# The (New) Nature and Essence of the Firm*

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**Abstract**

Extant explanations of the nature and scope of firms, such as transaction costs, property rights, metering and "resources" can be integrated into a more general (capability based) theory of the nature and essence of the firm that recognizes the importance to the firm of creating (and capturing) value from innovation. We note that the appropriability of returns from creative and innovative activity often requires the entrepreneurial creation and co-creation of markets. Accordingly, market failure and transaction costs approaches need to be revamped to capture the essence of entrepreneurial and managerial activity that extends beyond the mere exercise of authority. We suggest that the nature and objective of the firm in an economy with innovation and incomplete markets is to capture value (profit) from its advantages and actions; and that the way in which the firm tries to achieve this (by establishing quasi-sustainable competitive advantage) is its essence. This is non-separable from its nature and objectives.

## I. Introduction

In this paper, we claim that the objective, nature and essence of the firm can be usefully seen as being the same. They reduce to the diagnosis, configuration and leveraging of knowledge assets and organizational capabilities to allow the principals of these organizations to effectuate the capturing of value (profit) from both the creative and routine operations of the business enterprise. While the superiority of organization (the firm) in this context can be partly explicated in terms of its transaction-cost reducing properties, the advantages of organization (over the market) go well beyond savings in transaction costs. They include combining co-specialized assets and capturing value from intangible assets where business models that involve pure market transactions (e.g. licensing) simply won't work because of the absence of properly functioning markets.

Determining how to profit (or capture value) from innovation, knowledge, intangible assets and other advantages and/or capabilities constitutes an important thread in the business strategy literature (Teece 1986a, 1998, 2006; Winter 2003). Accordingly, the diagnosis, upgrading, and integration of intra-firm resources and organizational capabilities, especially dynamic capabilities, so as to achieve firm-level sustainable competitive advantage, (Teece 1997, 2007; Helfat et al (2007), can be regarded as "the essence of the firm" (Augier and Teece, 2008).

To date, the resource and capabilities – based approaches to the firm have spent little time directly addressing the nature of the business firm, and answering the fundamental question why firms exist (Priem and Butler (2001), Barney (2001a,

2001b). Exceptions are Pitelis and Wahl (1998) and Teece (2006). Both articles claim that the superiority of firms' *vis-à-vis* markets can be understood in terms of driving innovation, both technical and organizational and capturing value from it.

Penrose's (1959) theory of the growth of the firm, can be regarded as an alternative and complementary approach to transaction costs economics. Penrose indirectly answers the question why do firms exist by appealing to production-costs and revenue enhancing (instead of transaction-costs reducing) advantages. In addition, Pitelis (1991) had earlier suggested that it is neither useful nor necessary to try and separate the objective of firms (such as profit maximisation) from the 'nature' of the firm. Instead, the objective and nature of the firm should be seen as inseparable; namely that firms exist in order to (because they can) serve the objectives of their principals.

Section II of this paper explores how innovation and incomplete markets should change the parameters by which market "efficiency" should be assessed. Section III deals with definitions and extant theories. Section IV proposes what we claim to be a novel, more general theory of the nature, objective and essence of the firm and discusses how extant theories fit in our proposed framework. Section V discusses the central role of dynamic capabilities in the context of our proposed theory. Finally, Section VI provides summary and conclusions.

## II. Designing the Firm in a World with Innovation and Incomplete Markets

In today's world the business firm plays a major role in innovation. Innovative activity is essential to what firms must do to compete today, as it was when Coase (1937), Arrow (1974), Williamson (1975, 1985) and other great economists were

trying to illuminate the nature of the firm. However, neither Coase nor Williamson provide easy ways for theorists to incorporate innovation into the theory of the firm. Indeed, Coase (1937) makes no mention of innovation.[1] Williamson (1975) assumes "small numbers"[2] and Klein, Crawford, and Alchian (1978) implicitly assume the ubiquity of asset specificity, which of course implies "small numbers." These concepts (i.e. small numbers and asset specificity) are somewhat consistent with the world of innovation[3]; but if these are the hooks through which innovation is to be incorporated into transaction cost theory, then the treatment is inviting but inadequate. Both Coase and Williamson implicitly assume ubiquitous markets -- the only question is the transaction costs of using markets. The very existence of markets is in little doubt.

