Transaction costs versus resource value?

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Abstract *Two major advances in the theory of the firm and (micro)economics more generally are arguably transaction costs economics (TCE) and the theory of firm resources. TCE has originally been applied to the theory of the firm, but found applications in virtually all fields of economic inquiry. The theory of firm resources currently spans much of the industrial organisation (IO) and strategic management literature. In some fields, e.g. diversification, it has already acquired dominant status. Despite significant progress in TCE there still seem to remain significant unresolved issues. Indeed we claim that transaction cost economics fail to supply convincing answers to the issues of the nature of the firm (why do firms exist?), and their essence (running a business). It offers a partial explanation of the "nature" and little on the "essence". The resource value view complements the nature side and goes far beyond on the essence issue. It provides a fruitful starting point for an integrative framework. This, we suggest, should be based on the resource value perspective story and craft (dynamic) transaction costs in the ensuing evolutionary tale.*

I. Introduction

Two major advances in the theory of the firm and (micro)economics more generally are arguably transaction costs economics (TCE) and the theory of firm resources. TCE has originally been applied to the theory of the firm[1], but found applications in virtually all fields of economic inquiry, notably industrial organisation and the economics of (under)development. In both fields, Nobel prizes resulted (Ronald Coase and Douglass North, respectively). The theory of firm resources currently spans much of the industrial organisation (IO) and strategic management literature. In some fields, e.g. diversification, it has already acquired dominant status. Its potential for applications outside IO and strategic management has not yet been the subject of much attention, but there could be substantial scope. Despite significant progress in TCE there still seem to remain significant unresolved issues. The objectives of this paper are: first, directly to expose some remaining unresolved issues in TCE; second, to consider the extent to which the firm's resources theory can assist in explaining such issues and/or provide new answers. The paper also considers more generally differences, similarities and the scope for integrating the two approaches.

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Following this introduction, section II critically assesses the TCE perspective, and points to remaining unresolved issues. Section III presents Penrose's theory of firm resources as well as some developments in the resource-based tradition. Section IV considers the extent to which major unresolved issues of TCE can be explained in terms of the Penrosean perspective. It also considers more generally, the issue of possible integration between the two theories. Section V has conclusions.

II. The transaction costs perspective

In Coase (1937) the firm is explained in terms of "natural" market failures[2], due to "marketing costs" (now known as transaction costs), the costs of carrying out market exchanges. These "marketing costs" consist, according to Coase, of "discovering the relevant prices" (p. 390) of the factors of production and of "negotiating and concluding a separate contract for each exchange transaction" (pp. 390-91).

In the case of services, notably by labour, a contract which allows for the direction of the resources by an entrepreneur is argued to be desirable because it reduces uncertainty and "marketing costs". A firm (thus) emerges when the direction of resources, within the limits of a contract, becomes dependent on the buyer (p. 392)[3].

For Coase, the size of firms is also induced (and limited) by the availability-existence of transactions which can (or cannot) be carried out with less cost within the firm. As the firm grows larger the cost of organising an extra transaction within the firm may rise, thus a point may be reached where it might not be less costly to organise additional transactions within the firm, so these are left to be organised in the market. The entrepreneur may have a maximum of transactions and complexity that he/she can deal with without failing to place the factors of production to their most valuable uses (p. 394). Furthermore, the cost of organising additional transactions may rise as the transactions become more dissimilar to those already organised, as they disperse physically in space and as the probability of changes in the relevant prices of the factors of production increases (p. 397)[4]. These limitations to the size of the firm help explain why the whole economy is not dominated by a single, large firm[5].

Vertical and horizontal integration will take place when this is judged by the entrepreneur(s)-coordinator(s) to be more efficient. Vertical integration will result when it is less costly to organise within the firm transactions with individuals or with other firms that previously were organised through the market. Horizontal integration by firms is realised when the common organisation of production is mutually beneficial in terms of reducing the "marketing costs" that firms face[6]. An explanation for multi-product production is also provided:

> . . . there may be a point where it is less costly to organise the exchange transactions of a new product than to organise further transactions of the old product (Coase, 1937, p. 402).

To summarise, the firm, according to Coase, is characterised by the supersession of the price mechanism and by the direction of the coordinator-entrepreneur over factors of production, notably labour. The latter is said to enter a contractual agreement by voluntarily exchanging uncertainty for their output or earnings with obeyance to orders (within certain limits). In this view, firms (hierarchies) emerge and grow to solve market failures. The boundaries and size of firms depend on the relative costs of internal governance versus market allocation.

For Williamson (1975), market failure due to high costs of transacting is the outcome of the co-existence of bounded rationality, opportunism and asset specificity[7].

Williamson (1985, pp. 30-32) argues that these three conditions are frequently present simultaneously in today's market economies, resulting in market failure. The co-existence of these three conditions is calling for a governance structure, such as the firm. A firm gives rise to fewer transactions, reduced bounded rationality, opportunism and haggling (which comes as a result of asset specificity) and therefore results in savings in transaction costs. When one condition only is absent, then market contracting can still be efficacious[8].

Vertical integration may, under the above assumptions, be explained in terms of the degree in which three characteristics of a given transaction are present: frequency, uncertainty and asset specificity (see Medema, 1995, p. 30). Assuming, among others, a sufficient degree of uncertainty and focusing on frequency and asset specificity, Williamson (1985, pp. 73, 78) finds vertical integration the most efficient way to deal with recurrent transactions involving highly specialised (idiosyncratic) assets[9].

