses of action (1978, p. 97):

- avoiding resource dependence, and
- avoiding control.

\textit{Avoiding resource dependence} implies avoiding the conditions which demand compliance in the first place, that is, changing “the focal organization’s dependence on important critical resource exchanges” (Pfeffer & Salancik, 1978, p. 108). Benson identifies the basic action orientations of maintenance and defense of an exclusive, autonomous domain. “To forestall a loss of autonomy and to remove some of the contextual constraints on behavior, the focal organization may take action to reduce the probability of being subject to successful enforcement of external demands” (Pfeffer & Salancik, 1978, pp. 95-96).

In practice, organizations can choose to buffer inputs and to commit other organizations to long-term contracts for disposal of output. However, buffering does not remove the basic source of vulnerability. Another solution is to develop substitute exchanges (‘the redefinition of an exchange so that it is no longer critical’) or to diversify (‘expansion into a related geographical area, or market, to the conglomerate of the firm so that it includes diverse lines of business with practically no resource exchanges in common’). In general, avoiding resource dependence implies altering “(…) the purposes and structure of the organization so that it no longer requires only a limited range of inputs or serves only a few markets” (Pfeffer & Salancik, 1978, p. 109).

\textsuperscript{106} For example, by means of sequential attention to environmental demands, nondisclosure or playing various groups off against one another (Cyert & March, 1963; Pfeffer & Salancik, 1978).
Avoiding control is a course of action that is referred to as 'expanding organizational jurisdiction and encompassing critical contingencies' by Wamsley and Zald (1973). In this course of action, “the control which other organizations might possess over the exchange of that resource” (Pfeffer & Salancik, 1978, p. 108) is manipulated. This manipulation is inspired by the observation that “if the exchange is important for the organization, the organization should attempt to manage its interdependence by extending its own control in those vital areas” (Pfeffer & Salancik, 1978, p. 113). An option is to control the input or output exchange itself, to control the stability and predictability of the exchange relations by controlling the rules of the trade. Pfeffer and Salancik propose a variety of measures to do this.

Firstly, collective structures of interorganizational action can be established: informal or semiformal mechanisms in which behavior is coordinated “not by hierarchical mandate but by agreements to behave in certain ways” (Pfeffer & Salancik, 1978, p. 144) in such a way that access to resources is controlled and assets’ use is regulated. This can be done by co-optation (forming interlocking directorates). Co-optation is “a situation in which a person, or a set of persons, is appointed to a board of directors, advisory committee, policy meeting or influencing group, some organizational body that has at least the appearance of making or influencing decisions” (Pfeffer & Salancik, 1978, p. 162).

Secondly, one method is to operate under the protection of government or interfirm regulation. For instance, concentration of control in the environment can be eliminated through appealing to antitrust legislation. However, this is only possible in a limited number of circumstances. For example, governmental power cannot be eliminated using this type of reaction. Furthermore, this second category of measures “still leaves the organization somewhat vulnerable. Cartels can disband, government regulators can become hostile, and informal arrangements can be broken down” (Pfeffer & Salancik, 1978, pp. 108-109).

Therefore, thirdly, partner organizations can be controlled by means of merger. Here, “ownership solves the problem directly; compliance comes through the authority established by owning the other organization” (Pfeffer & Salancik, 1978, p. 145). Merger is viewed as quite a drastic measure (as compared to informal or semiformal linkages), because “relationships established through communication and consensus can be established, renegotiated and re-established with more ease than the integration of organizations by merger can be altered” (Pfeffer & Salancik, 1978, p. 144).

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107 Pfeffer and Salancik state that this can be achieved both by legal as well as by illegal means.
108 Also referred to as ‘the negotiated environment’ by Cyert & March (1963).
109 Of course, abusive exertion of governmental power is incompatible with General Rules of Conduct and can be contested using objection and appeal procedures in administrative law (Heesen, Homburg & Offereins, 1995; Heesen, Homburg & Offereins, 1997). The result, however, can never be the dismantling of governmental power.
Furthermore, formal mechanisms like merger may not always be possible (Heesen, Homburg & Offereins, 1995, 1997).

