Relationship significance: is it sufficiently explained?

Filipe J. Sousa

and

Luís M. de Castro
“RELATIONSHIP SIGNIFICANCE: IS IT SUFFICIENTLY EXPLAINED?”*

Filipe J. Sousa
Doctoral Student at Faculdade de Economia, Universidade do Porto
Junior Lecturer at Instituto Superior de Administracao e Linguas
Rua do Comboio 5, 9050 - 054 Funchal, Madeira
filipejmsousa@netmadeira.com
Phone: +351291705705
Fax: +351291705709

Luis M. de Castro
Senior Lecturer at Faculdade de Economia, Universidade do Porto
Rua Roberto Frias, 4200 - 464 Porto
mcastro@fep.up.pt

* Our reasoning has benefited, at an early stage, with the comments of Carlos Brito, Helder Valente, Joao Mota, Per Servais, Hakan Hakansson, Ian Wilkinson, and Keith Blois. Recently, criticisms from two anonymous reviewers and in-depth remarks from Luis Araujo must be also gratefully acknowledged. All remaining errors are the authors’ responsibility.
ABSTRACT

The Industrial Networks Theory (cf. Axelsson and Easton, 1992, Hakansson and Snehota, 1995) sets out to describe and explain the business relationships and markets in which the focal firm is deeply embedded. One of its major propositions pertains to the (time-varying) significance of business relationships for the focal firm (Gadde et al., 2003), i.e., business relationships influence to some extent the focal firm’s survival. Such significance seems strongly related to the role played by business relationships and consequently the relationship outcomes accruing to the focal firm. The theoretical justification underlying this proposition is outwardly oriented, somewhat overlooking the inside of the focal firm - in particular the influence of business relationships on what the focal firm does competently within and across its boundaries. Arguably, the creation and appropriation of relationship value by the focal firm is a necessary but not sufficient condition for relationship significance. A supplementary (internal) explanation supported by Knowledge-based Theories of the Firm (e.g., see Kogut and Zander, 1992), we suggest, may be missing. Our aim here has been to intuitively pinpoint a theoretical flaw, further suggesting a feasible path for its solution.

Keywords: Industrial Networks Theory; relationship significance proposition; relationship functions, dysfunctions, benefits, sacrifices, and value

“(…) significant, behind the eyes
there’s no need to hide (…)
significance, between the lines
(we may need to hide) (…)”

Pearl Jam, “I am mine” in Riot Act (2002), EPIC
INTRODUCTION

Theories are, to varying degrees, conceptual frameworks for understanding, allowing us to make sense of the overwhelming world which we inhabit (Astley, 1985). Conceptually, theories may be depicted as systems of constructs and variables, linked by propositions and hypotheses respectively, and bounded by the spatial and temporal assumptions of theorists (cf. Bacharach, 1989). With regard to the Industrial Networks’ (or Markets-as-Networks’) body of knowledge, it has been developed by the Industrial Marketing and Purchasing (IMP) Group over the last three decades - some seminal contributions from the 1970s can be readily identified (e.g., Blois, 1972, Hakansson and Ostberg, 1975, Richardson, 1972, amongst others). We believe that such thirty-year-old body of knowledge can be seen as a theoretical system of constructs and variables (e.g., actor, adaptation, micro-position, just to name a few), with which some propositions and hypotheses are derived (e.g., the existence, connectedness, and uniqueness of business relationships in industrial markets), bounded by theorists’ spatial assumptions (e.g., business relationship as the main unit of analysis). According to Bacharach’s (1989) definition of theory, the Industrial Networks’ body of knowledge can be deliberately referred to as a theory. The recognition of a fully-fledged Theory of Industrial Networks, even if sometimes denied or not assumed (Hakansson and Snehota, 2000), should not even be seen as a new (or absurd) argument within the IMP Group as it seems to be shared, albeit implicitly, by some of its scholars (see, e.g., Moller and Halinen, 1999, McLoughlin and Horan, 2002).

Still evolving, the Industrial Networks Theory (Hakansson and Snehota, 1995, Axelsson and Easton, 1992) attempts to describe and explain the inner workings of business markets (and the business relationships among firms, these comprise). At least five major propositions may be pointed out in the Industrial Networks Theory: (1) the existence of business relationships (Hakansson, 1982, Ford, 1980), as well as their connectedness (Axelsson and Easton, 1992, Anderson et al., 1994) and uniqueness (Hakansson and Snehota, 1995, Ford et al., 1998); (2) business relationships as a third type of governance structure, alternative to hierarchies and markets (Richardson, 1972, Hakansson and Johanson, 1993b); (3) the development of knowledge in business relationships, i.e., among firms (Hakansson and Snehota, 1989, Ford et al., 1986, Hakansson, 1987, Hakansson and Snehota, 1995); (4) firm performance explained.

---

1 Industrial Networks Theory does not seem to be only properly applied over certain time periods – hence it does not make sense to include temporal restrictions in its empirical applicability. Notwithstanding, as there is always uncertainty regarding the applicability of theories in the future (Bacharach, 1989), Industrial Networks Theory is (like all others) partly bounded in time.
both by internal operations and exchange processes (Hakansson and Snehota, 1989, Hakansson and Snehota, 1995, Araujo and Easton, 1996); and (5) the significance of business relationships for the focal firm (Gadde et al., 2003). Here we will be primarily concerned with the last of these propositions.

The significance proposition is made quite explicit in the pervasive contention throughout Industrial Networks Theory that business relationships are one of the most important resources at the disposal of the focal firm (cf. Hakansson and Snehota, 1995, Hakansson, 1987, Hakansson, 1989). The business relationships that the focal firm establishes, develops, and maintains with counterparts (e.g., customers, suppliers, competitors, third parties) are significant because they affect the focal firm’s functioning and development, ultimately influencing its survival in business markets (Ford and McDowell, 1999, Kalwani and Narayandas, 1995, Hakansson and Snehota, 1995). Without business relationships, the focal firm is not only somehow impeded to operate and grow, but more importantly it is doomed to perish. Contrary to what the economic theory postulates, the existence of the focal firm cannot be conceived of without business relationships – no existing (surviving) firm is ‘an island in a sea of market relations’ (Richardson, 1972, Hakansson and Snehota, 1989). As a result, some scholars and researchers stress the ‘strategic importance’ or ‘significance’ of business relationships (Hakansson, 1989, Gadde et al., 2003), whereas others refer to relationships of ‘strategic status’ (Moller and Halinen, 1999) and to ‘critical’, ‘crucial’, ‘good’, ‘high quality’, ‘high-performing’, ‘important’, ‘relevant’, ‘significant’, or ‘valuable’ business relationships (Hakansson and Snehota, 1995, Cunningham, 1980, Ford et al., 1998, Kutschker, 1982, Hakansson, 1987, Johanson and Mattsson, 1987, Gadde and Snehota, 2000, Ford and McDowell, 1999). Even Edith Penrose, whose influence is conspicuously recognized across Industrial Networks Theory, has earlier remarked “[t]he importance attached by firms to the maintenance of their existing business relationships (…)” (1959, p. 147, fn. 2).

By and large, business relationships are significant for the focal firm. Nevertheless, not all business relationships of the focal firm are equally significant (i.e., do not affect to the same extent the focal firm’s survival) – obviously some are more significant to it than others (Ford

---

2 In tracing the ‘IMP Story’, Hakansson and Snehota (2000) review the first three of these propositions though labelling them differently as ‘conceptual cornerstones’.

3 The term ‘relationship significance’ may be thus equated to ‘relationship relevance’, ‘relationship importance’, or ‘relationship value’. It is here used to denote the irreplaceable contribution of business relationships to the focal firm’s survival, which is implicitly assumed throughout Industrial Networks Theory. Such contribution, as we will see later on, is brought about because relationship benefits are perceived to exceed accruing sacrifices, i.e., relationship value is created and captured by the focal firm.
and McDowell, 1999). And relationship significance is but a perception of the focal firm (and of its counterparts), particularly of their members. Therefore, it is bound to vary over time within and between the parties involved. But what is the underlying explanation for relationship significance? And is such justification sufficient?

Surprisingly, the significance of business relationships for the focal firm has not been object of systematic analysis. Tacitly shared by scholars and researchers, relationship significance is a taken-for-granted (apparently primordial) presumption, often asserted but not much discussed within Industrial Networks Theory. Supposedly, such significance is strongly associated with the role business relationships accomplish for the focal firm. By fulfilling a role (in the form of functions and dysfunctions), more benefits than sacrifices – hence relationship value – normally ensue to the focal firm. (Relationship benefits and sacrifices, as well as the functions and dysfunctions from which they originate, are examined at length in the third section.)

The explanation, within Industrial Networks Theory, supporting relationship significance is naturally oriented towards the focal firm’s outside, in particular its context (i.e., a full-faced environment composed of a limited number of distinct, clearly identifiable counterparts) (Hakansson and Snehota, 1989). An all-encompassing argument - the creation and appropriation of relationship value by the focal firm - is advanced to support the significance proposition. This argument, we advocate, seems a necessary but not sufficient condition for justifying relationship significance; another (internally-focused) theoretical explanation may be missing here. Such justification ought to derive from other theories, particularly those addressing the core (inside) of the focal firm. The so-called Competence- or Knowledge-based Theories of the Firm (Penrose, 1959, Kogut and Zander, 1992, Foss, 1996) may be, in this respect, quite apposite. According to these theories, the focal firm is seen as a bundle of direct and indirect competences, which allow it to (know how to) do certain things by itself, as well as (know how to) get other things done by others respectively (cf. Nelson and Winter, 1982, Loasby, 1998). What the focal firm gets done by others is a direct reflection of the business relationships (and also the arm’s-length relations) it is able and chooses to initiate, develop, and sustain with several counterparts. Moreover, what the focal firm does (both within and across its fuzzy boundaries) is largely a consequence of the business (and purely transactional) relationships that it is unable or, if capable, decides not to engage in. In this sense, we suggest that it may be enlightening to append a knowledge-based reasoning on the aforementioned proposition.
Admittedly, a flaw is being spotted in Industrial Networks Theory. Our claim is not absolutely solve such theoretical pitfall, yet seek to offer insights on how one might attempt it. We agree with the overall *whats* and *hows* of Industrial Networks Theory (i.e., its constructs and propositions, respectively), but not completely with its *whys* (in particular, the logical reasoning underlying its relationship significance proposition). Therefore we *challenge the robustness* of the significance proposition or, in other words, *the completeness of its underlying arguments*. It seems that the phenomenon in question - relationship significance - can only be partly explained in terms of the existing theory (Wilkinson, 2003). Our intent is neither to question nor to evaluate the Industrial Networks Theory as a whole. We are rather trying to contribute to it. The issue here is not which of the focal firm’s business relationships are (more or less) significant, nor even why they are so – although we admit the following discussion may help to do this (see the next section). The gist of our rationale is that the arguments within Industrial Networks Theory justifying the relationship significance do not seem to suffice.