According to Williamson, (1981; 1985) transaction cost economising may also explain changes in the internal organisation of the firm. It is argued that the modern multi-divisional (M-form) structure of the firm resulted due to efficiency problems faced by large unitary (U-form) firms. The replacement of the U-form by the M-form structure is argued to have been an (efficient) arrangement, emerging to solve (external) capital market failures as well as problems arising from individuals given to opportunism and bounded rationality[10]. For Williamson (1985, pp. 283-94), the M-form organisation is functioning as an internal capital market, allocating funds to their high-yield uses, under the planning and the coordination of the general office. This organisational structure, combining both divisionalization and the capability for internal control, has arguably contributed to the emergence, in the post-war years, of two new types of firm, the one managing diversified assets in different lines of commerce and the other managing foreign direct investment and technology transfer: the conglomerate and the multinational firm (Williamson, 1981).

To summarise, the internalisation of (imperfect) markets by firms (hierarchies) is said to increase overall efficiency and, moreover, to be a contractual process between those involved in transactions. Removing market inefficiency is both the reason for and effect of firms. Given costs of hierarchy (organisation, management costs) the boundary of the firm is defined as being where an extra transaction can take place equally efficiently by sticking to the market. Accordingly, the "observed" market-hierarchy mix is enhancing overall efficiency. Market internalisation due to market transaction costs can also explain the evolution and strategies of firms, horizontal and vertical integration, the M-form organisation, the conglomerate and the transnational corporation (TNC). In addition, hybrid forms of organisation, such as strategic alliances, networks, equity joint ventures, etc., can also be attributed to the quest for efficiency, a progression from markets to hybrids to hierarchies, Williamson (1993). In short, the quest for efficiency explains why firms, hybrids and markets. Efficiency is also the outcome of the process.

Much of the above has been the subject of debate and critique, see for example Pitelis (1991; 1993) and, more recently, Demsetz (1995), Ghoshal and Moran (1996), Williamson (1996), Conner and Prahalad (1996), Foss (1996), Marris (1998), Holmstöm and Roberts (1998). Despite significant progress, debate and evidence, however, there appear to still exist some significant unresolved issues with the TC perspective.

Point 1 – firms are not markets and result from natural market failures

For Coase, markets differ from firms in that the former rely on voluntary transactions between individuals, while the latter on authority of the entrepreneur over the labourer. However, the firm's essence need not be that it is a multiple person hierarchy (the employment contract), which the Coasean firm is[11]. Moreover, if firms differ from markets, the nature of this difference may (not) be Coase's focus on the existence of hierarchy (authority, fiat) of one agent over another. An example is the case of a single producer ("unitary firm" for McNulty, 1984), or the case of a cooperative production unit (firm?). Authority and fiat may exist in a family which operates as a production unit (firm?).

If we accept that the firm is a multi-person unit, it still does not follow that it involves authority of a "principal" over an "agent", see Alchian and Demsetz (1972)[12]. In their view, the firm is seen as a nexus of contracts, the aim of the principal being to devise productivity-enhancing contracts[13].

Accepting that the capitalist firm is a multi-person hierarchy, the question becomes, why an employment contract to start with[14]. If, for example, agents work for principals because they simply cannot do otherwise, then the relationship is asymmetrical to start with, and even market-type relationships become hierarchical (Pitelis, 1991).

Absent market failure, firms (organisations) may exist if they perform different functions (the same function, but "better") and/or if they complement the market. Seen from a dynamic perspective, firms can be said to create (and/ or close) markets as host of theorists of the (in particular transnational) corporation have argued, notably Hymer (1976)[15].

A further reason why the existence of firms need not presuppose transactional market failures is simply because firms may be able to increase productive efficiency by virtue of authority being able to achieve a "better" (from the point of view of the principal) use of specialisation and the division of labour, Pitelis (1993), an idea going back to Karl Marx and, more recently, to Marglin (1974)[16].

In sum, (the existence of) firms need not presuppose transactional market failure. It all depends on the nature of the firms (and markets) which is the issue under consideration.

Point 2 – the employment contract is (the result of) a contractual process
For Coase, "agents" accept to work under the authority of "principals" voluntarily, because they expect to gain out of the increased (transaction costs-related) efficiency gains resulting from emergent hierarchies. This need not be true. The alternative is that "agents" are obliged to work for the principals (Marglin, 1974), for example by the principals and/or the state (Hymer, 1979; Galbraith, 1987) and/or because they simply have no better alternative, i.e. the alternative is to work for another principal or not work at all (be unemployed). In the former case the process is predatory, while in the latter it is contractual in a narrow sense, in that it fails to account for the constraints in agents' choices.

It is interesting that the predatory theory of hierarchies receives support by the 1993 Nobel Prize winner Douglass North (1981; 1991). This is after he had first adopted an efficiency perspective. He rejected it in favour of the predatory view (that principals' objectives are the driving force behind the emergence of institutions and institutional change) after what is arguably the most detailed yet analysis of institutions and institutional change in history (Pitelis, 1998).

Point 3 – firms exist and evolve as a result of transaction costs related efficiency
This need not be true. In Marglin's perspective for example, firms (the factory system) may ensue even if they result in inefficiency, as long as they enhance the power and control of capitalists over workers, so as to allow the former to gain at the expense of the latter.