Summarizing, whereas in economic organization theory, profit-maximizing behavior of organizations as atomic agents is assumed, political organization theory makes assumptions about behavior of organizations as well as behavior within organizations (extra-organizational and intra-organizational, respectively). In political organization theory, the behavior of organizations is not guided by cost-benefit considerations\textsuperscript{110}, instead, organizations are assumed to be \textit{actors that strive to optimize their self-interest by (1) minimizing their dependence on other organizations and (2) maximizing the dependence of other organizations on themselves} (see also Guetzkow, 1966; Reekers & Smithson, 1996). Donaldson states that “(…) thus, the thesis of Pfeffer and Salancik (1978) is at root a model of political struggle, that is, of different parties seeking to influence each other to their own advantage, both between one organization and another, and between one organizational member and another” (1995, p. 130). Donaldson accuses Pfeffer and Salancik’s theory of treating organizations as political actors, represented by top-management, rather than production systems or systems of economic activity (Donaldson, 1995). In fact, Pfeffer and Salancik themselves state that asymmetrical power and dependence relations play an important role in their theory and attention has to be paid to aspects of conflict, struggle for power, exploitation and especially protection of autonomy. “Many of the structural attributes described as desirable for organizational adaptability and for coping with an environment of conflicting demands and interests are represented in political organizations (…). We are not the first to note structural parallels between political organizations and other types of organizations or the similarities in their governance and adaptation. (…) We suspect that it is mainly when the problems confronted by formal organizations become increasingly the management of conflicting demands and adaptation to changing social contexts that structural similarities to political organizations emerge” (1978, pp. 277-278).

Donaldson furthermore states that political organization theory is an example of a theory that overemphasizes politics, has an anti-management quality and has become associated with an outbreak of irrationality. In short, Donaldson seems to suggest that “politics are an aberrant form of behavior” (Davenport, Eccles & Prusak, 1992, p. 55). Tushman, on the other hand, states that politicking “arise[s] not because of (…) perversity, but because of the nature of organizational processes and decision-making under uncertainty (…) Conflict is inherent in the system whose social structure is seen as pluralistic, fractured by (…) divergent interests” (Tushman, 1977, p. 212).

Analysis of the political organization theory as depicted in this section shows that political theory mainly states that organizational survival is achieved by adaptation and by influencing the environment in order to retain a degree of organizational autonomy.

\textsuperscript{110} Pfeffer and Salancik (1978) assert that subjective and ideological elements play an important role in the causal chain that eventually explains behavior of organizations.
The existence of production systems and economic aspects is not denied but rather viewed from another perspective\textsuperscript{111}.

3.4.4 Autonomy, coordination and dependence in political organization theory

Autonomy, coordination and dependence all are literally used in the discussion of Pfeffer and Salancik’s version of political organization theory. Dependence is described as being the obverse of power (Emerson, 1962), “the reason why nothing comes out quite the way one wants it to” (Pfeffer & Salancik, 1978, p. 40) and it is defined as a situation in which another has discretion to take actions that affect the focal organization’s interests. Dependence exists when there is an unequal balance between two organizations with respect to the concentration of resources and the importance of resources to the organizations. In fact, dependence is portrayed as being the product of the importance of a given input or output to the organization\textsuperscript{112} and the extent to which it is controlled by a relatively few organizations. Eventually, dependence is very important in the explanation of interorganizational behavior.

According to Benson, “[a]dmministrators undertake or refuse to undertake cooperative ventures on the basis of reasonably careful calculations of costs and returns at the level of resource acquisition. Coordination proposals which threaten the program efficiency of an agency or its established ties to supporting publics are resisted. Proposals which strengthen the agency’s position in the resource game are more likely to be adopted” (1975, p. 238).

Coordination is also literally used. It must be noted, however, that a definition of coordination is lacking. Coordination is described as “a means for managing mutual interdependence” (Pfeffer & Salancik, 1978, p. 143). Coordination may be achieved through a hierarchical mandate, but also by so-called interfirm linkages, depending on voluntary behavior in which significant discretion remains with external organizations who may withdraw from the coordinated interaction. Examples of such forms of informal or semiformal coordination are: “co-optation, trade associations, cartels, reciprocal trade agreements, coordinating councils, advisory boards, boards of directors, joint ventures, and social norms” (Pfeffer & Salancik, 1978, p. 144). Pfeffer and Salancik mention the following advantages of interfirm linkages:

\begin{itemize}
  \item They provide information about the activities of that organization which may impinge on or affects the focal organization;
\end{itemize}

\textsuperscript{111} In fact, not many of the theories discussed by Donaldson (1995) manage to survive his critical review. Schrama (1991) has remarked that Donaldson’s analysis is at least a rear-guard action.

\textsuperscript{112} Resource importance is often operationalized as the ratio of the amount of a specific resource and the total amount of resources that are transacted by the focal organization (van der Zaal, 1997).
They provide a channel for communicating information to another organization on which the focal organization depends;
They constitute a first step in obtaining commitments of support from important elements of the environment; and
They have a certain value for legitimating the focal organization (Pfeffer & Salancik, 1978, p. 145).