This paper is organized as follows. We start in the next section by addressing the needfulness of enquiring this topic. The theoretical support for the relationship significance proposition is then discussed in detail. The fourth section comprises the motives conducive to challenging the robustness of the proposition. Finally, some issues related to the future empirical research (indispensable to extend the network-based rationale on relationship significance) are outlined.

**RELATIONSHIP SIGNIFICANCE IN THEORY AND PRACTICE**

Business relationships are sources of both opportunities and constraints, thus being simultaneously demanding and rewarding for the focal firm (Hakansson and Snehota, 1995). There are multiple relationship benefits accruing to the focal firm but these do not come rapidly or for free (Blois, 1999). Inescapably, some sacrifices must be incurred. Being involved in business relationships is always resource-intensive, even if to varying extents (Gadde and Snehota, 2000). Relationship benefits and sacrifices are both unavoidable (Walter

---

4 Whetten (1989) describes theory as a collection of four essential elements: (i) *what* factors (constructs and variables) should be part of the explanation on the phenomenon of interest; (ii) *how* are those factors related (i.e., which propositions and hypotheses may be formulated); (iii) *why* were such factors chosen and the linkages among them proposed; and (iv) *who*, *where* and *when* (i.e., under which spatial and temporal conditions the theory holds). Together the *whats*, *hows*, and *whys* constitute the subject of theory, whilst the *whos*, *wheres*, and *whens* determine its range of applicability. Whetten further contends that *why* is probably the most important of all four elements, insofar as it is both the theoretical glue that welds a theory together and the basis for judging theory’s soundness.

5 Needless to say, this also applies to the counterparts with which the focal firm maintains business relationships. Because we are here only focused on the focal firm, the counterparts’ perspective is primarily left latent (albeit totally resembling the former’s).
et al., 2001, Walter et al., 2003). Ensuing benefits are often sensed to outweigh sacrifices and relationship value is thus created and appropriated by the focal firm (Wilson and Jantrania, 1994) – in such cases, business relationships are perceived as being (more or less) significant. However, if sacrifices exceed (or are roughly equal to) benefits, business relationships may be deemed insignificant for the focal firm.

The focal firm needs to continually prioritize its business relationships (Gadde et al., 2003), since they (i) differ over time in their relative degree of significance and (ii) can only be established, nurtured, maintained, and even ended through large and incremental investment of resources (adaptation) (Hakansson, 1982). As business relationships are not equally significant at a given point in time, and the focal firm is endowed with limited resources (and consequently, it can be highly involved with only a limited number of counterparts), a mixed relationship posture must be effected (Gadde and Snehota, 2000). In this respect, adopting both low- and high-involvement relationship postures (hence committing resources to lesser and greater extents respectively) seems the best way for the focal firm to ‘make the most’ of its business relationships.

Business relationships, according to their perceived significance for the focal firm, should be handled in quite different ways – relationship differentiation is demanded (Ford et al., 1998). Typically the focal firm is strongly committed to (i.e., highly involved in) business relationships it perceives as being (currently or in the future) highly significant. Such relationships are sure to have taken a long time and many efforts to develop and, consequently may be extremely difficult to replace (Ford et al., 1998). Even if substitutable relationships (actual or potential) do exist, these are probably not significant to the same extent (e.g., because their benefits are perceived as comparatively lower or sacrifices greater). A low-involvement posture, on the contrary, is likely to be adopted by the focal firm in the business relationships perceived as low in significance.

Notoriously, the significance of business relationships must be continually assessed if the focal firm aims to manage effectively and efficiently (the allocation of resources within) its set of business relationships. Differentiation with regard to relationship posture – essentially network management (Ritter et al., 2004) - can only be achieved as long as the focal firm clearly understands which of its business relationships are significant, to what degree, and more importantly why. Only by enquiring relationship significance and unfolding its determinants, will the indispensable understanding - concerning the (individual and collective) management of business relationships - emerge. That understanding will lead, for
instance, the focal firm to reinvest in a business relationship (expected to become even more significant in a near future) or instead divest (if it is perceived as being currently insignificant). The decision to divest of (or even terminate) a business relationship will probably release resources that the focal firm may use otherwise (e.g., to deepen another extant, or establish a new, business relationship potentially more significant). Substantial opportunity costs may be incurred if the focal firm chooses to maintain a (poorly significant) business relationship in disfavour of other (highly significant) one(s).

Our main intent in this paper is to contribute to Industrial Networks Theory, especially its explanations for relationship significance, and indirectly to better practice. Since to improve the practice of industrial marketing and purchasing, it is needed first of all a better understanding of business firms, relationships, and markets (Wilkinson, 2001). Wilkinson and Young (2002, p. 127) note that “(...) by extending and improving firms’ understanding and sensitivity regarding relationship and network issues, better performing firms and networks will emerge (...”). The dominant stance within Industrial Networks Theory – that better theory leads to better practice - largely justifies its positive orientation (Easton, 1995). This is not tantamount to say that Industrial Networks Theory is purely descriptive or ‘managerially empty’ (cf. Moller and Halinen, 1999). As Easton (1992) argues, normative implications flow from, but do not drive, it.

THE SIGNIFICANCE PROPOSITION AND ITS UNDERLYING ARGUMENTS

Any attempt to justify the significance of business relationships for the focal firm should not bypass the centrality of their role in Industrial Networks Theory. Business relationships may be considered significant owing to their multiple purposes (and associated outcomes) for the focal firm (Hakansson and Snehota, 1995, Gadde and Snehota, 2000).

The focal firm engages in business relationships fundamentally because of appropriate payoff structures (Axelrod, 1984). The payoff for cooperating exceeds that of deflecting (i.e., abandon current cooperation with a specific partner and proceed alone). In other words, the (economic and non-economic) consequences resulting from being engaged in business relationships are deemed globally satisfactory by the focal firm.6 It pays off for the focal firm to be involved in a business relationship with a specific counterpart (Kalwani and

---

6 This, of course, holds true if rationality in business behaviour is assumed. Demsetz (1992) further suggests that business behaviour cannot be properly understood in the absence of that presumption. The rationality of business firms, even if bounded (cf. Thompson, 1967), seems one of the stepping stones for Industrial Networks Theory. Hakansson and Snehota (1995, chapter 8, fn. 1) highlight this.
Narayandas, 1995), and consequently that business relationship is termed *significant*, for either or both of two reasons:

(1) relationship *benefits* (i.e., the ensuing *positive outcomes*) obtained by the focal firm exceed, to some extent, the *sacrifices* incurred (i.e., *relationship costs* plus *deleterious outcomes*) (Gadde and Snehota, 2000, Biong et al., 1997, Hakansson and Snehota, 1995, Blois, 1999);

(2) relationship benefits are greater and/or relationship sacrifices are lower than benefits and sacrifices (a) *expected* by the focal firm or (b) potentially stemming from *alternatives*, i.e., substitutable business relationships and conventional governance structures (hierarchies and markets) (Hakansson and Snehota, 1995, Anderson et al., 1994, Zajac and Olsen, 1993).

An opening distinction between benefits and sacrifices ensuing from business relationships is timely here. Relationship benefits are positive outcomes (Anderson *et al.*, 1994) accruing to the focal firm from the fulfilment of relationship functions (Walter *et al.*, 2001, Walter *et al.*, 2003). Relationship sacrifices, on the other hand, encompass both the costs incurred by the focal firm (to obtain the positive outcomes referred) (Gadde and Snehota, 2000) and the deleterious outcomes that ensue from being involved in business relationships (Anderson *et al.*, 1994). Deleterious outcomes frequently result from relationship dysfunctions (Walter *et al.*, 2001). If deleterious outcomes accrue to the focal firm then a relationship dysfunction must have occurred; yet, we would argue, deleterious outcomes can also result from the non-fulfilment of some relationship functions (expected or desired by the focal firm). In this regard, deleterious relationship outcomes include not only ensuing harmful consequences, but also the potential (but not attained) positive outcomes. In sum, one may argue that relationship benefits comprise ‘what is positively get’ from a business relationship (i.e., its positive outcomes), whereas sacrifices consist of ‘what is given’ (i.e., its costs) plus ‘what is negatively get’ or ‘what could have been positively get’ from that same relationship (i.e., its deleterious outcomes). Ford *et al.* (1998) put it in different terms, seeing relationship benefits and sacrifices respectively as what parties (focal firm and its counterpart) demand from, and can offer to, each other.

The justification advanced within Industrial Networks Theory for relationship significance - *business relationships pay off (per se or comparatively)* - may be thus divided in two. Let us now examine each of them in detail, explaining why the latter is here intendedly left apart.
Relationship benefits outweigh sacrifices: the minimal explanation

By engaging in a business relationship with a counterpart, the focal firm obtains benefits in excess of sustained sacrifices. In this sense, functions fulfilled by business relationships outweigh either the dysfunctions carried out or the functions not accomplished by them, or both (Walter et al., 2001). As benefits more than offset sacrifices, relationship value is (jointly) produced and (partly) appropriated by the focal firm (Ravald and Gronroos, 1996). When this happens, the business relationship is labelled valuable (Ford and McDowell, 1999) or high-performing (Gadde and Snehota, 2000); in our terminology, it is entitled significant for the focal firm. Otherwise, if relationship sacrifices were greater than benefits, then no relationship value would exist – the business relationship would not be seen as significant or valuable, but instead as a burden or liability for the focal firm (Hakansson and Snehota, 1995, Ford et al., 1998, Hakansson and Snehota, 1998).