Whether firms emerge for efficiency or power over labour cannot be answered on a priori grounds. This task requires detailed empirical work. However, despite appeals to evidence, there is no corroborating support to the TCE perspective on this particular issue, that firms could be the result of power over labour[17]. Williamson's approach on this issue usually consists of him reinterpreting apparent power-over-labour supporting arguments in terms of efficiency. He comes up with strange conclusions. One example is his 1985 reinterpretation of Stone's (1974) paper. There, having observed the possibility that Stone's evidence on the transformation of the steel industry in the USA is in line with enhanced efficiency, he observes rather surprisingly that:

> Given . . . the large efficiency gains that Stone reports, the efficiency hypothesis or *a combined efficiency-power hypothesis cannot be rejected*! (p. 236, emphasis and exclamation mark added).

All these point to the possibility that efficiency and power need not be seen as polar opposites. They could co-exist, one would lead to the other, and/or they could even be different sides of the same coin (Pitelis, 1991)[18].

Williamson's (1981) explanation of vertical integration, the M-form organisation, conglomeration and transnational corporations is in terms of them pursuing such strategies in order to reduce market transaction costs. Williamson (1998) claims that existing evidence supports TCE. There is indeed substantial evidence to support the claim that TCE-type theorising has merit, see, for example Caves (1996), Shelanski and Klein (1995). There are also problems, notably that estimated equations are mostly of the reduced form type and do not adequately test the hypotheses in hand (Masten, 1996; Shelanski and Klein, 1995).

However, there is simply no evidence in favour of what are arguably the main assertions of TCE: first, that markets differ from firms and that their existence presupposes market failure, particularly in the market for labour (the nature of the firm). Moreover, there is no evidence that the employment contract is a contractual process[19]. The possibility of testing these has not even been addressed. The evidence, furthermore, on efficiency versus power over labour being the reason for and/or result of the emergence and evolution of firms is at best indecisive. In the view of these authors, in fact, the evidence clearly points to the combined efficiency-power hypothesis to which Williamson has hinted.

To conclude this section, transaction cost economics based explanations of the nature of the firm are based on shaky theoretical foundations and have no evidence in support of claims concerning these foundations. Moreover, there is no evidence concerning the contractual, or otherwise, nature of the employment contract[20].

III. The resource value perspective

There is long and most influential lineage in this tradition[21], which includes, among others, Adam Smith, Alfred Marshall, Frank Knight, Philip Selznick, Alfred Chandler, Kenneth Andrews, George Richardson, Harold Demsetz, Richard Nelson and Sidney Winter, see Demsetz (1995), Foss (1997), Loasby (1997). To these we would add Stephen Hymer, whose work on the transnational corporations bears close affinity to Chandler's work, see notably Hymer (1979). Arguably, however, the mother figure and leading and lasting influence has been Edith Penrose's (1959) classic, *The Theory of the Growth of the Firm*. In what follows, we first present an account of her views, and then expand on some of the issues by looking at more recent developments. As contributions from the perspective have now expanded by leaps and bounds, we do not try to be comprehensive (for which see, e.g. Conner (1991), Peteraf (1993), Mahoney and Pandian (1992), Seth and Thomas (1994), Foss (1997), among others). Our aim is rather to consider whether and to what extent the Penrosean perspective helps in providing solutions to the problems raised in the previous section. We also look at some more general concerns, to include the scope for an integration of the two perspectives.

For Penrose (1959/1995), the firm in neoclassical economics is a model convenient for analysing the way in which prices and the allocation of resources among different uses are determined, but not suitable to analyse the expansion of "innovating, multi-product, 'flesh and blood' organisations" (p. 13) of the real business world. She proposes, for that matter, a theory which explains different rates of growth of firms. She defines the (industrial)[22] firm, the object of her inquiry, as a collection of tangible and intangible productive resources bound together in an administrative framework. The boundaries of the firm are defined by the firm's ability to maintain sufficient administrative coordination and authoritative communication within the firm (1995, pp. xi, 18-19).

In contrast to the neoclassical firm, which is seen as a price and output decision maker for a given product and which grows towards a known in advance "optimum" scale, Penrose's firm is viewed as a growing organisation of the real world. The product and the market are not given through time; demand may be found elsewhere than in the "traditional" line of products of the firm, or created by the firm. Management is not a fixed factor, either. The firm grows not to reach an optimum output scale (given technology) but rather to exploit perceived opportunities. Profit in the neoclassical theory is a behavioural assumption underlying the movement of the firm towards an optimum size. In Penrose, profits remain significant as a motivating power, as a condition of successful growth of the firm, which in turn results in long-term profits. In this sense, profit would be desired for the "sake of the firm itself and in order to make more profit through expansion" (p. 29). It is suggested that it is indirectly, through the growth of firms, that individuals gain satisfaction and increase their personal utility, not directly through the realisation of profit itself. According to Penrose "growth and profits become equivalent as the criteria for the selection of investment programmes" (p. 30), if the firm seeks profit to re-invest it in the firm and not to pay out the capital owners more than needed to maintain a supporting capital structure for the firm.