With respect to hierarchical coordination, the following is remarked: “[e]xplicit coordination among organizations is costly. When the external world is brought into the organization, through director interlocks, through the pooling of resources in a joint venture, or by giving authority to some interfirm organization, external influence over the organization is increased and its own discretion is simultaneously constrained even as it increases the certainty of its environment.” (Pfeffer & Salancik, 1978, p. 183). Alexander (1995) states that hierarchical coordination may in fact offer few or no benefits and setting up hierarchical coordination structures may involve costs which, even if they are low, offer few prospects of offsetting gains (p. 273). Moreover, Pfeffer and Salancik remark that “[o]rganizations are willing to bear the costs of restricted discretion for the benefits of predictable and certain exchanges” (Pfeffer & Salancik, 1978, p. 183). Overall, however, Pfeffer and Salancik describe interfirm linkages (that is, in the terminology of this thesis, interorganizational relations) using the term ‘collusion’ and find them undesirable. “One might ask why collusion is seen as so disturbing. Why are reciprocal trade agreements, cartels, and other forms of interfirm coordination considered to be undesirable? After all, the firms are just solving the problems of dependence through establishing a negotiated environment. The problem is that the negotiated environment established is not one that includes the interests of all parties. If two organizations collude to reduce competition, they have created greater dependence for those who purchase their products. The problem with collusion, or coordination to establish negotiated environments, is that everyone is not freely and openly participating in the process” (Pfeffer & Salancik, 1978, pp. 183-184).

Autonomy is also literally used albeit not defined. Autonomy is a state to be cherished, and dependence is a state always to be avoided, unless uncertainty can be reduced, for example by ‘absorbing’ information from partner organizations, gaining support from the environment, and, in general, legitimizing the organization. From the fragment “[o]rganizations seek to avoid dependencies and external control and, at the same time, to shape their own contexts and retain their autonomy for independent action” (Pfeffer & Salancik, 1978, p. 261) one might guess that autonomy in political organization theory is the state of non-dependence; that is, self-containment. However, as has also been taken into account, no organization is completely self-contained, so autonomy is more of an ideal state or objective than an existing, observable state. A peculiar detail of the role of autonomy in political organization theory is that organizations (especially those operating in industries at intermediate stages of concentration) tend to use inter-firm linkages in order to avoid uncertainty. Yet each of
these interfirm linkages in itself involves an element of diminution of autonomy (Donaldson, 1995). So “in order to protect their autonomy, organizations take steps which reduce their autonomy” (Davis and Powell, cited in Donaldson, 1995, p. 148). This ‘irony’ is further discussed in section 3.5.

The positive causal relation between dependence and uncertainty is notable, especially because a satisfying explanation is lacking (see also van der Zaal, 1997): in some situations, organizations resist external control (interfirm linkages, integration), because it reduces their autonomy. However, organizations are also hypothesized to surrender autonomy actively in order to reduce uncertainty for the benefits of predictable and certain exchanges. Obviously, it is assumed that interorganizational relations that are initiated by other organizations reduce autonomy for a focal organization, whereas if a focal organization initiates interorganizational relations, it enhances the focal organization’s autonomy.

<table>
<thead>
<tr>
<th>Political Organization Theory</th>
<th>Autonomy: the ideal state of self-containment</th>
<th>Dependence: situation in which another organization has discretion to affect focal organization’s behavior and interests by controlling necessary resources</th>
<th>Coordination: diminishment of freedom to act independently, either by hierarchical mandates, voluntary behavior or co-optation</th>
</tr>
</thead>
</table>

Figure 28: Autonomy, dependence and coordination in political organization theory (synthesis)

### 3.5 Synthesizing perspectives

#### 3.5.1 Opportunities for reconciliation between theoretical perspectives

The debate on the appropriateness of economic organization theory and political organization theory (see section 3.3.1) is a vigorous one. The discussions of economic organization theory (section 3.3) and political organization theory (section 3.4) have indeed revealed that there is some tension between authors of the two different streams. The debate is somewhat polarized by Williamson (1995) and Pfeffer (1997).