Relationship benefits and sacrifices are respectively greater and/or lower than the potential ones in expectations or alternatives: the differential justification

It may not suffice to argue that business relationships bring about more benefits than sacrifices (thus creating relationship value) – the focal firm may still want to take into account the value created in substitutable business relationships and in alternative governance structures. In this regard, the value co-created and appropriated by the focal firm in a business relationship should exceed the value it expected or the potential value ensuing from alternatives. The benefits accruing from a business relationship are greater and/or sacrifices are lower when compared to those that the focal firm: (a) expected to attain (taking into consideration its past experience in similar relationships); or (b) could seize alone or with others, that is, in hierarchies and markets or in substitutable business relationships with other counterparts (Hakansson and Snehota, 1995, Zajac and Olsen, 1993, Anderson et al., 1994, Biong et al., 1997, Walter and Ritter, 2003, Wilson and Jantrania, 1994, Kalwani and Narayandas, 1995).

7 We take here a superficial account on relationship value. How relationship value is co-produced and afterward distributed within the business network (i.e., which are the antecedents for relationship value creation and the determinants for value sharing), as well as how it can be measured (i.e., what are its multiple, perceived or observable, components) remain objects of heated dissection among researchers and scholars within Industrial Networks Theory, and no deliberate attempt is made here to shed light on these matters. For the purpose of this paper, it is only assumed that relationship value is created when (actual or potential) relationship benefits are perceived to outweigh incurred sacrifices, whatever those two might be. Relationship value may be defined as the positive trade-off between relationship benefits and sacrifices (Ravald and Gronroos, 1996, Wilson and Jantrania, 1994). We are not here referring to the overall value of a business relationship (jointly created by, and somehow distributed between, both parties) (Wilson and Jantrania, 1994), but rather concerned with the ‘slice’ of relationship value captured by the focal firm.
**Expectations.** Relationship benefits are greater and/or sacrifices lower than those expected by the focal firm (Anderson et al., 1994). The relationship value currently produced and seized is judged to exceed the focal firm’s expectations (based upon value creation, in the past, within similar business relationships). In addition to expectations drawing on past relationship value, one might further suggest that the focal firm’s future prospects (concerning potential relationship benefits and sacrifices) are likely to be important in the assessment of relationship significance.

**Hierarchies and markets.** Benefits resulting from such alternative forms of governance (namely authority and price mechanism) are lower and/or sacrifices greater than those accruing from the focal firm’s business relationships (Biong et al., 1997, Walter and Ritter, 2003). One can put this differently: for a similar set of benefits, the sacrifices stemming from business relationships are lower than those to be incurred in either hierarchies or markets (cf. Blois, 1999); or, we might add, for a similar set of sacrifices, benefits ensuing from business relationships are greater than those to be attained in hierarchies or markets. The relationship value created and captured exceeds the (potential) value that could be otherwise produced and appropriated by the focal firm had it (i) vertically integrating its counterpart (viz employing hierarchy), or (ii) be playing the market (i.e., keeping a counterpart at arm’s-length distance).

**Substitutable business relationships.** Benefits stemming from a specific business relationship may be greater and/or sacrifices lower than those that might arise had the focal firm alternatively engaged in a business relationship with another counterpart (Hakansson and Snehota, 1995, Anderson et al., 1994, Wilson and Jantrania, 1994). That is, the value produced and appropriated by the focal firm in that business relationship outweighs the potential value accruing from engagement in substitutable business relationships. Disputably, the business relationship with a certain counterpart (e.g., customer A) may permit the focal firm to co-produce and appropriate more value than that arising in other business relationships, negatively connected or not (e.g., with customer B or supplier C respectively). This fact seems quite plausible, even though the value to be derived in these two last business relationships (with counterparts B and C) will be naturally different.8

**Why we have set aside this comparative explanation.** Focused only on the relative significance of business relationships (in comparison with the focal firm’s expectations or alternatives), this justification is consciously left out. Two reasons support our decision.

---

8 It seems to be implicitly assumed that substitutable business relationships are all about the focal firm’s mutually exclusive (i.e., negatively connected) relationships (Cook and Emerson, 1978). We think substitutable relationships may include also the complementary (i.e., positively connected) business relationships of the focal firm.
Firstly, think (abstractly) of ‘relationship benefits’ as ‘RB’, ‘relationship sacrifices’ as ‘RS’, ‘benefits resulting from expectations or alternatives’ as ‘BEA’, and ‘sacrifices resulting from expectations or alternatives’ as ‘SEA’. Relationship significance is (partly) explained, according to the differential justification, because ‘RB exceeds BEA and/or SEA outweighs RS’. A problem arises as BEA and SEA cannot be (fully) determined without, first of all, thoroughly unravelling RB and RS. In particular, calculating the benefits and sacrifices (i) expected by the focal firm and (ii) ensuing from substitutable business relationships, it is a matter of taking (respectively) past and future perspectives on relationship value creation and appropriation. One needs to understand how relationship value is presently created and appropriated by the focal firm in order to (i) revise the relationship benefits and sacrifices earlier obtained in similar business relationships, and (ii) forecast the relationship benefits and sacrifices potentially attained in substitutable business relationships. Secondly, the benefits and sacrifices resulting from alternative governance structures (namely hierarchies and markets) are exhaustively detailed elsewhere, particularly in Transaction Cost Economics (Williamson, 1981) and the Property Rights Approach (Hart and Moore, 1990). It is outside the scope of this paper to determine all the benefits and sacrifices of vertically integrating, and employing transactional relations with, counterparts. Incorporating the differential justification would thus substantially escalate the complexity of our discussion on relationship significance, possibly making our arguments unintelligible, and not contribute much to the overall purpose of this paper.

Functions and dysfunctions in business relationships

Relationship nature and role. Business relationships can be characterized according to two primary dimensions: nature (or substance) and role (or function) (cf. Hakansson and Snehota, 9 Our discussion of benefits and sacrifices accruing from hierarchies and markets is succinct and, of course, incomplete. It builds primarily upon the works of Coase (1937) and Williamson (1985, 1981), and Grossman and Hart (1986). Transaction Cost Economics and the Property Rights Approach only refer to ‘costs’ (and not ‘sacrifices’) of hierarchies and markets. Nonetheless, as our conceptualization presumes the former to be part of the latter, no incoherence may be spotted here. The ‘costs of using the price mechanism’ (i.e., ‘the costs of discovering what the relevant prices are’ and ‘the costs of negotiating, making, and concluding a separate contract for the supply of each article or service’) have been presciently discovered by Coase (1937, pp. 390-1), that claimed these costs to be the fundamental factor explaining the existence of the firm. Also labelled ‘marketing costs’ by Coase, they were later reworded ‘costs of transacting’ (Demsetz, 1968) and ‘transaction costs’ (Williamson, 1981). “The economic counterpart of friction is transaction cost: do the parties to the exchange operate harmoniously, or are there frequent misunderstandings and conflicts that lead to delays, breakdowns, and other malfunctions?” (Williamson, 1981, p. 552). In terms of benefits related to markets, the reduction of transaction costs (when asset specificity and uncertainty are both low and the exchange transaction is rather infrequent) is frequently stressed (Williamson, 1981). Benefits of vertically integrating often comprise: (i) provision of incentives alignment, hence mitigating hold-up problems (and other potential opportunistic behaviour); (ii) reduction of transaction costs (in the face of highly specific assets); and (iii) minimization of ex post losses related to ex ante investment distortions, because of contract incompleteness (Grossman and Hart, 1986). With respect to the sacrifices of hierarchies, one may point out: (i) diseconomies of scale and scope (or ‘diminishing returns to management’); (ii) internal governance costs (e.g., deriving from individuals pursuing their personal goals); and (iii) incentives impairment (mostly for the party acquired) and consequently monitoring costs (op. cit.).
1995). It is further argued that the latter is contingent upon the former (op. cit.). That is, some relationship substance – in the form of activity links, resource ties, and actor bonds - must exist if functions are to be performed. Relationship functions (and dysfunctions) are effected because the activities and resources of both parties to a business relationship are being coordinated and employed, respectively (Walter et al., 2001, Walter et al., 2003).

In principle, only high-involvement (i.e., ‘substantial’) business relationships are certain to deliver functions for the focal firm (Gadde and Snehota, 2000); but that is not always the case, and therefore low-involvement (‘non-substantial’) relationships may also perform a role for the focal firm (for instance, in the future) (op. cit.).

Multiple features of business relationships (e.g., high degrees of trust, commitment, and interdependence, extended scope of cooperation and interpersonal contacts) are crucial to functions’ fulfilment. Unfortunately, some dysfunctions are unavoidable even with relationship substance. Empirical research has identified some relationship-specific factors as preconditions for functions’ fulfilment: (i) trust, commitment, and satisfaction (i.e., relationship quality); and (ii) adaptations (Walter and Ritter, 2003). In addition, Walter et al. (2003) empirically found that the fulfilment of (both direct and indirect) functions is a strong determinant for (perceived) relationship quality. A reciprocal, reinforcing effect between relationship function and quality thus seems to be posited. In this sense, it seems that the role of business relationships also shapes their nature (and not just the other way around).

**Relationship functions.** Both *primary* and *secondary* functions are attributed to business relationships (Hakansson and Johanson, 1993a, cf. Anderson et al., 1994). Relationship functions are labelled *primary, direct or first-order* (when relationship benefits and sacrifices are immediate for the focal firm or ensue independently of its connected relationships); on the contrary, relationship functions are said *secondary, network, indirect or second-order* if benefits and sacrifices depend on the focal firm’s connected relationships or only accrue for it in the future (cf. Walter et al., 2001). “(…) in a given relationship, secondary functions can be as important as primary ones, or even more so” (Anderson et al., 1994, p. 3).