Assuming that the individual firm is neither subject to the same restraints nor to the same degree as the economy as a whole, Penrose describes a set of qualitative features that determine a firm's growth potential (as well as its limits to growth). She starts by introducing the notion of the (subjective) "productive opportunity" of the firm. This includes all the productive possibilities that its entrepreneurs see and can and are willing to take advantage of. The productive opportunity of a firm is considered to be the entrepreneurs' perception of both the environment and the internal abilities of the firm to exploit it profitably. The productive opportunity of the firm is not fixed: it may change with a change in external conditions, and/or with a change in a firm's knowledge and, consequently, with a change in the internal supply of productive services[23]. A firm's growth rate is therefore determined by both its resources and (thus) its perception of profitable opportunities in the environment. Individual firms grow with different rates since they do not possess the same resources and they are not subject to the same constraints by their environment. Therefore, firms are subject to different opportunities for profitable growth and the means to exploit them.

The entrepreneurs' belief that opportunities exist or can be created for the firm and, consequently, their "decision" to commit effort and resources to search for them, is a *sine-qua-non* condition for the inducement of the process of growth. Given this "psychological predisposition" of the entrepreneurs, of significance for the inducement of the process of growth is the existence of unused productive services within the firm. During the ordinary activity of the firm, some resources are normally not fully utilised. Furthermore, as the firm as a working group gains experience[24], new productive services may be created. Therefore, as resources are freed and new services become available, a firm, which seeks profits and growth, has an endogenous incentive to expand, that is, to use the services of its resources more profitably and/or make fuller use of its existing resources. As a result of indivisibilities, expansion may lead to further not fully used resources, sustaining the internal stimuli to growth.

The rate of growth of the firm may decline for the very same reasons that it may increase. First, the capacities of the existing managerial[25] personnel (and the existing size of the firm) both limit the amount of activity that can be physically planned and, consequently, the amount of new personnel and other productive resources that can be profitably absorbed in the firm. Second, the environment may no longer allow for an increasing rate of growth and profitable expansion: competition may become keener, entry into new, even "neighbouring" areas (where one of the following is not new: technology, market, product, p. 110), may be costly or legally impossible. Although a firm may infinitely generate new, unused productive services as well as face opportunities for expansion, its internal coordination structure and capabilities may not allow it to profitably exploit them. It follows that the accumulation of knowledge through experience and the existing coordination in the firm determines the growth trajectory of the firm and the latter determines the path, as a combination of opportunities and internal capabilities for their exploitation, for further growth.

The new knowledge and services available in the firm might also be useful for the production of products other than the existing ones (Penrose, 1959, p. 114). These productive services and knowledge available in a firm as well as the changes in the external supply and market conditions as perceived by the firm, may point to opportunities to produce new products and/or enter new markets, using the existing or a new technological base. It is thus likely that when a firm produces for a market of which the rate of growth is not sufficient to accommodate its growth potential (its idle resources and accumulated knowledge), then it may exploit opportunities for expansion through diversification into new products or markets. As resources consist of a bundle of potential services, therefore, their use for the production of sufficiently different products may consist of one of a set of profitable opportunities for growth.

It is also possible that expansion through merger and/or acquisition may be a profitable opportunity for a firm or a less costly way to obtain the productive services (notably managerial) and knowledge necessary for diversification in a new field. That means that a firm may use its "excess" productive resources and services to grow, diversifying or not, through a merger or an acquisition of an existing firm. This type of external expansion may bear the same limitations as internal expansion: the existing resources of the firm determine the extent to which new resources might be absorbed and integrated organically into the firm[26].

To summarise, Penrose attempts to explain the different rates of growth of firms, based in their continuously generating "excess" productive services which can be profitably deployed to "neighbouring" activities and markets. The centrepiece of her analysis is the accumulation of knowledge, in firms and individuals, as well as that the firm is more than a collection of individuals' capabilities and skills. Therefore, a firm's knowledge, capabilities and skills, acquired and accumulated through the firm's daily productive activities, determine both the "perceived" profitable opportunities as well as the ability to exploit and enhance them. The firm is viewed as a bundle of resources, which consist of a pool of potential services. These productive services are consumed by creative activities (entrepreneurial services), and planning and operating activities as well as for the overcoming of uncertainty[27] (managerial services), see, however, [25].

Penrose's work has arguably been the basis of what is commonly called competence- or resource-based perspective, see Foss (1997)[28]. According to this perspective, (differential) firm performance is said to be determined by the existence of firm-specific assets that are difficult to imitate (these are the "resources" of the firm, see Teece (1990)) and of isolating mechanisms which enable firms to have persistent above-normal earnings (see Rumelt, 1984; Teece, 1984; Wernerfelt, 1984)[29]. Above-normal returns are generally taken as the firm's ultimate objective and may persist infinitely, as long as the firm, according to Rumelt (1984, pp. 557-8) as a bundle of unique resources and relationships, adjusts and renews them so as their value is not being eroded by time, competition and change.

As in Penrose, the firm, through its everyday working, produces products and new knowledge, (thus) new resources and capabilities, as well as the ability to implement them and thus respond to the ever changing conditions of the environment. Firms are in search of unique, costly to copy inputs, whose combination in the existing unique resource pool creates value. Rumelt (1974, p. 561, italics added) sees the firm as a "bundle of *linked* and idiosyncratic resources and resource conversion activities". The uniqueness of the inputs refers on the ability to link specific and scarce assets so that productive value may be generated (notwithstanding the costs of resources as Barney (1986) argued). It is the degree of linkedness between assets specific to each other (as well as the extent to which as many as possible assets can be linked) that determines the creation, within the firm, of true productive value that would not exist if the assets were not combined, see Conner (1991, p. 135).