Nevertheless, there are enough similarities and overlaps in order to try to synthesize the two perspectives: “(...) While important areas of disagreement remain, more consensus exists than is at first apparent” (Scott, 1987, cited in Williamson, 1995, p. 207). Moreover, many authors have tried to reconcile economic organization theory and political organization theory (Holland & Lockett, 1994; Bensaou & Venkatraman, 1996; Klein, 1996; Schwarzer, Zerbe & Krcmar, 1997). Other authors have even tried to
reconcile strategy formation (see section 2.3), economic organization theory and political organization theory (Haselhoff, 1977; Krickx, 1991, van der Zaal, 1997). In this section, the insights from both theoretical perspectives are compared to each other and combined where possible. The justification for this effort lies in statements like “[i]n many ways, transaction cost theory can be considered as an extension to the resource dependence perspective” (Reekers & Smithson, 1996). Pfeffer (1997) asserted that studying power processes can provide at least a partial test of the economic model of organizations, and can also increase the explanatory power of economic models of, for example, not-for-profit organizations (see also 3.4).

3.5.2 Comparison of political organization theory and economic organization theory

Introduction

The compatibility of both political organization theory and economic organization theory with frameworks addressing consistency of organizational (and, for instance, other organizational or technological) variables has been subject to discussion. Political organization theory’s description of mutually adjusting interorganizational and environmental parameters is quite compatible with such a framework (e.g. ‘emergent’ adaptation to environment, rejection of unilateral causality; see also Rogier (1998), Donaldson [1995]). Donaldson’s critique on political organization theory mainly pertains to the overall tone of the theory: “(…) highly damning of the discipline of organizational behavior” (1995, p. 132). In section 3.4.3, it has already been stated that this line of reasoning does not convince from a research point of view. Economic organization theory can also be regarded as a theory of adaptation of organizational variables to environmental variables (especially technology). Pfeffer concluded with respect to economic research on the relationship between organizational parameters and environment that “(…) structure seemed to vary quite systematically with an organization’s strategy, size, technology, and conditions of the organization’s environment. (…) Common sense suggested that the appropriate organizational arrangements must surely depend on what is being organized and the environment in which the organization has to operate” (Pfeffer, 1997, p. 160). Therefore, we conclude that both political organization theory and economic organization theory are not incompatible with the overall framework of this study.

In section 3.5.1, opportunities for reconciliation of the often diametrically portrayed interorganizational theories were identified. After all, economic organization theory and political organization theory have in common that they explain interorganizational phenomena like interorganizational relations, integration and mergers and that they, in general, study various means of adaptation of organizations to their environment.
Contrasts

Using the elements of the first step of the CAST method (see footnote 29, p. 25), and using criteria that have been proposed by authors who have addressed both economic organization theory and political organization theory Haselhoff [1977] and Schwarzer, Zerbe, Krčmar [1997], it is possible to emphasize the distinct contributions of economic organization theory and political organization theory (see Figure 29). In Figure 29, the following criteria are used:

1. theoretical roots (Schwarzer, Zerbe & Krčmar [1997]);
2. perspective / actors (Haselhoff, 1977);
3. model formulation (after Haselhoff, 1977);
4. key concepts (CAST method);
5. key performance indicators (CAST method);
6. key statements (CAST method, see also Schwarzer, Zerbe & Krčmar [1997]); and
7. unit of analysis (Schwarzer, Zerbe & Krčmar [1997])

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Economic Organization Theory</th>
<th>Political Organization Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Perspective (actors)</td>
<td>Although agency theory identifies various stakeholders (owners, managers and employees) within firms, their interests are common (maximization of utility in terms of efficiency and, eventually, profits) and the firm is the actor (methodological individualism). Bounded rationality is assumed.</td>
<td>Organization is the actor. The organization is a loose confederation of various stakeholders with diverse interests. Bounded rationality is assumed.</td>
</tr>
</tbody>
</table>

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113 In general, methodological individualism refers to a philosophy in which all human activities are purposeful and meaningful, and, moreover, to a philosophy in which all social phenomena can be explained in terms of individually purposeful and meaningful activities. In microeconomics, as well as in economic organization theory, methodological individualism is applied at a different level of analysis, i.e. at the level of analysis of organizations (Künneke, 1991, pp. 54-56; Hodgson, 1988; see also section 3.3.2).