The framework here recognizes that markets, particularly markets for know-how and intellectual property, may not exist for many reasons including transaction costs.[4] Moreover, it is required that entrepreneurial and managerial acts are critical to the co-creation of markets (Teece, 1993).

However, markets may suffer in their development for reasons other than transaction costs. They may not even exist because entrepreneurs have not as yet created them;

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[1] Coase (1937) sees the raison d'etre of firms in reducing the (transactions) cost associated with "organizing" production. To Coase the most obvious cost is that of discovering what the relevant prices are. The costs of negotiating and conducting the myriads of contracts that would otherwise be required must also be taken into account in the Coasian calculations. The business firm is more efficient, according to Coase, because it allows some authority (the entrepreneur) to direct resources (utilizing employment contracts) thereby having activity take place more smoothly and efficiently. The Coasian firm will tend to expand until the marginal cost of organizing internally equals the marginal costs of using the price mechanism (i.e. contracting externally).

[2] Williamson (1975) does deal with innovation in two excellent chapters, but they are a bit disconnected from transaction costs economics analysis.

[3] Innovative activity generates uniqueness which in turn leads to small numbers of suppliers.

[4] This theme goes back to the early work by Teece (1980, 1981, 1982) which stressed the particular problems associated with transacting in markets for know-how.

or they may exist, yet transactions may be highly infrequent. While Williamson (1975) explicitly recognizes transactional frequency in his implicit calculus of transaction costs (low frequency of exchange means high transaction costs), the implied "thinness" of the market has not been explored with respect to broader strategic and theoretical ramifications.

When markets are thin and assets are not easily traded, accessing assets and valuing them can be difficult. In such circumstances the ownership of an asset creates both liabilities and opportunities. Co-specialization opportunities may emerge which may be difficult for competitors to replicate. Such arrangements can be effectuated inside the firm, or possibly between and amongst firms. Co-specialization opportunities may allow the enterprise to do something distinctive and thereby affording the opportunity to create and capture value.

What's missing from the literature is a recognition that strategic choices by management (i.e. decisions and actions which are popularly thought of as strategy and business model issues (Teece, 2009a)) are important to the success of firms as well as to the theory of the firm. Entrepreneurs and managers can effectuate coordination that not only saves on transaction costs (in the sense of Coase and Williamson) but also involves creating markets, creating new combinations, and capturing value. The vertical integration literature examines some classes of decisions designed to protect against holdup (Williamson, 1975, 1985); but other motivations for integration (common ownership) also exist in the context of innovation. Firms must not only decide whether to integrate or outsource to protect values: they must also consider whether to invest in intangibles, to bundle product, to offer complements, how to

segment the market, and what value propositions to put to the customer. These are not just questions about running the business; they are often questions about creating markets and designing the firm. Solving these questions alone will likely involve creative activity. Certainly more is likely to be involved than selecting from a known set of alternatives. New alternatives may need to be created.

These observations allow us to be more demanding with respect to how a theory of the firm should help us understand innovation. While the nature of the firm may indeed involve the Coasian internalization of transactions which could conceivably take place in a market, the marginalist approach laid out by Coase (i.e. keep internalizing until the marginal costs as between using the market and internalization are equalized) is not an adequate conceptualization of the business enterprise for a world in which the enterprise is the locus of innovation in the economy. Rather, an acceptable theory also must help illuminate how managers/entrepreneurs decide (1) whether to invest in new product/process development, (2) the activities to be outsourced, (3) how should products be "priced," (4) the value proposition to the customer, (5) whether the product be bundled for sale, and if so, who should do the bundling? These are key top management or "strategic" decisions. They involve not only issues about authority, and employment, but questions about finance, resource allocation, and choice of business model. Of course operational decisions need to be understood too. However, the essence of the firm is not just about running a business (which sounds rather operational), it is also about creating markets and designing the business.