In Penrose's view the creation of new "productive services" and (thus) the (realisation of the) growth potential of the firm rely heavily on people having worked together in the existing firm. The firm also encapsulates a unique pool of routines and ways of working, inherited from the past. Similarly, in the competence-based perspective, it is maintained that firms are following a certain path of competence development, defined by the competences already created and the capabilities that a firm as an organisation inherits from its past.

To conclude, the resource value perspective suggests that the main reasons for firm growth and success may be found inside the firm. "Empirical work demonstrated that profit rates were much more heavily dispersed within industries than across industries. The sources of profitability were clearly firm-specific rather than industry-specific" (Foss, 1993, p. 132). Superior resources and internal capabilities of firms constitute the basis for competitive advantage, if matched appropriately with environmental opportunities (Peteraf, 1993).

As in the case of TCE, the resource value approach has been employed to address issues of firm strategies, horizontal or vertical integration, and notably, diversification. In the last mentioned, the resource value view is arguably dominant (see Teece, 1980; Foss, 1997). Available evidence, summarised in Mahoney and Pandian (1992) and Argyres (1996) moreover, seems to provide more general support for the resource value view[30]. This raises a number of questions, one of which is whether the two perspectives can be seen as rival or complementary. Both views can be found in the literature, with Conner (1991), Peteraf (1993) and Mahoney and Pandian (1992) pointing to differences, similarities and possible areas of complementarity and potential integration. However, our main objective here, is the extent to which the resource value view provides new answers or solutions to what we identified to be the unresolved issues in TCE[31].

IV. Resource value versus transaction costs?

On the issue of markets and firms, and in line with the TCE view, Penrose (1959) has drawn a clear distinction between the two. She suggests that:

> The growth and size of firms is of significance for the economy as a whole largely because the organisation of production within *the administrative framework of the individual firm* is substantially different from the organisation of production brought about through the operations of the *open market* (p. 197, emphasis added).

She added a footnote to this to assert that:

> The distinction is valid in spite of the problems of identifying the "boundaries" of a firm and in spite of the existence of a "grey" area which obscures on the periphery any clear-cut line between "administrative" and "market" decisions (p. 197).

In her 1995 foreword to the third edition, moreover, she points out that the boundaries of the firm "... are determined by the 'area of administrative coordination' and 'authoritative communication'" (p. xi).

It follows from the above that "hierarchy" (and a multi-person one for that) is present in Penrose's firm as in Coase's. In contrast to the Coase-Williamson view, which regards the two as substitutes, Penrose explicitly suggests that they are complementary:

> Markets and firms are interacting institutions, each being necessary to the existence of the other (p. 197).

This is in line with, supports the, and is supported by our discussion in the previous section, a view more recently supported by Demsetz (1995)[32].

The resource value view focuses on the production and resource allocation advantages of firms and not any transaction costs related market failures. These advantages are basically due to the cohesive nature of firms which in essence allows for enhanced generation, preservation and development of knowledge, see Pitelis and Wahl (1998). This focus on value, as opposed to (transaction) costs, need not imply that the latter have no potential role or relevance. On the contrary, the two can be complementary. This is clearly suggested by Penrose's own discussion of vertical integration, in places reminiscent of TC-type theorising (see Pitelis and Wahl, 1998), and Teece (1980). Given the above, the resource value view can be seen to address a problem of TCE, in that it does not require market failures (in the labour markets and due to transaction costs) in order to explain why firms exist[33].

Unlike Coase, Penrose has not addressed the issue why some people decide to work (or not) for others, that is whether the employment contract is the result of contract or predation. Her theory provides an additional rationale for expected efficiency gains; in this case, from resource value. This complements and supports the Coasean perspective, but does not address or settle the issue. Our observations on this still hold, in particular the idea that predation is a more likely explanatory factor.

Similar considerations apply for our point that firms are the result of efficiency, which, however, is here due to productivity-enhancing factors, not (just) transaction costs reductions. In contrast to TCE, however, Penrose is explicitly in favour of the combined efficiency-power view. She discusses efficiency and market power-based reasons for vertical integration, mergers and acquisitions and concentration, discusses first mover advantages of large firms ("theory of the headstart", p. 257) and "artificial" barriers to entry (p. 230), which, moreover, impair economic advance (p. 234):

> . . . the large firms expect reward for their efforts, but this expectation is held precisely because competition can be restrained (p. 264).

This is in line with our discussion in the previous section. It simultaneously complements and critiques the TCE perspective[34].

On the issue of objectives, Penrose is also explicit and most illuminating:

- "firms are in search of profits" (p. 27);
- "in general the financial and investment decisions of firms are controlled by a desire to increase total long-run profits" (p. 29);
- "profits would be desired for the sake of the firm itself and in order to make more profit through expansion" (p. 29).

Penrose goes on to suggest the equivalence of the profit and growth objectives in the long run and to discuss other motives, including the "mere love of the game" (p. 30).

Once again, the above are in line with the view that existence and objectives cannot be usefully separated; in contrast to the TCE approach.