114 Economists obviously admit to the idea of bounded rationality, but economic models of organizations “still tend to define ‘bounded rationality’ as an imperfect approximation of the ‘unbounded’ one” (Dosi, cited in Pfeffer, 1997, p. 44). Furthermore, institutions are designed to achieve efficiency, and through a process of natural selection, inefficient ones cease to exist. The time frame involved in this process...
<table>
<thead>
<tr>
<th>Approach Criteria</th>
<th>Economic Organization Theory</th>
<th>Political Organization Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Model formulation</td>
<td>Qualitative, expressed in quasi-quantitative notation\textsuperscript{115}. The expression of information search activities, haggling, administrative rigor etc. in terms of costs enables the expression of these aspects in a general equilibrium model.</td>
<td>Qualitative, verbally expressed. Political organization theory uses concepts (uncertainty, autonomy) that are not yet expressed in comparable units and are thus harder to formulate in an equilibrium model.</td>
</tr>
</tbody>
</table>
| 4. Key concepts | Autonomy: state in which property rights are exerted with respect to assets in an unbounded manner, which elicits powerful incentives to perform well  
Dependence: state in which assets can only be made productive in association with other assets  
Coordination: the mechanism that optimizes incentives for participants involved | Autonomy: the ideal state of self-containment  
Dependence: situation in which another organization has discretion to affect focal organization’s behavior and interests by controlling necessary resources  
Coordination: diminishment of freedom to act independently, either by hierarchical mandates, voluntary behavior or co-optation |
| 5. Key performance indicators | Efficiency through incentive intensity | Autonomy |

\textsuperscript{115} Neo-institutional economics shares this feature with, for example, Marxian economic analyses (Gazendam, 1993, p. 281).

Economist Williamson has admitted that economists are somewhat far-sighted (Williamson, 1995, p. 226).
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Economic Organization Theory</th>
<th>Political Organization Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Key statement</td>
<td>Minimal costs determine optimal (inter)organizational structure.</td>
<td>Designing interorganizational structure helps to manage interdependencies.</td>
</tr>
<tr>
<td>(key problem, propositions)</td>
<td>P Agency Theory: If one party acts on behalf of another, parties’ performance is enhanced by minimizing agency costs;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P Transaction Cost Economics: Cooperating parties’ performance is enhanced by choosing the governance mechanism that minimizes consequences of uncertainty;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P Property Rights Theory: Cooperating parties’ performance is enhanced by choosing the governance mechanism that optimizes incentives of participants.</td>
<td></td>
</tr>
<tr>
<td>7. Unit of analysis</td>
<td>Transaction</td>
<td>Interorganizational behavior</td>
</tr>
</tbody>
</table>

**Figure 29: Comparison of economic organization theory and political organization theory**

From the discussion of economic organization theory and political organization theory in Figure 29, two important differences are elaborated here:

- the perspective on the subjects being studied, organizations; and
- the line of reasoning in the theories, as it appears from the key statements.

The differences in perspective are, in a way, coherent with both approaches’ theoretical roots. Economic organization theory, like neoclassical analysis, assumes methodological individualism (Hodgson, 1988; Künneke, 1991). In general, methodological individualism is a philosophical stance in which, eventually, all kinds of (social) phenomena are explained in terms of individuals. However, many writings on economic organization theory are not always strict in adhering to methodological individualism. Although de Vries (1992) upholds that neo-institutional economics maintains the core of methodological individualism (de Vries, 1992), there are economic organization theorists who state that, in order to understand organizations, it is not necessary to observe microprocesses of individuals (Künneke, 1991, p. 110). Notably property rights theorists experience difficulties in explaining phenomena.
concerning, for example, large administrative agencies that function to a certain degree independent of the preferences of individual participants. In fact, two solutions are suggested: (1) property rights are eventually attributed to individuals (customarily owners, or, for administrative agencies, citizens or taxpayers) or (2) to whole organizations. In the latter case, the behavior of individuals is not observed, but rather the behavior of unitary organizations, which in fact is not completely consistent with methodological individualism in a very strict sense\textsuperscript{116,117}.

Political organization theories, on the other hand, pursue a more realistic analysis by explicitly distancing themselves from economic organization theory’s methodological individualism\textsuperscript{118}. Organizations are viewed as coalitions of participants with principally divergent interests (referred to as \textit{methodological interactionism} by Nooteboom [1996]). This viewpoint is a far less elegant, but possibly more realistic, starting point for analysis.

The rationality of organizational behavior definitely differs in economic organization theory as compared to political organization theory. The rationality in economic organization theory assumes that behavior is driven by cost-optimizing considerations (see section 3.3.1). In every condition, the governance mechanism that renders the least costs is preferred, even if autonomy of organizations has to be surrendered. Bounded rationality is assumed in the sense that not all the possible states in the world can be discerned and anticipated in long-term contracts (see section 3.3.4). Political organization theories analyze organizational behavior as behavior that attempts to reduce uncertainty. This can be done by adapting to the environment, but also by actively influencing environmental forces. In order to reduce uncertainty, organizations are assumed to be actors that strive to optimize their self-interest by (1) minimizing their dependence on other organizations and (2) maximizing the dependence of other organizations on themselves. This rationality of behavior is thus of a different kind than the rationality in economic organization theories. In economic organization theory, uncertainty reduction is a means to the end of economizing on costs, whereas in political organization theory, uncertainty reduction is an end in itself.