## III. The Nature and Essence of the Firm

Why firms exist has been a fundamental question for the theory of the firm (and business strategy) since Coase (1937) posed it. By addressing the issue of the firm's existence and "nature," scholars have obtained insights on the boundaries, strategy and more recently the value creation/capture attributes of firms.

By studying firm boundaries, scholars have also obtained insights on how firms create value (according to Coase it was by reducing market transaction costs). Exploring the firm's "nature" has been critical to the development of the economics of the firm (Holmstrom and Tirole, 1989) and business strategy for value creation and capture (Pitelis, 2008; Teece, 2008).

However, despite the valuable insights provided, we suggest that the theory of the firm can be made richer by deeper embodiment of concepts about knowledge creation and capture. We explore here a new *raison d'être* for the existence of firms in terms of value capture by principals-to-be, through market and value co-creation. The economy-wide social process of market, value and price co-creation is a dynamic capability par excellence.

In Coase (1937) the nature of the firm was anchored partly in the employment contract between an entrepreneur and labourers. While conceptually it is possible to organise production through the exclusive use of the market mechanism (relative price changes determine the allocation of resources), Coase observed that the employment contract can have advantages in terms of transaction costs. These include

fewer transactions, but also the lower average cost of transactions. The former is the case when an entrepreneur directs resources (notably employees), instead of having to transact with an equal number of independent contractors, who may also liaise between themselves. An employment contract can replace spot market contracting, and thereby obviate the need for continuous renegotiations of contractual terms. Hierarchy and the associated use of the powers of fiat lead to less protracted intra-firm negotiations.

Herbert Simon (1951) joined Coase in identifying the employment relation and the concomitants hierarchy and authority as defining the essential nature of the firm. Simon, like Coase, saw the employment relationship and discretionary control over employees by the employer as an efficient response to the impossibility of foreseeing the tasks and activities that would be asked of a worker. Bargaining and transactions costs could be too great to negotiate and write a contract for each task.

As already mentioned, in the Coasian theory the internalization of market transactions will take place up to the point where the transaction costs involved in having a transaction organized by the market are equal to the intra-firm transaction (organizational) costs of undertaking this transaction intra-firm. According to Coase, both horizontal integration and vertical integration can be explained in terms of this transaction costs logic (Demsetz, 1995; Pitelis and Pseiridis, 1999). As discussed earlier, it follows in transaction costs theory that the nature and boundaries of the firm are explained in terms of overall market and organizational cost minimisation calculus (Teece, 1982; Pitelis, 1991).

Arrow (1974) went one step further and stressed that the reason why firms exist is not simply high transaction costs; rather, markets in some situations simply do not work and there is market "failure." However, Williamson (1975) points out that at the heart of it all, market "failure" is due to transactions cost. Whatever the fundamental cause, the interdependencies between parties will not be fully internalized by the market and so the firm and its management can step in and fill a (theoretical) void.

By Arrow's logic, economic activity occurs within the firm when it represents a better way to motivate and coordinate than the market does. It is of course important to know when this is likely. As discussed below, in our view the most important (and under-researched) domain within which there is likely to be "failure"[5] is with respect to transactions that relate to the creation, transfer, and protection (appropriability) of know-how.