Lastly, on firm's evolution and the motives behind firm's evolution and strategies, Penrose clearly provides a far more complex picture to that of TCE. Her account of firm evolution is dynamic and endogenous and involves both efficiency and (market) power-related factors, as already seen, see notably her case study of the Hercules Powder Company (Penrose, 1960).

To summarise, in both perspectives, firms are superior to a collection of market transactions for different reasons: superior efficiency in the transaction costs perspective comes from the avoidance, or reduction, of costs incurred in market transactions due to opportunism, bounded rationality and asset specificity, while in the resource value perspective productivity/efficiency gains come from value creation by the firm (which might not exist were activities organised by the market).

The issue of points in common and a possible integration between the two perspectives has been already addressed in the literature. First, as argued by Teece *et al.* (1992,p. 33), new capabilities may be viewed as transaction-specific assets. Therefore, the search for new capabilities may be a way to avoid (transaction) costs associated with firm-specific assets and small numbers. To "acquire/develop" a new capability (by investing internally from the very beginning) may be a means to economise on the costs of this transaction as well as avoid the costs that would be incurred later, in an effort to imitate or catch up with other firms' capabilities. Moreover, Conner (1991, p. 143) argues that the existence of opportunistic potential is not necessary, but neither is it denied in the resource value perspective. Therefore some integration decisions in a firm may be driven from the desire to avoid (transaction costs associated with) opportunism, and others from the desire to create and redeploy firm-specific assets, or Penrose's "excess productive services". It may also be that integration decisions aim at both the (positive) value creation within the firm and the avoidance of the (negative) effect of opportunism.

Third, there is the problem of which transactions to internalise and which to leave to be organised by the market. As Winter (1993, p. 192) suggests, the organisation of transactions across the boundaries of the firm may be part of the problems that organisational "routines" may solve. Drawing on this, partly due to the possibility of an asset's linkedness to multiple existing assets, there is no reason to believe that the relative costs of organising transactions in the firm compared to those of the market are known in advance. Therefore the decision to make or buy may be the outcome of experience (and foresight or luck) on a series of contracting problems faced earlier. Furthermore, there are so many transactions that would (or would not) be carried with less cost within the firm. We suggest that the firm's experience and existing resources and capabilities determine the choice over which transactions might be profitable to internalise, the combination of the appropriate contracting processes for the carrying out of the firm's existing and new activities and the content of the contract for each transaction.

Attempting a historico-evolutionary mode of explanation based on transaction costs, Winter (1993, p.191) suggests that "transaction costs shape economic organisation over time because organisational innovations occur that permit previously experienced transactional difficulties to be circumvented". Penrose's entrepreneurial (creative) judgment may be situated in the root of the problem of transaction costs minimising. It could be suggested that whether a firm internalises a transaction or not may depend on the ability for judgment about the potential effect on the existing pool of resources of the firm. Furthermore, since there may be infinite transactions characterised by (opportunism, bounded rationality and) asset specificity, does not this mean that the firm has to be able to assess which of the available transactions (through an appropriate contracting process) would create the highest value for the firm? This assessment does not only depend on the capabilities of the entrepreneur-coordinator; it also depends on the existing collective knowledge, resources and capabilities of the firm. In brief, if transaction costs exist and form a part of the total costs of production that a firm faces, we suggest that the competences of a firm are critical to the degree transaction costs will be overcome and value will be created (instead) of them[35].

While similarities are evidently there, there remain substantial differences. The Penrosean theory is dynamic, systemic, and integrative. It is based on, and provides a far richer understanding of reality than TCE. Our discussion in the previous section and the evidence summarised by Mahoney and Pandian (1992) and Argyres (1996) attest to that. In all problem areas of TCE discussed in the previous section, the resource value view has a more convincing story to tell. Arguably Coase and TCE have never really entered the "black box". It is Penrose who did this. Coase limited himself to the issue of the "nature" (the existence) of firms. On this issue, too, Penrose had a lot to offer. It would appear to us that were a new story to be told, it should encompass both resource value and transaction costs ideas, whereby (dynamic) transaction costs were crafted into the Penrosean story.

V. Concluding remarks

Transaction cost economics fail to supply convincing answers to the issues of the nature of the firm (why do firms exist?), and their essence (running a business). It offers a partial explanation of the "nature" and little on the "essence". The resource value view complements the nature side and goes far beyond on the essence issue. It provides a fruitful starting point for an integrative framework. This, we believe, should be based on the Penrosean story and craft (dynamic) transaction costs in the ensuing evolutionary tale[36].

Still unresolved, remains the question whether the capitalist firm has been the issue of contract or predation. This is a limitation, because it does not address the issue of conflict potential within firms (and in the broader economy). As shown by authors such as Hymer and Marglin see also Lazonick (1991), such conflict may be present, and is a potentially useful explanation of firm's nature, essence and evolution.