### 3.5.3 Common themes

Apart from the differences between economic organization theory and political organization theory, there are also a number of common characteristics in both theories. For example, a striking common characteristic of both theories is that they both lack an

\textsuperscript{116} For a more elaborate discussion on methodological individualism in the social sciences, refer to Franssen (1997).

\textsuperscript{117} But even if property rights are attributed to organizations, the example mentioned in section 3.3.5 illustrates that incentive intensity refers to the individuals working in an organization.

\textsuperscript{118} Neo institutional economics has also pursued a more realistic analysis of organizations by adopting bounded rationality.
explanation of how (i.e. by what exact mechanisms) a hierarchy mitigates the consequences of uncertainty (see the ‘irony’ in uncertainty reduction and autonomy, section 3.4.4). A notable exception as far as economic organization theory is concerned, is property rights theory\textsuperscript{119,120} (which is often portrayed as a multidisciplinary theory). Other common characteristics are:
• the assumption of bounded rationality;
• the fact, in both theories, that ‘management of interdependence’ is stressed; and
• both theoretical streams’ difficulties with dynamics.

Bounded rationality

The origins of both economic organization theory as well as political organization theory seems to lie in the observation that organizations are boundedly rational and hence, uncertainty exists (section 3.3.2; see also Ter Bogt, 1998; van der Zaal, 1997). Uncertainty plays a major role in both theoretical streams. In fact, in both streams, the expressiveness of the lines of reasoning diminishes severely if the assumption of bounded rationality is no longer held.

However, the line of reasoning in political organization theory differs from the line of reasoning in economic organization theory, though, in terms of the way organizations are supposed to cope with uncertainty. With reference to economic organization theory, Williamson (1975, p. 9) explicitly states that uncertainty is not a crucial problem in itself, but that it begins to play a role when asset-specific investments enter into a relationship between organizations. Here uncertainty mainly refers to the possibility of opportunistic behavior by partner organizations, caused by circumstances that are impossible to foresee at the moment contracts are drawn.

Political organization theory, however, assumes that organizations are always confronted with bounded rationality. “The current formulation of [economic organization theory] does not acknowledge that uncertainty may have a separate effect (…), independent of asset specificity. [Political organization theory] does acknowledge this independent effect of uncertainty” (Krickx, 1991, p. 147). In fact, uncertainty in political organization theory also stems from the behavior of governmental organizations, trade associations, new legislation, etc.

Concluding, in political organization theory, uncertainty stems from a variety of sources and is always assumed to be problematic, whereas uncertainty in economic organization theory is only problematic in combination with complementarity of assets.

\textsuperscript{119} In section 3.3.5, we used property rights theory to illustrate that in the case of complementary assets, a hierarchy can improve incentives for employees working with assets, thus providing at least some explanation of how a hierarchy mitigates the consequences of uncertainty in a market.

\textsuperscript{120} Therefore, property rights theory is the cornerstone of the model of a political economy framework to be presented in section 4.3.
Managing interdependence

The core of both economic organization theory and political organization theory is that, in the presence of bounded rationality, interdependence between organizations is considered to be problematic by the organizations involved: the interorganizational relationship is subject to management activities. Although the determinants of interdependence in economic organization theory and political organization theory are labeled differently, Krickx (1991) shows that asset specificity in fact implies resource dependence: “(…) when asset specificity is high, it implies that resource dependence is high as well” (p. 154). The reverse is not true: resource dependence is broader than asset specificity because there are sources of resource dependence, such as monopolist supply, which do not increase asset specificity (Krickx, 1991).

Both theoretical streams emphasize that organizations engaged in interorganizational relations are able to limit the consequences of uncertainty by restricting the autonomy of the partner organization, that is, by limiting the number of courses of action an organization is able to pursue (procedural coordination): the organization attempts to manage its interdependence by extending its own control in those vital areas, either by hierarchical mandate or by informal or semiformal agreements to behave in certain ways.

In economic organization theory, this is done by drafting contracts (transacting designated property rights) that include compensatory measures for specific circumstances. In political organization theory, it is assumed that this is accomplished through co-optation, interfirm regulation or requesting government regulation. Ultimately, both designated as well as residual property rights are transacted so that input or output exchange itself is totally controlled: the stability and predictability of the exchange relationships are safeguarded by controlling the rules of the trade. Thus, decision premises are imposed on partner organizations that limit the number of courses of action an organization is able to pursue. Note that in both theoretical streams, it is assumed that in order to be able to limit another organization’s autonomy, a focal organization must accept decision premises from partner organizations, too: a bilateral dependence develops.