Notwithstanding the widely recognized importance of innovation, the further development of the Coasian framework by Oliver Williamson (1975, 1985) and Klein, Crawford, and Alchian (1978) focused on asset specificity as the driver of internalization (Williamson, 1985; Monteverde and Teece, 1982). However, Coase (1991) has questioned the importance of asset specificity and even the concept of rationality (see Pitelis, 2002a). Moreover he has later expressed regrets for his almost exclusive focus on the "employment relationship," claiming that one should not just focus on the (Coasian) nature of the firm but also its essence, which is "running a business." This involves more than the employment contract. In short, Coase seems somewhat dissatisfied with extensions to his framework provided by transactions cost

[5] Of course by using the word "failure" we do not mean to undermine real world market processes. Indeed, the success of firms in innovation reflects in fact the triumph of markets over other arrangements. The "failure" we speak of is only with respect to a theoretical alternative.

economics. While offering embellishment of his ideas, it does not seem to satisfy Coase's desire for a theory that "fits in with the real world" (Coase, 1937). In our view, and as discussed below, the neglect of innovation issues is one obvious oversight in Coase's framework, although this deficiency serves to have gone unnoticed.

Despite a very extensive literature on transaction costs that includes support and criticisms.[6] Coase's distinction between the "nature" and the "essence" has also gone unnoticed. Subsequent developments zeroed in on "property rights" under conditions of incomplete conracting (Hart, 1988; Grossman and Hart, 1986; Hart and Moore, 1990), and problems of metering and (self)-monitoring (Alchian and Demsetz, 1972) to address the question of the existence and scope of the firm as well as the question why does capital employ labour rather than the other way around. The answer given was in terms of the efficiency benefits of residual control over property rights under incomplete contracting, and (self)-monitoring in the context of team production.[7] None of these theories attempted to deal with the issue of the "essence" of the firm – what Coase (1991) has subsequently referred to as "running a business."

Later contributions by Demsetz (1988), Demsetz and Jacquemin (1994), and Kogut and Zander (1996) as well as the emergence of the resource and capabilities-based view (RBV) drew on earlier works by Demsetz (1973) and Edith Penrose (1959), (see among others Teece, 1980, 1982; Wernerfelt, 1984; Barney, 1991; Peteraf, 1993; Langlois and Robertson, 1995; Pitelis, 2004a). This scholarship has gone some way

[6] See David and Han (2004) for an assessment of the evidence which is found to be mixed.
[7] See Kim and Mahoney (2002) and Pitelis (2007a) for more detailed critical assessments and syntheses.

toward explicating the "essence," and toward recognizing the important role of intangible assets, which are of course seminal to the innovation process.

A critical concern of the strategy literature is to explain how firms develop sustainable competitive advantage (SCA).[8] This in part involves issues pertaining to "running a business." For example, in the resource-based view (RBV), the diagnosis, building, re-configuration and leveraging of intra-firm resources that are valuable, rare, inimitable and non-substitutable (VRIN), help firms acquire SCAs. Clearly this is at least part and parcel of Coase's "essence," but it would help if the theory of the firm could explain how competitive advantage is developed and sustained. A theory of the firm that fails to do so is inadequate.

Early contributions in the RBV were focused on trying to understand competitive advantage. They did not set out to explain the nature of the firm.[9] For Pitelis and Wahl (1998), the Penrosean version of the RBV, however, could be interpreted as a theory of the nature of the firm too. The superiority of firms in terms of knowledge creation, innovation, and knowledge transfer (Teece, 1980, 1982) could be seen as an embellishment to Coase's, Arrow's, and Williamson's transactions cost/market failure framework. Subsequent literature, summarized in Mahoney (2005), has used the two theories as partly complementary, partly incompatible. Issues of potential incompatibility revolved around the question of "opportunism" and "asset specificity." Such issues notwithstanding, the alleged production-costs-related advantages of firms have been acknowledged as complementary to his own by Coase himself. In a letter to one of the authors about Penrose's views Coase observed that,

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[8] See, for example, Lippman and Rumelt (2003) and Peteraf and Barney (2003).
[9] See Priem and Butler (2001) and Barney (2001a,b).