Notes

1. For a comparison of Coase (1937) and Williamson (1975; 1985), on the one hand, and the "property rights" school, of in particular Grossman and Hart (1986) and Hart and Moore (1990), on the other, see Holmström and Roberts (1998). While a virtue of the last-mentioned approach is said to be that it simultaneously addresses the costs and benefits of ownership, and it does not rely on impersonal markets, its conclusions tend to be "sensitive to the particular bargaining solution being used" (p. 79), and it is less amenable to empirical testing than the williamson version of transaction cost theory. Existing evidene testing the latter fails to cast light on the property rights school's models (Holmström and Roberts, 1998). As one of our aims is to challenge the empirical evidence for transaction costs economics, here we will focus on the Coase-Williamson story.
2. For the distinction between "natural" and structural market failures, see Dunning and Rugman (1985). In brief, "natural" refers to inherent (such as transaction costs induced) failures, while structural to oligopolistic market structures-related failures.
3. Coase did not give an explanation as to whom, and under what criteria, the direction of resources is allowed. He simply observed that: "... the operation of the market costs something and by forming an organisation and allowing some authority (an "entrepreneur") to direct the resources, certain marketing costs are saved" (p. 392).
4. See, however, Marris (1998) for a critique of this assumption. In particular, Marris observes that: "... no one has produced any strong general theory to make the marginal agency-cost curve inevitably upward sloping. As one takes on increasing numbers of people lacking ownership rights, why should the average non-incentive effect necessarily increase more than proportionately to output? Why not a simple law of constant unit effect?" (p. xiv).
5. "A firm will tend to expand until the costs of organising an extra transaction within the firm become equal to the costs of carrying out the same transaction by means of an exchange on the open market or the costs of organising in another firm" (Coase, 1937, p. 395). Note that Coase treats transactions with individuals and firms equally: a firm may get larger by organising within it market transactions either with individuals or with other firms.
6. Similar to the question of who will become the entrepreneur who will direct the resources, an acquisition of a firm by another (and which will be the acquiring firm) is difficult to be explained along these lines.
7. Bounded rationality is defined after Herbert Simon as behaviour that is "intendedly rational, but only limitedly so" (Simon, 1961, p. xxiv; Williamson, 1990, p. 9). Given bounded rationality, which is the outcome of cognitive limits of individuals and incomplete information, limited knowledge, foresight, skill and time, it is not possible to devise fully specified contracts. Opportunism, linked to the degree of uncertainty surrounding a transaction, is defined as "self-interest seeking with guile" (Williamson, 1985, p. 30) which includes attempts to distort or hide information and "calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse" (Williamson, 1985, p. 47). With opportunism the contact as a promise is naïve (Williamson, 1993, p. 93) and the cost of writing and safeguarding a contract may be high, but, given unbounded rationality, it is of no account, since appropriate adaptations to subsequent publicly observed contingencies can be fully described (1985, pp. 30-66). Asset specificity refers to the inappropriateness of some (especially capital) assets to be used in uses (or by users) other than those initially acquired for. Williamson states that at least four different types of asset specificity are usefully distinguished: site specificity, physical asset specificity, human asset specificity and dedicated assets (1985, p. 55). Asset specificity results in sunk costs.
8. In the absence of bounded rationality, opportunism or asset specificity, Williamson argues that three contracting processes other than governance i.e. planning, promise or competition accordingly, can be used as devices to carry out market exchanges efficiently. When asset specificity only is absent, competition may take the form of contestability (see Baumol,1982), but, Williamson's view is that the existence of durable,

firm-specific assets is widespread, and consequently hit-and-run entry, as proposed by the contestable markets theory, is often infeasible. In this sense, Williamson suggests that transaction cost economics and contestability theory inquire into the same phenomenon – asset specificity – although through opposite ends.

9. For a critical comparison between this "hold-up problem" approach and the property rights theory, see Holmström and Roberts (1998).
10. For a critique of the M-form's alleged ability to reduce opportunism, see Fransman (1994).
11. Coase (1993) recognizes this and refers to the need to examine the essence of firms,which is "running a business". This is taken to include direction of others but also of the entrepreneur's own faculties and of non-human resources.
12. Williamson (1993) distinguishes between firms and markets in terms of the idea that disputes in the former case are solved inside the firms (an inside court of appeal), which is not the case in the market. This is apparently true, but fails to address the possibility of such legal aspects being endogenous to the system.
13. There are interesting insights in Alchian and Demsetz, which, however, are beyond the scope of this paper. See Demsetz (1995) for more on this and also Seth and Thomas (1994), and Hodgson (1998).
14. Our definition of the capitalist firm here is a bundle of resources involving a multi-person hierarchy with an employment contract in which a principal purchases labour power and becomes a residual claimant of any profits realised by selling produced commodities in the market. A cooperative firm may involve authority but no purchase of labour power of "agents" by "principals".
15. From the host of prominent authors dealing with this question, few share the Coasean perspective. For example, Demsetz (1988) views the *differentia specifica* of firms to be in them involving specialisation, continuity of association and direction. This, incidentally, need not imply authority over others, as it could only be limited to the direction of one's own faculties and/or non-human resources, see also Coase (1993). Simon (1991) stresses the coordination and motivational aspect of organisations. Others still see the firm as a bundle of competences such as tacit knowledge, skills, etc., which are part and parcel of organisations, see Penrose (1959).
16. For a more recent restatement of such views, see Demsetz (1995).
17. Note here that whatever evidence seems to favour TCs over power-related reasons (for a survey see Shelanski and Klein, 1995), refers to market power, not power over labour (for which, see Stone, 1974).
18. It is interesting that Williamson does not reject the concept of firms' objectives being to maximise profits. If so, as noted above, it is simply unclear why firms should use all methods available to do so, namely reduce transaction costs and increase their power over markets, labour, etc. Porter (1980), for example,directly advises firms to pursue such strategies in order to increase market power (make industries "attractive") and seems capable of finding customers to pay him the advice. Not to do so will defy self-interested behaviour (let alone opportunistic one), the very basis of Williamson-type analysis. Moreover, firms may pursue non-transaction costs reducing means of increasing profits, even if their original success was due to efficiency (transactional or more general in the Demsetz (1973) and/or Schumpeterian (1942) sense). This is confirmed by hosts of everyday experiences, notable being the case of Microsoft.
19. The latter critique applies to the property rights school too. This is not the case for the former problem, where no market failure is being presupposed, see Holmström and Roberts (1998).
20. Despite the above, we believe that TCE has been a most important development in economics and management. The main reason is because it has relaxed the prevalent assumption in economics before that one can analyse economies and economic problems