However, such a limitation in the courses of action an organization is capable of pursuing has positive (effects of uncertainty are reduced) as well as negative consequences. Economic organization theory emphasizes that attenuation of property rights yields diminished incentive intensity. Political organization theory states that when the external world is brought into the organization (through director interlocks, through the pooling of resources in a joint venture or by giving authority to some interfirm organization), external influence over the organization is increased and, consequently, its own discretion is simultaneously constrained.

This constraint on discretion is assumed to be a threat, even as environmental uncertainty is decreased. In fact, both organization theories state that a limitation of autonomy may yield benefits (“[o]rganizations are willing to bear the costs of restricted discretion for the benefits of predictable and certain exchanges” [Pfeffer & Salancik,
negative consequences of restricted discretion are highlighted more in political organization theory than in economic organization theory: “(…) it is frequently the least powerful and the least organized whose interests are not served in the resultant interorganizational structure” (Pfeffer & Salancik, 1978, p. 183).

Dynamics

The standard analysis pursued in economic organization theory is static. “It is a peculiar thing that on the one hand passage of time [in terms of dynamics and adaptation, VH] is crucial, but on the other hand relevant parameters are seen as timeless. According to [transaction cost economics], a crucial condition for dependence is that time is required, with repeated transactions, to recoup transaction specific investments, and allowance is made for the emergence of unpredictable contingencies that preclude closed contracts to govern dependence. On the other hand [transaction cost economics] implicitly assumes continuation of ex ante inability to judge propensities towards opportunism, unchanged configuration of supply and demand (…) productive competencies, and ability to monitor partner’s actions. But surely, ongoing interactions will modify those parameters”, comments Nooteboom (1993, p. 4).

The same comment seems to pertain to political organization theory; here, unforeseen changes may happen over time, to which an organization has to respond. Concluding, both economic organization theory and political organization theory seem to assume dynamics, but both theories use timeless parameters.

3.6 Summary and conclusions

This chapter has elaborated on the variety that exists in interorganizational coordination mechanisms and has reviewed theories that explain this variety.

Since the 1950s, the popularity of topics like strategic alliances, partnerships or, in general, interorganizational relations, has increased in organization theory. Characteristic for interorganizational relations is that organizations transfer or share control over resources for a certain period of time, but not necessarily for a continuous period. This entails that autonomy is sacrificed, but at the same time, organizations keep their formal identify. In general, an interorganizational relationship may be defined as significant interaction between distinguishable organizations, or, more precisely, the recurrent, non-discrete transaction of resources between two or more organizations.

In relation to the central concept of this chapter, coordination, the literature provides often hard-to-follow accounts of why organizations that are supposed to strive to maintain their autonomy, seemingly voluntarily accept that their decision making is at least in part guided by decision-making premises set by other organizations. In general, often incommensurable descriptions are provided between (interorganizational) coordination on the one hand and autonomy and dependence on the other hand.
Since the 1970s two distinct theoretical streams have emerged that attempt to explain how autonomy, dependence and coordination relate to each other. These streams are economic organization theory and political organization theory. Both theoretical streams provide explanations of the behavior of organizations in terms of protection and surrendering of organizational autonomy, management of bilateral dependence between organizations, and coordination between organizations. An important driving force in both theoretical streams is the condition of bounded rationality: organizations are assumed to be partially ignorant because it is prohibitively expensive or even impossible to gather all information required, and hence organizations are confronted with uncertainty. In fact, the condition of bounded rationality is necessary to explain why organizations sometime surrender their autonomy.

In economic organization theory, the starting point of the line of reasoning is the situation in which assets are dispersed over a number of asset ‘owners’. Owners can legally exert usus, usus fructus and abusus property rights with respect to their (nonhuman) assets. By exerting the abusus property rights, assets may be enhanced with innovations, and the usus fructus property right entitles the owner to appropriate the gains of these innovations, for example by having other persons use the modified asset in return for an increased compensation, specified in the terms of a contract. The ability to appropriate the gains of assets confronts each ‘owner’ in a community of owners with proper incentives to invest in assets. If necessary, adaptation of the terms of the trade occurs ‘spontaneously’, e.g., through a change in price, quantity or quality. A disadvantage of this form of adaptation is that ‘haggling’ and ‘learning’ between owners and users of assets yield costs, so-called transaction costs.