"I do not regard her views as an alternative view to mine in *The Nature of the Firm* but as a necessary addition to it. As I indicated in my Yale lectures … there has been insufficient attention to the role of the firm in 'running a business'." (Pitelis, 2002a: 34)[10] It is interesting that Coase's acknowledgment of the necessary complementarity between transaction-costs and resource-based ideas is in terms of the issue of the "essence."

It is arguable that the most relevant recent development that has injected insight into the nature of the firm is the dynamic capabilities perspective (Teece and Pisano, 1994; Eisenhardt and Martin, 2000; Teece, 2007; Zollo and Winter, 2002; Helfat et al, 2007). While Penrose (1959), Richardson (1972) and resource-based scholars used the concept of capabilities to explain the growth, scope, and boundaries of firms, as well as the institutional division of labour between market, firm and inter-firm cooperation (Richardson, 1972) they did not go so far as to analyze how firms can leverage these resources and capabilities so as to obtain SCA. Additionally, there has been limited discussion on the nature and types of capabilities that can help engender quasi-SCA. This has been the agenda of the DCs perspective.

Michael Porter's (1980, 1985) approach to SCA that drew on the earlier work of Industrial Organization (IO) scholars, such as Bain (1956), relied on the characteristics of the industry and on positioning strategies by firms. While these remain relevant, it is now widely recognised that intra-firm factors are more important in explaining firm profitability than industry-level factors.[11] Penrose (1959)

[10] Williamson (1999) also recognised transaction costs and capabilities-based views as the two major perspectives on the firm, see Helfat et al (2007).
[11] See McGahan and Porter (1997). For a wider critique of Porter's approach and a comparison with the (dynamic capabilities) perspective, see Teece, 2009b.

synthesised industy and inta-firm factors in terms of her concept of "productive opportunity."[12]

By focusing on dynamic capabilities (DC) as higher-order capabilities that help create, re-configure and leverage organizational resources and capabilities, and by identifying the sensing and seizing of opportunities, the DC perspective has arguably been a major advance in terms of explicating Coase's "essence" of the firm. Below, we claim that in addition the Coasian distinction between the "nature" and the "essence" might be artificial and that DCs can help explain both. This claim also questions whether one should define the nature of the firm independently of the objective of its principals, or principals-to-be.

## IV. The Nature of the Firm is the Objective of the Firm and its Principals (to-be)

Ontologically, the question why do firms exist cannot be separated from the objectives of whoever sets a firm up – more conventionally its principals (or principals-to-be). A firm is created by entrepreneurs, groups, or other entities in order to achieve a particular purpose or objective (Pitelis, 1991). This approach is in line with fundamental assumptions in economics and strategy, that economic agents are motivated by (degrees of) self-interest, and also North's (1991) analysis of institutions and institutional change more generally.

In conventional microeconomics the objective of the firm is taken to be profit maximization. This assumption also manifests itself in the transaction-costs and

[12] See Pitelis (2002a).

resource-based views. Both perspectives assume bounded rationality by agents, and in Penrose (1959) it is implicitly one of profit seeking over-time (not short-run profit maximization, as in neoclassical microeconomics). The pursuit of profit by the principals (assumed to be owner-shareholders in today's public limited liability companies) constitutes the *raison d'être* for the focus on shareholder value embedded in the neoclassical approach.[13] It is only the behavioural approach of Cyert and March (1963) that questions as a descriptive matter the very pursuit of profit by firms, positing instead a "satisficing" objective that results from bounded rationality and intra-firm conflict (Pitelis, 2007a).[14] None of the above theories have linked the objective of the organization, however, with its *raison d'être*.