Six main functions may be set forth to group the diversity of roles that business relationships play directly and indirectly for the focal firm (Hakansson, 1987, Hakansson and Johanson, 1992, Johanson and Mattsson, 1987, Hakansson, 1989): (1) *access* (to network actors, as well

---

10 Hakansson and Snehota (1995) argue that business relationships accomplish functions not only (i) for the dyad, and (ii) for each party involved, but also (iii) for third parties (i.e., rest of the network). Therefore, not only benefits and sacrifices stem for each and both parties involved (i.e., the focal firm and its counterpart), but also ensue for others (directly and indirectly) connected to them. The role played by business relationships for other (connected) network actors is acknowledged, but not important for the purpose of our paper – we will be hence focused on the relationship role for the focal firm.
as exploitation of their resources and activities); (2) control (i.e., exercise of influence, and increase of control or reduction of dependence, in the network); (3) efficiency (i.e., reduction of production and transaction costs); (4) innovation (i.e., creative leveraging of resource heterogeneity); (5) stability (i.e., learning and reduction of environmental uncertainty); and (6) strategy (i.e., interrelate with context, manage interdependences, and cope with network paradoxes). These major functions are promptly described.

(1) Access function. The focal firm is not a self-sufficient entity, being instead deeply enmeshed in networks of relationships and largely dependent on external resources and activities (Thompson, 1967). Focal firm’s resources and activities are therefore considered to extend beyond its traditional ownership delimited boundaries (Araujo and Easton, 1996). As suggested in the Activities-Resources-Actors (ARA) model (Hakansson, 1987, Hakansson, 1989, Hakansson and Johanson, 1992), business relationships allow the focal firm to access other network actors (namely firms) and exploit their (complementary) resources and activities. The resources possessed and the activities performed by the focal firm are a result of its history and can only be changed slowly and at great cost –at least this is a recurrent contention within the Resource-Based View of the Firm (RBV) (see, e.g., Dierickx and Cool, 1989). However, the Industrial Networks Theory has shown that it is always possible (and less costly?) for the focal firm to change the resources and activities it has access to and exploits, by disentangling from existing business relationships and finding new partners (Ford et al., 1998). The resources and activities of the focal firm are essentially passive and fragmented. “A company is a collection of inert resources [and activities] that are only activated through interaction with others and (…) these resources [and activities] acquire their value when they become useful to others. Companies interact with each other and develop relationships in order to exploit and enhance their own resources [and activities] and to gain the benefit of those of others.” (Ford et al., 1998, p. 46, emphasis in original). Hence both (intra- and inter-firm) resource and activity complementarity is present in business markets (Johanson and Mattsson, 1987).

(2) Control function. Business relationships can be used by the focal firm as means of influence over counterparts, thereby increasing its network control (Hakansson, 1987, Hakansson, 1989). Through business relationships, the focal firm can: (a) build new, or

---

11 Walter et al. (2003, 2001) list the (direct and indirect) functions of (i) supplier relationships for the customer and of (ii) customer relationships for the supplier, respectively. We believe all these functions, both direct and indirect ones (e.g., profit, market, to name but a few), may be easily marshalled in the six major functions imputed to business relationships (noted above), regardless of the focal firm being either a customer or supplier.
strengthen (i.e., preserve or alter) its existing, position(s) in the network (Mattsson and Johanson, 1992); (b) influence counterparts (and their respective network theories) and change business relationships, consequently altering network structures, e.g., by ending business relationships, establishing new, or changing the substance of existing ones (Mattsson and Johanson, 1992); (c) restructure the web of interdependences at the production system (i.e., activity/resource) level, e.g., to reduce its dependence on counterparts’ resources and activities, or increase counterparts’ dependence on own resources and activities (Mattsson and Johanson, 1992); (d) enhance its own reputation in the network or attractiveness as a business partner (Anderson et al., 1994); and (e) promote suitable change, or instead block undesired changes initiated elsewhere, e.g., by counterparts (Lundgren, 1992).

(3) **Efficiency function.** “From the point of view of a company the benefits of relationships often consist in their positive consequences for company costs.” (Hakansson and Snehota, 1995, p. 394). Efficiency gains (i.e., reducing production and transaction costs) can be achieved by the focal firm through participating in business relationships. By interlinking its activities with those of counterparts, the focal firm is likely to attain (more) efficient ways of producing and transacting (Hakansson, 1982). As Hakansson and Snehota (2000, p. 42) point out, “(…) relationships can be a way to reach a higher level of efficiency in the combination of production and transactions”.

(4) **Innovation function.** According to the RBV, resource and competence development has been usually thought to occur within firms (cf. Dierickx and Cool, 1989, Wernerfelt, 1984). Conversely, such development has been empirically found to take place to a large extent between firms, i.e., in the business relationships they maintain among themselves (Hakansson and Snehota, 1995, Hakansson, 1987). “A firm’s capabilities and resources are seen as embodied in evolving networks of interdependence both within the firm and within the network structure in which it is embedded.” (Araujo and Easton, 1996, p. 376). As the focal firm combines its resources with those of counterparts, new knowledge is certain to emerge and hence previously unused dimensions of resources may be exploited (Penrose, 1959). Hakansson and Snehota (2000, p. 42) suggest that “(…) relationships can be means for tying resources to each other in such a way that some of their heterogeneity is utilized – that is, different dimensions of the resources are partly unknown, and through ‘interaction’ these dimensions are identified and utilized”. By interacting, new ways of employing and combining resources may be found (i.e., resource dimensions may be exploited differently or unknown dimensions discovered) and even new resources may be developed. “(…) it is
important that resources are not perceived as givens. Resources always have ‘hidden’ and unexploited dimensions that can be explored and developed in interaction with business partners. It is through the continuous combining and recombining in business relationships that new resource dimensions are identified and further developed.” (Gadde et al., 2003, p. 360). Therefore, resource heterogeneity is the outcome of both internal operations and exchange processes taking place (Hakansson, 1987, Easton and Araujo, 1993, Penrose, 1959).

(5) **Stability function.** As business relationships develop over time, mutual trust and commitment are gradually increased, and interfirm learning becomes greater (Hakansson et al., 1999). Both learning and teaching happen in business relationships. Therefore, both parties’ uncertainties are likely to be greatly reduced (Easton, 1992). “Developing continuous, ‘dense’ relationships with others seems to be a way to cope with the complexities and ambiguities which any company is facing in a [business] market.” (Hakansson and Snehota, 1995, p. 11). Business relationships are used as information conduits or channels (Anderson et al., 1994, Hakansson, 1987), through which firms share their knowledge, hence allowing them to deal better with (and also increase their control over) the environmental complexity faced (Hakansson, 1982). Any business relationship always implies some degree of control of the focal firm over its counterpart (and vice versa) and therefore, some extent of control of the focal firm over its environment – stability is somewhat attained (Hakansson and Snehota, 1989).

(6) **Strategy function.** Business relationships influence, to larger or lesser degree, the focal firm’s strategy in the business markets in which it operates (Ford et al., 1998). The focal firm devises and puts in practice its strategy, with and mostly through the business relationships that it establishes, develops, maintains, and terminates with counterparts. “(…) strategy development in business markets centres on, is affected by, and is implemented through relationships” (op. cit., p. 75). Clearly, business relationships are one of the main instruments (if not the primary one) at the focal firm’s disposal to enact its network strategy. They contribute decisively to the way the focal firm: (i) relates to its changing context (Hakansson and Snehota, 1989); (ii) manages associated interdependences at activity, resource, and actor levels (Gadde et al., 2003); and (iii) deals with paradoxes inherent in business markets (e.g., influencing, and being influenced by, counterparts) (Hakansson and Ford, 2002).

One final aspect is worthy of comment. Relationship functions may be fulfilled at activity, resource, or actor levels (cf. Anderson et al., 1994, Hakansson and Snehota, 1995). Put differently, the effects of relationship functions’ fulfilment (i.e., benefits) are sensed, by the
focal firm, to occur at these three levels. With respect to the six main functions of business relationships, they seem to be performed at diverse levels (see Table 1 below). Our viewpoint is that the Access, Control, and Strategy functions are fulfilled at all levels. With regard to Efficiency, Innovation, and Stability functions, these are respectively delivered at activity, resource, and actor levels.

<table>
<thead>
<tr>
<th>Levels of fulfilment</th>
<th>Access</th>
<th>Control</th>
<th>Efficiency</th>
<th>Innovation</th>
<th>Stability</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 1 - Levels at which main relationship functions are fulfilled*

At a given point in time, not all these six functions are accomplished in every business relationship that the focal firm is engaged in (Walter et al., 2003). Moreover, the fulfilment of relationship functions is likely to vary over time. For example, as the focal firm’s relationship with customer A evolves, the Access function (previously accomplished in it) may be replaced by the Innovation function. If we presume that participation in business relationships can be often justified from diverse rationales, more than one function is bound to be fulfilled over time in each business relationship. Inasmuch as it is very unlikely that the same business relationship fulfils (at a certain point in time) all functions expected or desired by the focal firm (Walter et al., 2003), one might refer to the non-fulfilment of functions and consequently, to dysfunctions.

**Relationship dysfunctions.** A business relationship may be labelled dysfunctional if it does not fulfil some functions (expected or desired from it by the focal firm) or if precludes the fulfilment of expected/desired functions in other (connected) relationships. For instance, the focal firm’s relationship with customer A is deemed dysfunctional if it does not permit the access to other relevant actors (i.e., does not fulfil the Access function) or hinders the Innovation function in its relationship with customer B.