Another situation is the situation in which there is one ‘owner’, a centralized authority, (a ‘unibrain’, see section 2.4.2) who exerts usus, usus fructus and abusus property rights with respect to a number of assets in a consistent and uncontested manner, without the need to negotiate and renegotiate the terms of the trade as specified in contracts between autonomous parties, every time circumstances necessitate adaptation. Hence, in comparison to the situation in which assets are dispersed over a number of ‘owners’, concentrated ownership economizes on transaction costs. However, in such a situation, the owners of assets are faced with less intensive incentives, which results in bureaucratic costs, or, in general, less intensive incentives.

The above situations of dispersed ownership over assets and concentrated ownership over assets are also referred to as the coordination mechanisms of the market and hierarchy. Interorganizational relations represent intermediate situations, in which contracts are used that have characteristics of market-based relations as well as characteristics that are typical for hierarchies. Characteristic of economic organization theory is that it identifies advantages and disadvantages of dispersed ownership and concentrated ownership in terms of bureaucratic costs and transaction costs and that it
explains the occurrence of these ownership structures in terms of maximizing behavior (e.g., cost minimizing behavior) of the organizations involved. An important hypothesis is that normally, bureaucratic costs outweigh transaction costs, or, inversely, that the benefits of access to a control apparatus which enables uncontested adjustment is outweighed by the costs of degraded or suppressed incentive intensity. Hence, dispersed ownership is preferred over concentrated ownership.

There are, however, specific conditions in which transaction costs are prohibitively raised, or, equivalently, incentives are suppressed. Such a situation occurs if assets are only productive in conjunction with assets that are controlled by other organizations; this is a situation in which dependence between organizations exists. In such a case, incentives are suppressed because marginal returns on investments incurred by any of the organizations have to be split between the focal organization and the partner organization (because of the presence of hold-up power by the partner-organization; see the example in section 3.3.5). It is assumed that such a situation yields prohibitively high costs of haggling and learning and that, in such a case, attenuation of usus, usus fructus and abusus property rights (e.g., concentrated ownership) is preferred.

In political organization theory, the starting point of the line of reasoning is that organizations try to avoid uncertainty. That is, they are hypothesized to safeguard their autonomy; they try to avoid being limited in their courses of action. They do so by attempting to minimize their dependence on other organizations and by trying to maximize the dependence of other organizations on themselves.

In reality, however, organizations are limited in their possible courses of action because of unequal balances with respect to the concentration of resources (social legitimacy, information, and physical and monetary resources) and the importance of these resources to the organizations involved (which results in so-called resource dependence between organizations). This form of dependence is a source of uncertainty that can be effectively fought by informal and semiformal linkages between organizations such as co-optation, but also by actively influencing governments and lobbying for, for example, funding, regulation, etc. Merger of the organizations involved also eliminates this source of uncertainty, albeit at the expense of a lot of disadvantages (see section 3.4).

In section 3.5, economic organization theory and political organization theory were mutually compared with respect to their similarities and differences. An obvious difference is the fact that economic organization theory has a more clearly stated trade-off in the form of a general equilibrium model than political organization theory does. Political organization theory, on the other hand, offers a richer description of co-optation, actively forestalling uncertainty, etc. Here, both theoretical streams reflect their roots: neoclassical analysis for economic organization theory, with an emphasis on elegantly formulated trade-offs, and political organization theory with an emphasis on ineffable constructs like power and status and a tendency to stay close to empirical particulars.
With reference to the treatment of autonomy, dependence and coordination in organization theory at large, and the subsequent elaboration of the line of reasoning in economic organization theory and in political organization theory, it is possible to formulate an answer to the second research question (‘what types of coordination between organizations can be defined?’). The answer is based especially on economic organization theory and political organization theory and the synthesis of these two distinct theoretical streams.

The way coordination is defined in these streams is tightly associated with the way ‘assets’ (or ‘resources’) are dealt with. In fact, two extreme situations are identified that define a range of coordination types. One type of coordination is the situation in which assets are dispersed over a number of owners, and each owner is granted the right to exert usus, usus fructus and abusus property rights. So, should access to other organizations’ resources or assets be required, then designated (usus) property rights may be transferred in return for compensation. As ownership of assets yields intensive incentives, it is assumed that adjustments occur spontaneously, although transaction costs are incurred.

A situation that defines the opposite pole of the range of coordination types is the situation in which the exertion of property rights with respect to a number of assets rests with a centralized authority. This ‘unibrain’ can adapt the terms of the trade and the assets or resources involved in an uncontested manner, thus economizing on transaction costs but, in the absence of complementarity of assets, also degrading powerful incentives.