by assuming zero exchange costs. Once such costs are allowed for, most interesting implications follow, notably why exchange can often fail to take place and, relatedly, what explains development or non-development of organisations, institutions and economies. In brief, we submit that the main scope of TCE is in explaining the conditions which nurture an institutional framework conducive to efficient producion and exchange, see North (1981; 1991).

21. We use the term resource value, instead of the more widely known resouce-based, competence-based, capabilities, dynamic capabilites, to emphasize that in the Penrosean tradition value is created in the main from internal resources, not from saving in transaction costs.
22. As opposed to the "holding" firm, which is viewed more as a concentration of financial control than a body with sufficient administrative coordination between its parts for the organisation of production.
23. Penrose makes a distinction between productive resources and productive services. Resources themselves are not used in the production process; it is the services that the resources can render that are used as inputs in the production process. The services yielded by resources depend on the way these resources are used. In other words, "resources consist of a bundle of potential services" (p. 25) and it is in this distinction that the uniqueness of each individual firm lies.
24. Experience may change both acquired knowledge and the ability to use it (Penrose, 1959, p. 53).
25. Entrepreneurial services are different from managerial services. The former relate to the "creative" aspect (introduction of new ideas for products, location, technology, etc.) of the operations of the firm, while the latter relates to the execution of the entrepreneurial ideas and proposals.
26. The establishment of a working relationship between inherited and acqured resources may be easier if the firm embarks into activities complementary and supplementary to the existing ones.
27. The effect of uncertainty to the firm is that some managerial services ought to be used to gather and analyse information, but it may limit expansion only to the extent that there are limited managerial resources available.
28. For extensive surveys see Seth and Thomas (1994) and Foss (1997). For more recent developments, see the winter 1996 special issue of the *Strategic Management Journal* on "knowledge and the firm", notably the contributions by Grant (1996) and Spender (1996) and the contributions and debate in the September-October 1996 issue of *Organisation Science*, by notably Conner and Prahalad (1996), Kogut and Zander (1996) and Foss (1996). Like the resource-based perspective, knowledge-based theories can be claimed to build on the work of Penrose. In some case the link with Penrose is directly acknowledged, see, e.g. Foss (1997), and also Loasby (1997), Kay (1998) and Nahapiet and Ghosal (1998). In other cases, e.g. Conner and Prahalad (1996) and Grant (1996), Penrose is not even referred to. This is also true in Kogut and Zander's (1993) knowledge-based evolutionary theory of the multinational corporation. In this context, and given that Penrose's work has not been terribly influential in microeconomics either (in part due to difficulties with dealing with knowledge in microeconomics), an important aim of this paper is to highlight Penrose's importance in the history of the development of these important ideas.
29. Isolating mechanisms are "phenomena that limit the *ex-post* equilibration of rents among individuals firms" (Rumelt, 1984, p. 567). The specificity of an input to multiple other inputs in the firm is one of the mechanisms that renders the firm's inputs costly to copy (see Dierickx and Cool, 1989, pp. 1507-09).

30. It is interesting to note here that Argyres' (1996) evidence on vertical integration fails to even mention Penrose. This is also true of Kogut and Zander's (1993) analysis and evidence on the multinational firm, see also below.
31. It goes without saying that such a task involves interpretation and (thus) a degree of judgement. It is not claimed here that Penrose said anything directly on transaction costs economics, albeit some of her arguments, especially on vertical integration, could be interpreted today in transaction costs terms, see Pitelis and Wahl (1998).
32. Penrose does not address issues such as alternative definitions and/or issues of endemic power asymmetries. Our observations on these, therefore, hold for the resource value perspective, too.
33. Note, however, that "why firms exist" is not a concern of Penrose. In her analysis, firms are taken to exist. However, the advantages of production within firms may be seen as one rationale for firms' existence. This does not preclude other rationales consistent with Penrose's views, including predatory ones. The issue is simply not addressed by Penrose.
34. It is worth noting here Demsetz's (1973) own support for this view. "There is no reason to suppose that competitive behavior never yields monopoly power; although in many cases such power may be exercised not by creating entry barriers, but through the natural frictions and ignorance that characterize any real economy" (!) (Foss, 1997, p. 75). TC economists should feel very lonely on this one.
35. See also Loasby (1998), for whom "managing capabiities is itself a capability . . ." (p. 139).
36. For dynamic transaction costs approaches, see Pitelis (1991), Langlois (1992) and Zajac and Olsen (1993). The latter also attempts to integrate transaction costs, learning and strategic explanations.

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