If some sacrifices (particularly deleterious outcomes) accrue to the focal firm, then a relationship dysfunction must have been performed. Furthermore, for each relationship function fulfilled for the focal firm, it is very likely that a dysfunction follows - and hence

---

12 We take advantage of this sound argument previously advanced by Barringer and Harrison (2000), who were however concerned with formal, horizontal interfirm relationships.
some deleterious outcomes result. For instance, as the focal firm obtains more control in the network (through fulfilment of the relationship *Control* function), there is a high likelihood that its counterparts also enhance their network control (partly at the expense of the focal firm). Or, as the focal firm copes better with the surrounding environmental complexity (via fulfilling the relationship *Stability* function), some of its own stability is necessarily lost (i.e., ‘given’) to counterparts. The same happens for each other main function potentially carried out in that business relationship. In a certain sense, we may allude to six major dysfunctions potentially fulfilled by business relationships. The focal firm gains from being involved in business relationships, but in return it also has to cede (i.e., allowing or fostering its counterparts’ gains). In business markets, it is not a matter of receiving: one has forcefully to give, at least if it truly wants to get. This resembles Hakansson and Ford’s (2002) reasoning on the paradoxes inherent in business markets.

**Connectedness of relationship functions and dysfunctions.** As business relationships are connected to each other, it is very likely that their functions and dysfunctions are interdependent (see Hakansson and Snehota, 1995). For instance, the *Innovation* function carried out in the focal firm’s relationship with customer A may be dependent on, as well as positively influence, the *Innovation* functions fulfilled in both the former’s relationship with customer B and the latter’s relationship with supplier C (a focal firm’s competitor). Alternatively, the mere existence of the (supposedly dysfunctional) business relationship with supplier D may preclude the realization of *Innovation* function in the focal firm’s relationship with supplier E. It does not seem necessary, however, that only functions and dysfunctions of the same kind are interdependent, as in the given examples. The same *Innovation* function of the focal firm’s relationship with A may (positively or otherwise) depend on, and impact, both the *Access* and *Efficiency* functions in its relationships with competitor C and supplier D respectively.

**Benefits and sacrifices resulting from being engaged in business relationships**

As mentioned earlier, relationship benefits are the positive outcomes deriving from the fulfilment of relationship functions. Relationship sacrifices, conversely, comprise the costs incurred to attain such benefits plus the negative outcomes stemming from either relationship dysfunctions or the mere non-fulfilment of relationship functions. Plainly, benefits encompass what propels the focal firm into business relationships, whilst sacrifices may be seen as the factors inhibiting relationship formation (Biong *et al.*, 1997).
**Relationship benefits.** Six primary positive outcomes for the focal firm, accruing from fulfilling main relationship functions, may be advanced: (1) accessing other actors in the network, and potentially exploiting their resources and activities (complementary to those it internally possesses and performs) (Hakansson and Snehota, 1989, Johanson and Mattsson, 1987, Hakansson, 1989, Hakansson, 1982); (2) exercising and/or augmenting its influence and control in the network (e.g., reinforcing its network position, changing the dominant network theory, restructuring interdependences at activity and resource levels to its own advantage, enhancing its reputation and attractiveness, promoting or blocking change) (Hakansson and Johanson, 1992, Johanson and Mattsson, 1987, Anderson et al., 1994); (3) attaining efficiency gains (i.e., reducing its production and transaction costs) (Hakansson, 1982, Hakansson, 1989, Johanson and Mattsson, 1987); (4) innovating (i.e., improving the existing use of resources, discovering new uses for extant resources, or even developing new resources) (Anderson et al., 1994); (5) learning, thus coping better with (or even reducing) the surrounding environmental uncertainty (Hakansson, 1987, Hakansson, 1989, Hakansson, 1982); and (6) strategizing (i.e., devising and putting into practice its network strategy) (Gadde et al., 2003, Hakansson and Snehota, 1989).

**Relationship sacrifices (costs plus deleterious outcomes).** Three relationship costs are usually faced by the focal firm: (1) opportunity costs related to its established business relationships\(^\text{13}\) (in particular the adaptations made in them)\(^\text{14}\) (Gadde and Snehota, 2000, Hakansson, 1982); (2) relationship handling costs (i.e., costs of establishing, developing, maintaining, and terminating each of its business relationships)\(^\text{15}\) (Hakansson and Snehota, 1989).

---

\(^\text{13}\) The focal firm’s current relationships, at a given point in time, may contribute to forfeit future gains ensuing from more attractive relationships that exist or may eventually come up (Biong et al., 1997). As an illustrative example, the focal firm’s relationship with customer A may (i) preclude the obtainment of benefits in new, potentially more valuable business relationships (with counterparts B and C, which are both A’s competitors) or (ii) hinder the attainment of more benefits and/or less sacrifices in its concurrent relationship with Supplier D.

\(^\text{14}\) Adaptations may be envisaged as idiosyncratic (relationship-specific) investments indispensable to the development process of business relationships (Ford, 1980, Dwyer et al., 1987). As adaptations often cannot be transferred to other business relationships (hence having insignificant or zero value in alternative uses), they are certain to involve opportunity costs (cf. Hallen et al., 1991). Relationship adaptations compete for the limited resources of the focal firm (Ford et al., 1998). Moreover, focal firm’s adaptation in one of its business relationship may imply ‘misadaptation’ in another (Ritter, 1999).

\(^\text{15}\) For Blois (1999), three relationship costs are generally incurred by the focal firm: (i) costs for establishing the business relationship (what he calls ‘investment’); (ii) costs for developing the business relationship (so-called ‘relationship development costs’); and (iii) costs for maintaining the business relationship (labelled ‘relationship maintenance costs’). In addition, the focal firm’s costs involved in ending its business relationships must also be considered. Inasmuch as business relationships are substantial (i.e., have substance), costs for terminating or exiting them are not negligible (Ford et al., 1998). Business relationships “(...) are not easy to change quickly and changes are likely to incur significant costs, both in disruption and in developing new relationships” (op. cit., p. 43). These last costs are not given proper attention by Industrial Networks Theory, probably because they do not lead to any relationship benefits - at least immediately or within the business relationship in question. We believe they should nonetheless be included in this relationship cost category. In essence, relationship handling costs comprise all focal firm’s expenses necessary to initiate, nurture, sustain, and exit business relationships with counterparts (e.g., the time spent in negotiations, adaptations made). These expenses, often large and difficult to overall quantify, are partly considered sunk costs for the focal firm (Hakansson and Snehota, 1995). Relationship handling costs can notwithstanding be easily imputed to a single counterpart or to a specific business relationship (op. cit.).
1995, Blois, 1999, Gadde and Snehota, 2000); and (3) network handling costs (i.e., overhead costs incurred with several of its business relationships)\textsuperscript{16} (Hakansson and Snehota, 1995, Gadde and Snehota, 2000).

With respect to deleterious outcomes accruing to the focal firm because of its engagement in business relationships, one may point out: (1) lock-in effects (e.g., focal firm’s established business relationships may preclude the development of other relationships)\textsuperscript{17} (Mota and Castro, 2002, Araujo and Harrison, 2002); (2) being more subject to opportunistic behaviour of counterparts (e.g., free-riding and hold-up problems), in parallel with its growing dependency on counterparts (and the resulting loss of autonomy) (Hakansson, 1982, Biong et al., 1997); and (3) various others harmful consequences (e.g., the focal firm’s relationship with counterpart A may have damaging effects on its positions, reputation, and attractiveness in the network) (Anderson et al., 1994, Mattsson, 1989). Additionally, deleterious outcomes may include the non-attainment of positive relationship outcomes by the focal firm, i.e., what it could have gained (more?) in its business relationships. (Deleterious outcomes may hence come close to relationship opportunity costs.) Therefore, deleterious outcomes may be partly seen as relationship benefits obtained by counterparts, at the expense of the focal firm. For example, Efficiency and Innovation benefits captured by counterpart A (to the disfavour of the focal firm) can be viewed, from the focal firm’s perspective, as relationship sacrifices (namely deleterious outcomes).

\textbf{Interdependence of relationship benefits and sacrifices.} Diverse benefits and sacrifices are typically expected from different business relationships. As stressed earlier, benefits and sacrifices depend on the substance (and quality) of the business relationship (Hakansson and Snehota, 1995), which in turn is contingent upon the posture adopted by, and consequently the input of, both parties to it (Gadde and Snehota, 2000). Different relationship postures (i.e., degrees of involvement) are sure to be conducive to diverse benefits and sacrifices.

\textsuperscript{16} Both the production, warehousing, and distribution costs of a focal firm’s product sold to customers, and the costs associated with the technological platform used for communicating with its suppliers (e.g., internet, phone, fax) are two examples of costs which cannot be attributed to a particular business relationship or counterpart – they are entitled relationship base costs by Hakansson and Snehota (1995). Gadde and Snehota (2000), on the other hand, label the focal firm’s overhead costs in dealing with suppliers as supply handling costs. Drawing upon their rationale, we coin the notion of network handling costs to refer to the common (shared) costs incurred by the focal firm to interact with (some of) its multiple counterparts.

\textsuperscript{17} “By engaging in a relationship some companies perceive that they might loose flexibility in choosing alternative partners (…)” (Biong et al., 1997, p. 102, emphasis added). Put simply, lock-in effects can be embodied into loss of flexibility or alternatively, the costs of change (Ford et al., 1998). Lock-in effects are associated to “(…) the notion that ‘history matters’ in the way we understand the trajectories of firms and the technological choices they are confronted with” (Araujo and Harrison, 2002, p. 5). Over time, the focal firm’s trajectory in business markets is strongly determined by its (past, current, and future) business relationships with counterparts (Mota and Castro, forthcoming).
Relationship benefits and sacrifices are not independent (Gadde and Snehota, 2000); the former are not derived automatically or for free (op. cit.), being partly dependent on the latter (Blois, 1999). Some time and sacrifices (at least costs) are needed, before relationship benefits can be reaped by the focal firm (Hakansson and Snehota, 1995, Blois, 1999). Attaining benefits often requires a high-involvement of the focal firm in the business relationship, i.e., sacrifices. It is not axiomatic, however, that only high-involvement business relationships lead to significant benefits and entail low sacrifices (e.g., the case in which the counterpart lacks motivation and interest) (Gadde and Snehota, 2000). On the other hand, a low-involvement business relationship may permit the focal firm to attain high benefits, while incurring only reduced sacrifices (op. cit.). Finally, it should be noted that different amounts of sacrifices may lead to similar relationship benefits whilst similar relationship sacrifices may imply diverse benefits (Hakansson and Snehota, 1995).

**Measuring relationship benefits and sacrifices.** There will always remain some uncertainty about the overall sacrifices and benefits accruing from a business relationship (Ford, 1980) and not all of these can be quantitatively calculated. “Some [relationship] consequences are quite easy to exposure, measure and quantity; others are less obvious, more indirect and more difficult to measure, but no less important.” (Gadde and Snehota, 2000, p. 307). As a rule, the former consequences are relationship sacrifices whereas the latter refer to relationship benefits.

In the short-term, relationship benefits are only partially evident for both the focal firm and its counterpart, becoming more manifest over time and indirectly (i.e., in the future and in connected relationships respectively) (Hakansson and Snehota, 1995, Gadde and Snehota, 2000). Owing to being more immediate and direct, relationship sacrifices are easier to assess. Plus, because benefits are mostly non-economic (intangible) and sacrifices are generally expressed in economic terms (tangible), it becomes much more difficult to compute the former than the latter (Gadde and Snehota, 2000). Lastly, relationship benefits and sacrifices are both firm-specific, i.e., they vary across the parties to a business relationship (Hakansson and Snehota, 1995). That is, a business relationship may bear more benefits (or sacrifices) for the focal firm than for its counterpart, or vice-versa. (This explains the difference in perceptions of the focal firm and its counterpart regarding the significance of their business relationship, as will be discussed below. See footnote 18.)

**Relationship benefits and sacrifices: which to emphasize?** Relationship benefits and sacrifices are two sides of the same coin (Hakansson and Snehota, 2000). Industrial Networks
Theory, however, seems to place more emphasis on the benefits than on the sacrifices ensuing from business relationships. Both economic outcomes (mostly benefits) ensuing from, and the functions fulfilled by, business relationships are largely addressed in Industrial Networks Theory. By contrast, non-economic consequences as well as relationship sacrifices and dysfunctions are, almost in the same proportion, overlooked (Walter et al., 2001). This reinforces the widespread notion that the benefit side of business relationships is more important than their sacrifice side (Hakansson and Snehota, 1995).

Industrial Networks Theory does not give too much importance to the deleterious outcomes potentially ensuing from being engaged in business relationships (e.g., dependency and opportunistic behaviour problems). Probably, this is because potential deleterious outcomes are ‘part of the game’ – exactly what Hakansson and Ford’s (2002) reasoning on network paradoxes suggest. The focal firm should hence be more concerned with relationship benefits rather than with their accruing sacrifices. Hakansson and Snehota (1995, p. 396) convey this in clear terms: “(…) economizing on the costs of handling relationships is important but exploiting the potential relationship benefits is even more important. It is the benefits side of relationships and not the costs [and overall sacrifices] they entail that appear to be the critical variable in a management perspective”.

Perceptual nature of relationship significance

Before advancing to the gist of our paper, a few remarks ought to be made. As stressed earlier, the significance of business relationships for the focal firm can be directly traced to their outcomes – in general, ensuing benefits exceed sacrifices (i.e., relationship value is created and appropriated by the focal firm). Some of these relationship outcomes - primarily the benefits and sacrifices which are non-economic, mediate, and indirect - are difficult, if not impossible, to quantify or measure fairly. At most, they can be (subjectively) assessed by the focal firm (and, conversely, by its counterparts). Even if relationship benefits and sacrifices were totally quantifiable, the biased character of the individual actors (within the focal firm and counterparts) assessing them would have, as a consequence, personal (and different) valuations (Blois, 1999). By virtue of the intangible nature of benefits and sacrifices, the significance of business relationships is only perceived by the focal firm (and counterparts), instead of objectively determined. Business relationships are perceived to be more or less, or not at all, significant for the focal firm. At a given point in time, two business relationships cannot be equally significant – a relationship significance continuum may be thus presumed (Sousa and Castro, 2004b, Sousa and Castro, 2004a). Relationship significance is essentially a
perception of the focal firm, usually of its top management and other personnel directly involved in managing them (e.g., from marketing and purchasing departments). This perception is likely to vary over time, not only among the parties to a business relationship\textsuperscript{18}, but also within each party involved. In this respect, the *time-varying significance* of business relationships for the focal firm can be contended (Sousa and Castro, 2004b, Sousa and Castro, 2004a).

The final point to stress is that connectedness needs to be taken into account when assessing the significance of business relationships for the focal firm (Hakansson and Snehota, 1995). Seemingly, the significance of a focal firm’s specific relationship is often related to the significance of its other (directly or indirectly connected) business relationships. For example, the benefits (resulting from functions’ fulfilment) in excess of sacrifices (accruing either from dysfunctions’ fulfilment, non-fulfilment of functions, or both) attained by the focal firm in its business relationship with customer A may be strongly associated with the benefits and sacrifices derived (and hence to the functions and dysfunctions performed) in its connected relationships with other counterparts (e.g., customer B and supplier C).

**A MINOR FLAW IN A MAJOR PROPOSITION?**

We can now state explicitly the relationship significance proposition of Industrial Networks Theory:

*A business relationship may be considered significant for the focal firm to the extent that ensuing benefits are perceived to exceed sacrifices (i.e., relationship value is created and appropriated).*

According to the above-mentioned rationale, one all-encompassing argument is (implicitly) advanced within Industrial Networks Theory to support the significance proposition: *the creation and appropriation of relationship value*. That is, the relationship value created and captured by the focal firm - in the form of (i) access to network actors, and exploitation of their resources and activities; (ii) exercise or increase of influence and control in the network; (iii) efficiency gains; (iv) innovation; (v) learning and reduced environmental uncertainty; or (vi) network strategy - is claimed *sine qua non* for relationship significance. To our viewpoint, however, this argument sets a minimum, i.e., is a *necessary but not sufficient condition* for advocating relationship significance. As an illustrative example, one may think

\textsuperscript{18} The same business relationship may be differently perceived as significant by the parties involved. For instance, the focal firm may perceive the business relationship as highly significant, whilst the counterpart may only sense it as low in significance. Theoretically, a certain business relationship may be considered more significant for one party than for the other. We think this is not unusual.
of a business relationship that the focal firm holds with counterpart A (one of its suppliers). Such business relationship may be perceived as significant by the focal firm even though accruing sacrifices far exceed attained benefits (i.e., relationship value, if co-produced, is only appropriated by A). In this situation, the focal firm’s perception of significance concerning its business relationship with A will probably be motivated by other (yet unknown) motives.

The dominant theoretical justification underlying the relationship significance proposition is externally (or interfirm) oriented, essentially focused towards the focal firm’s (interaction with its) context (see, e.g., Hakansson and Snehota, 1989). Another part of the ‘relationship significance’ picture seems to be neglected by Industrial Networks Theory. An internally-oriented (intrafirm) theoretical support, primarily addressing the core of the focal firm, may be missing. Adopting a competence or knowledge-based perspective on the focal firm - hence looking at it as a bundle of resources and competences (Penrose, 1959, Kogut and Zander, 1992) - may be illuminating. We posit that the conceptual ‘baggage’ of so-called Knowledge-Based Theories of the Firm (e.g., the notions of routines, dynamic capabilities, and competences) may help to explain relationship significance, hence complementing the network-based explanations on this matter.

Cross-fertilizing network- and knowledge-based perspectives?

Industrial Networks and Knowledge-Based Theories have divergent concerns, naturally differing in their main units of analysis (which are focal firm’s networks of business relationships and its resources and competences, respectively). Plainly, one may argue that the former theory is more focused on the outside of the focal firm (addressing the character and dynamics of business networks surrounding the focal firm), whilst the latter is chiefly concerned with its innermost parts (specifically its resource endowments). These two theories may be thus seen, in principle, as complementary to each other.

Traditionally, Knowledge-Based Theories have been depicted as strongly influenced by neoclassical economics (Foss, 1997) and building upon unrealistic premises (when compared to the ones of Industrial Networks Theory) regarding the firm in general, and its environment, resources, and strategy in particular. The following orthodox assumptions can be easily summarized: (i) firms are seen as isolated and completely independent entities (hence neglecting business relationships and only acknowledging atomistic, faceless, and fully hostile environment); (ii) resources are only seen to reside within the firm (ignoring or downplaying the importance of external resources, and overlooking both intrafirm and
interfirm resource complementarities); and (iii) strategy is taken as a totally competitive, zero-
sum game (Lavie, forthcoming, Foss, 1997). Consider, in contrast, the network-based
allegations of: (i) firms as interdependent actors, deeply enmeshed in a full-face, networked
environment; (ii) resources extending beyond firm boundaries; and (iii) relational strategy
In the face of such opposing premises, a potential incompatibility between network- and
knowledge-based perspectives may be at stake (Sousa and Castro, 2004a, Sousa and Castro,
2004b).

The intellectual bridge between these two theories has been attempted (if not de facto made)
by Loasby (1998). Bridging the insights of Penrose (1959) and Richardson (1972), thus
harmonizing knowledge- and network-based rationales, Loasby (op. cit.) postulates the focal
firm as a set of internal (direct and indirect) competences, profoundly embedded in a wider
network of external (direct and indirect) competences.19 Firms have necessarily limited direct
competences (i.e., know how to do some things) and, consequently, need to possess indirect
competences (i.e., know how to get certain things done by others). In this sense, engaging in,
nurturing and maintaining business relationships to access and exploit needed (external)
competences is fundamental for the focal firm. In a similar vein, Sousa and Castro (2004a)
contend that the theoretical cross-fertilization between network- and knowledge-based
perspectives is not only apposite, but can also be conceptually advantageous for both. In a
preliminary review of Knowledge-Based Theories, they propose a (yet incipient) conceptual
framework that allegedly overcomes the main pitfalls attributed to such theories - principally
their conventional unworkable assumptions (described above), and the terminological
ambiguity and conceptual tangle frequently observed within those (cf. Foss, 1997).

**Changing the whys in Industrial Networks Theory**

Presumably, the significance of business relationships for the focal firm cannot be sufficiently
explained by the current state-of-art of Industrial Networks Theory. Therefore, the main
objective of this paper is to challenge the robustness of the relationship significance
proposition, or in other words, the completeness of its underlying arguments. It seems

---

19 Some competences are internal (existing within the focal firm), whereas others are external (complementary, residing
outside the focal firm) (Richardson, 1972). Internal competences may be of two types: (i) direct competences, also labelled as
core (Prahalad and Hamel, 1990), and (ii) indirect ones, said ancillary (Langlois and Robertson, 1995), relational (Lorenzoni
and Lipparini, 1999) or network (Ritter, 1999). Both internal and external competences may be envisaged as knowledge
assets (Richardson, 1972, Winter, 1987), primarily intangible (tacit, difficult to codify), and rooted in the focal firm’s ‘way of
doing things’ (i.e., organizational routines composed of complexly interconnected individual skills) (Nelson and Winter,
1982). Such idiosyncratic competences (Barney, 1991, Amit and Schoemaker, 1993) cannot be purchased on factor markets,
being rather internally developed (Penrose, 1959, Dierickx and Cool, 1989, Teece et al., 1997).
apposite to state hereinto that we are not interested in questioning the significance proposition in itself, as we unequivocally agree with business relationships being in general significant for the focal firm (by virtue of the aforementioned benefits in excess of sacrifices, and hence relationship value, they allow it to create and appropriate). Furthermore, our intent is neither to question nor evaluate Industrial Networks Theory as a whole.\textsuperscript{20} Instead we are only modestly trying to advance suggestions in order to improve (extend) theory (cf. Van de Ven, 1989, Whetten, 1989).

So far, we have intuitively pinpointed a minor flaw in one of Industrial Networks Theory’s major propositions. To solve such theoretical pitfall, the \textit{falsifiability} of the significance proposition needs to be tested (cf. Bacharach, 1989). We must start from the premise that: (i) the \textit{antecedent} of the significance proposition (‘creation and appropriation of relationship value by the focal firm’) is only a necessary condition for the \textit{consequent} (‘relationship significance’); and (ii) the referred proposition is non-tautological (i.e., the sheer existence of the antecedent does not automatically imply the existence of the consequent) (cf. Bacharach, 1989). Put simply, one needs to search for (or discover) empirical cases in which business relationships are perceived as significant by the focal firm and, more importantly, such relationship significance is not justified by the arguments previously advanced within Industrial Networks Theory (namely creation and appropriation of relationship value). Our conjecture is that such empirical research will probably unearth knowledge-based reasons for the relationship significance.

\textbf{Competences (and boundaries): an emerging explanation for relationship significance}

Sousa and Castro (2004b) presume the focal firm (i) to comprise a bundle of \textit{internal competences}, \textit{assets}, and \textit{dynamic capabilities}, whilst (ii) being deeply embroiled in its environment (hence relying, via business relationships, on \textit{external competences} and \textit{resources}) (cf. Barney, 1986, Dierickx and Cool, 1989, Teece et al., 1997, Langlois and Robertson, 1995). By looking at their knowledge-based framework (op. cit., p. 15), two sound questions crop up:

1. \textit{Do the focal firm’s business relationships contribute to the development, maintenance, and upgrading of its internal competences and assets?}

\textsuperscript{20} Evaluating a theory can proceed in one of two ways: (1) determine if it exhibits \textit{accuracy}, \textit{generality}, and \textit{simplicity} (Weick, 1969) or reasonably balances \textit{comprehensiveness} and \textit{parsimony} (Whetten, 1989); and (2) assess if it is both \textit{falsifiable} and \textit{useful} (i.e., can be disproved and is able to explain and predict respectively) (Bacharach, 1989).
2. Do the focal firm’s business relationships contribute to the access and exploitation (and possibly the creation) of required external competences and resources?\(^{21}\)

Industrial Networks Theory recurrently advocates, with our total agreement, that all external resources and competences accessed and exploited by the focal firm are inextricably related to its (potential and actual) business relationships, i.e., the business relationships it is capable of (and \textit{de facto} chooses to) establish, develop, and sustain with several counterparts (Hakansson, 1987, Hakansson, 1989). In a knowledge-based terminology (Nelson and Winter, 1982, Loasby, 1998), what the focal firm \textit{gets done by others} (Nelson and Winter, 1982, cf. Loasby, 1998) thus seems to be (in part) positively influenced by its current business relationships.\(^{22}\) (Moreover, the focal firm also gets things done via arm’s-length relations with counterparts. The resources and competences subcontracted by the focal firm across the market (i.e., accessed via transactional relations) are themselves likely to be a consequence of what it is unable of, or rather chooses not to, access and exploit through business relationships.) On the other hand, we contend the following: what the focal firm \textit{does} competently within and across its boundaries (i.e., its \textit{core} and \textit{relational} or \textit{network} competences) (Prahalad and Hamel, 1990, Ritter, 1999, Lorenzoni and Lipparini, 1999) is bound to reflect the external resources and competences it is \textit{incapable of}, or (even if able) \textit{chooses not to}, access and exploit through business relationships.

If the answer to both questions set forth above is (as we believe) a ‘yes’, then relationship significance is strongly associated with (i) what the focal firm does (competently) by itself and (ii) what it gets done (competently) by others, particularly via business relationships. In short, relationship significance may be justified by the influence that business relationships have on defining over time the boundaries of the focal firm. Basically, these boundaries separate what the focal firm does from what it gets done by others (via business relationships, as well through purely transactional relations, with counterparts). The delimitation of focal firm’s fuzzy boundaries is hence not resumed to a series of discrete ‘\textit{make-or-buy}’ decisions. Yet usually seen as both independent and dichotomous (Williamson, 1975), such decisions are connected to each other and, more importantly, incorporate a third option (‘\textit{access}’).

\(^{21}\) This question is clearly one put forward (and positively answered) by Industrial Networks Theory, in particular its ARA Model (Hakansson, 1987, Hakansson, 1989, Hakansson and Johanson, 1992).

\(^{22}\) The (partial) influence of business relationships on what the focal firm gets done by others is somehow already incorporated in the ‘\textit{creation and appropriation of relationship value}’ argument – advanced by Industrial Networks Theory to explain relationship significance - under the guise of ‘\textit{access to, and exploitation of, external resources and activities}’ (the \textit{Access} function earlier seen). We thank Lars Mikkelsen and Professor Hakan Hakansson for pointing this out.
Boundary decisions are hence about *making* (vertically integrating), *buying* (through arm’s-length relations), or *accessing* (via business relationships).

In addition to network-based reasoning alluded to before (to wit, *creation and appropriation of relationship value by the focal firm*), the significance proposition of Industrial Networks Theory may be supported by the influence that business relationships play on the evolution of the blurring and changeable boundaries of the focal firm, i.e., on what it competently does and gets done (cf. Araujo et al., 2003, Mota and Castro, 2004).

**CONCLUDING REMARKS**

Arguably, the Industrial Networks Theory does not stake out the sufficient conditions supporting its relationship significance proposition. The creation and appropriation of relationship value by the focal firm seems but a necessary condition for the significance of business relationships. This is because the justification is naturally focused on the focal firm’s outside (in particular its context) (Hakansson and Snehota, 1989), and consequently only on what it gets done by others (Hakansson and Johanson, 1992). Understandably, the network-based arguments underlying relationship significance do not contemplate the (partly overlooked) inside of the focal firm, in particular what it competently does within and across boundaries (i.e., core and relational competences). Questioning the robustness of the significance proposition implies that one must search for unexplored empirical evidences (or discover already documented ones) wherein the significance of business relationships for the focal firm is justified by reasons other than the network-based exposed before. Only forthcoming empirical research can illuminate these matters, and corroborate our criticisms on Industrial Networks Theory.

We conjecture that the network-based reasoning on the significance proposition may be supplemented with a rationale borrowed from Knowledge-Based Theories of the Firm (Kogut and Zander, 1992). The knowledge-based perspective may shed some light on relationship significance, despite its conventional premises being in some respects contradictory to the ones of Industrial Networks Theory (e.g., the knowledge view of the focal firm as an atomistic entity in a faceless, fully hostile environment). Researchers and scholars are trained to tenaciously pursue consistency in their theories, while dismissing any theoretical tensions and contradictions (like the potential ones arising when one attempts the cross-fertilization of

---

23 Of course, disclosed empirical cases - wherein ‘relationship significance’ (consequent) is not preceded by ‘creation and appropriation of relationship value by the focal firm’ (antecedent) - can be searched for within the literatures on Industrial Networks and Knowledge-based Theories of the Firm. If a future quick trawl through such literatures yields no satisfactory results, our intention is to conduct own inquiry.
network- and knowledge-based views). The possibility to exploit theoretical paradoxes in their efforts to advance theories is often neglected by theorists (Poole and Van de Ven, 1989).24

Reality is variegated – hence theories describe, explain, and predict, yet can only give partial pictures of it. “In this view, theories are not statements of some ultimate ‘truth’ but rather are alternative cuts of a multifaceted reality” (Poole and Van de Ven, 1989, p. 563). Researchers and scholars are trained and schooled in their theories for years (Van de Ven, 1989). As impelled to continually focus on (and perfect) theory, their field of vision is narrowed and an inability to reconsider and question presumptions is bound to develop among them. Conversely, instead of regarding theory as ‘a self-encapsulating whole’, researchers and scholars can play theories (even if incompatible) against one another, thus gaining insights from diverse perspectives (Poole and Van de Ven, 1989). “Questions problematic for one theory can often be addressed by another. Insights gained from one [theoretical] position should supplement and balance those from others” (op. cit., pp. 569-70). Along this vein, the reasoning that “(…) seemingly opposed viewpoints can inform one another (…)” (op. cit., p. 566) is here espoused seriously.

Even if apparently antagonistic, we believe network- and knowledge-based perspectives can be properly (and profitably) cross-fertilized. Three motives give further strength to their theoretical cross-fertilization. Firstly, the genesis of Industrial Networks Theory is in part related to bringing together different, partly contrasting theories (e.g., resource dependence, social exchange, transaction cost, and relational contracting theories) (Wilkinson, 2001, Easton, 1992). Secondly, Industrial Networks Theory is itself somewhat paradoxical, simultaneously incorporating conflicting notions of competition and cooperation, or stability and change within business relationships, just to cite two prominent examples. Finally, as one makes deeper sense of the large and heterogeneous knowledge-based literature, the incompatibility with the network view seems easily overcome (see, for instance, Sousa and Castro, 2004a).

**Not addressing a triviality, just attempting the improvement of theory**

The endless quest for better theory is a basic instinct in every researcher and scholar, whatever their field of study is (Van de Ven, 1989). Instead of being merely theory users,

---

24 It should be acknowledged that Industrial Networks and Knowledge-based theories do not provide mutually exclusive explanations of a given phenomenon, and hence the theoretical paradox - as Poole and Van de Ven (1989, p. 564) characterize it – is not here absolutely featured.
researchers and scholars should assume the key role of theory developers. In this respect, the current state-of-art of any theory should always be challenged, rather than simply (re)asserted (cf. Whetten, 1989). We think Industrial Networks’ theorists implicitly share this standpoint. This is understandable, insofar as the own birth of Industrial Networks Theory was motivated by questioning taken-for-granted assumptions in the industrial marketing field (strongly rooted in economics) (Cunningham, 1980). Professor Hakan Hakansson, one of the founders and the most prominent fledge-bearers of Industrial Networks Theory, has vigorously contended: “As researchers, we need to believe that we can be wrong. (...) Challenging, instead of accepting, can be an enthusiastic route. It makes you move on (...)

And this is exactly what we are doing here.

We believe relationship significance to be a prominent (but somewhat overlooked) topic within Industrial Networks Theory. It is quite admissible that relationship significance is (unanimously?) considered a triviality - it certainly is an inescapable stepping stone for many (if not all) of us who see reality in ‘relationship’ and ‘network’ terms (within the IMP Group or not). What we find totally inadequate is the prevalent view that underlying explanations for relationship significance are also trivial. They are not, and cannot be seen as such. This modest essay pretends to be a starting point for the indispensable (yet missing) reflection on this issue. It does not offer a definitive answer to the question put forward in the title, but nonetheless advances a tentative and workable path for obtaining such answer. Proposing solutions is an inherent responsibility of those who raise criticisms to theory (Whetten, 1989). Like many other researchers, our ultimate objective is to contribute for an even better Theory of Industrial Networks.

REFERENCES


---

25 This assertion was proferred during a discussion period following one of the presentations made in the context of the 1st IMP Doctoral Consortium at Odense (31th of August and 1st of September, 2004), attended by the first author.


Mota, J. and Castro, M. (forthcoming), "Relationship portfolios and capability development: cases from the moulds industry", *Journal of Purchasing and Supply Management*.


<table>
<thead>
<tr>
<th>Nº</th>
<th>Author(s)</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>182</td>
<td>Alvaro Aguiar and Manuel M. F. Martins</td>
<td>Testing for Asymmetries in the Preferences of the Euro-Area Monetary Policymaker</td>
<td>July 2005</td>
</tr>
<tr>
<td>181</td>
<td>Joana Costa and Aurora A. C. Teixeira</td>
<td>Universities as sources of knowledge for innovation. The case of Technology Intensive Firms in Portugal</td>
<td>July 2005</td>
</tr>
<tr>
<td>179</td>
<td>Mário Alexandre Silva and Aurora A. C. Teixeira</td>
<td>A Model of the Learning Process with Local Knowledge Externalities Illustrated with an Integrated Graphical Framework</td>
<td>June 2005</td>
</tr>
<tr>
<td>178</td>
<td>Leonor Vasconcelos Ferreira</td>
<td>Dinâmica de Rendimentos, Persistência da Pobreza e Políticas Sociais em Portugal</td>
<td>June 2005</td>
</tr>
<tr>
<td>177</td>
<td>Carlos F. Alves and F. Teixeira dos Santos</td>
<td>The Informativeness of Quarterly Financial Reporting: The Portuguese Case</td>
<td>June 2005</td>
</tr>
<tr>
<td>176</td>
<td>Leonor Vasconcelos Ferreira and Adelaide Figueiredo</td>
<td>Welfare Regimes in the UE 15 and in the Enlarged Europe: An exploratory analysis</td>
<td>June 2005</td>
</tr>
<tr>
<td>175</td>
<td>Mário Alexandre Silva and Aurora A. C. Teixeira</td>
<td>Integrated graphical framework accounting for the nature and the speed of the learning process: an application to MNEs strategies of internationalisation of production and R&amp;D investment</td>
<td>May 2005</td>
</tr>
<tr>
<td>174</td>
<td>Ana Paula Africano and Manuela Magalhães</td>
<td>FDI and Trade in Portugal: a gravity analysis</td>
<td>April 2005</td>
</tr>
<tr>
<td>173</td>
<td>Pedro Cosme Costa Vieira</td>
<td>Market equilibrium with search and computational costs</td>
<td>April 2005</td>
</tr>
<tr>
<td>172</td>
<td>Mário Rui Silva and Hermano Rodrigues</td>
<td>Public-Private Partnerships and the Promotion of Collective Entrepreneurship</td>
<td>April 2005</td>
</tr>
<tr>
<td>170</td>
<td>Óscar Afonso and Álvaro Aguiar</td>
<td>Price-Channel Effects of North-South Trade on the Direction of Technological Knowledge and Wage Inequality</td>
<td>March 2005</td>
</tr>
<tr>
<td>169</td>
<td>Pedro Cosme Costa Vieira</td>
<td>The importance in the papers' impact of the number of pages and of co-authors - an empirical estimation with data from top ranking economic journals</td>
<td>March 2005</td>
</tr>
<tr>
<td>168</td>
<td>Leonor Vasconcelos Ferreira</td>
<td>Social Protection and Chronic Poverty: Portugal and the Southern European Welfare Regime</td>
<td>March 2005</td>
</tr>
<tr>
<td>167</td>
<td>Stephen G. Donald, Natércia Fortuna and Vladas Pipiras</td>
<td>On rank estimation in symmetric matrices: the case of indefinite matrix estimators</td>
<td>February 2005</td>
</tr>
<tr>
<td>166</td>
<td>Pedro Cosme Costa Vieira</td>
<td>Multi Product Market Equilibrium with Sequential Search</td>
<td>February 2005</td>
</tr>
<tr>
<td>165</td>
<td>João Correia-da-Silva and Carlos Hervés-Beloso</td>
<td>Contracts for uncertain delivery</td>
<td>February 2005</td>
</tr>
<tr>
<td>164</td>
<td>Pedro Cosme Costa Vieira</td>
<td>Animals domestication and agriculture as outcomes of collusion</td>
<td>January 2005</td>
</tr>
<tr>
<td>163</td>
<td>Filipe J. Sousa and Luís M. de Castro</td>
<td>The strategic relevance of business relationships: a preliminary assessment</td>
<td>December 2004</td>
</tr>
<tr>
<td>162</td>
<td>Carlos Alves and Victor Mendes</td>
<td>Self-Interest on Mutual Fund Management: Evidence from the Portuguese Market</td>
<td>November 2004</td>
</tr>
</tbody>
</table>
Nº 160 Ana Teresa Tavares and Stephen Young, Sourcing Patterns of Foreign-owned Multinational Subsidiaries in Europe, October 2004

Nº 159 Cristina Barbot, Low cost carriers, secondary airports and State aid: an economic assessment of the Charleroi affair, October 2004

Nº 158 Sandra Tavares Silva, Aurora A. C. Teixeira and Mário Rui Silva, Economics of the Firm and Economic Growth. An hybrid theoretical framework of analysis, September 2004

Nº 157 Pedro Rui Mazeda Gil, Expected Profitability of Capital under Uncertainty – a Microeconomic Perspective, September 2004

Nº 156 Jorge M. S. Valente, Local and global dominance conditions for the weighted earliness scheduling problem with no idle time, September 2004

Nº 155 João Correia-da-Silva and Carlos Hervés-Beloso, Private Information: Similarity as Compatibility, September 2004

Nº 154 Rui Henrique Alves, Europe: Looking for a New Model, September 2004


Nº 152 Aurora A. C. Teixeira, Measuring aggregate human capital in Portugal. An update up to 2001, August 2004


Nº 150 Patrícia Teixeira Lopes and Lúcia Lima Rodrigues, Accounting practices for financial instruments. How far are the Portuguese companies from IAS?, July 2004

Nº 149 Pedro Cosme Costa Vieira, Top ranking economics journals impact variability and a ranking update to the year 2002, June 2004


Nº 147 Francisco Castro, Foreign Direct Investment in a Late Industrialising Country: The Portuguese IDP Revisited, May 2004

Nº 146 Óscar Afonso and Álvaro Aguiar, Comércio Externo e Crescimento da Economia Portuguesa no Século XX, May 2004

Nº 145 Álvaro Aguiar and Manuel M. F. Martins, O Crescimento da Produtividade da Indústria Portuguesa no Século XX, May 2004

Nº 144 Álvaro Aguiar and Manuel M. F. Martins, Growth Cycles in XXth Century European Industrial Productivity: Unbiased Variance Estimation in a Time-varying Parameter Model, May 2004

Nº 143 Jorge M. S. Valente and Rui A. F. S. Alves, Beam search algorithms for the early/tardy scheduling problem with release dates, April 2004

Nº 142 Jorge M. S. Valente and Rui A. F. S. Alves, Filtered and Recovering beam search algorithms for the early/tardy scheduling problem with no idle time, April 2004

Nº 141 João A. Ribeiro and Robert W. Scapens, Power, ERP systems and resistance to management accounting: a case study, April 2004

Nº 140 Rosa Forte, The relationship between foreign direct investment and international trade. Substitution or complementarity? A survey, March 2004

Editor: Prof. Aurora Teixeira (ateixeira@fep.up.pt)

Download available at:
http://www.fep.up.pt/investigacao/workingpapers/workingpapers.htm
also in http://ideas.repec.org/PaperSeries.html