A partial explanation for the above is that the assumption of "profit maximization," in its more narrow sense, presupposed the existence of an organization which has full knowledge of its demand and cost schedules, which is not, and cannot be the case (Pitelis, 2008). The dissonance between the real world and the assumed objective evaporates if profit maximization by firms is replaced by the more general objective of profiting (capturing value) from (conjectured) advantages by principals-to-be.[15] This generic objective helps integrate Penrosean, behavioural and neoclassical assumptions, by recognising that economic agents are intendedly rational pursuers of

[13] See Jensen and Meckling (1976), Lazonick and O'Sullivan (1996), and Pitelis (2004b) for critical assessments.

[14] For a recent appraisal of the contribution of the behavioural school, see the Special Issue of *Organization Science* (2007) on Cyert and March's (1963) classic book. Cyert and March's focus on intra-firm conflict, limited rationality and uncertainty is critical, not least in helping us identify firm-level (dynamic) capabilities that help engender SCA; see also Casson (2005), Pitelis (2007a).

[15] Our focus on 'conjectured' recognises the inherent uncertainty of the value of any advantage, which can only be proven, in the market place. Our focus on 'appropriable' aims to account for the idea that if an economic agent feels that an idea or advantage creates potentially value which is not possible to be appropriated by the agent in question , it is not worth entering the market to start with, see below.

profit, but operate under real-life constraints, conditions and behaviours. These include uncertainty, limited rationality, conflict and strategic behaviour and learning.

Scholarship on "Advantages" goes back to one of the founders of modern Industrial Organisation (IO), Joe Bain (1956). Bain discussed barriers to new competition, resulting from absolute cost advantages, product differentiation and economies of scale. The attribution of barriers to entry to underlying firm-specific advantages was picked-up by Stephen Hymer (1960), the founder of the modern theory of the multinational enterprise (MNE). Hymer developed this into an "advantages" thesis. He claimed barriers to entry are one of the two major reasons why firms become multinational, the other being reduction of rivalry, and a third, minor one, the diversification of risk (Teece, 1985, 2006; Dunning and Pitelis, 2008). The advantages thesis in effect posits that firms which possess monopolistic advantages may be in a position to profit from these advantages more if they leverage them internally, instead of licensing them to other (foreign) firms. In his dissertation thesis, Hymer focused mainly on market power-related benefits of internalisation, but subsequently Hymer (1968) built explicitly on Coase to provide also a transaction-costs explanation of why firms may be in a better position to profit from their monopolistic advantages if they integrate. The work of Hymer pre-dated work on transaction costs by Williamson and the efficiency benefits of internalisation later developed by Buckley and Casson (1976), Teece (1981a, 1981b, 1986b) and Kogut and Zander (1996).[16]

[16] See Pitelis (2002b), Teece (2006b), Dunning and Pitelis (2008) comprehensive accounts.

Subsequent work on Advantages was developed mainly by International Business Scholars. It focused mainly on ownership (not monopolistic) advantages and was encapsulated in John Dunning's (1977, 1981, 1993) triad of Ownership, Location and Internalization (OLI) Advantages. Teece (1986b) zeroed in one critical advantage – innovation -- and posed the question of how can an innovator profit globally from invention, which is presumed to be value creating. He suggested that a strong "appropriability regime" (in terms of the strength of patent protection) and the possession of complementary assets and capabilities, was critical for a firm to profit from its innovations. In their absence, competitors with complementary assets and capabilities could leverage these to appropriate more value than the innovator – as for example in the classic case of EMI (the music recording company) which invented the CT scanner but was eventually outperformed by rivals with superior complementary assets and capabilities (Teece, 1986a, 2006).

Despite significant differences (for example, Hymer's focus on profiting from monopolistic advantages versus Teece's focus on profiting from value creating ones, notably innovation) both authors focused on existing firms; Hymer focused on national firms that internalise foreign markets, Teece focused on growing firms, such as EMI. There is no reason however, why their analyses cannot be applied to the exegesis of the nature of the firm. Indeed for the case of Hymer, this has been done subsequently by Williamson (1981).[17] In addition, Hymer's ideas on the internalization advantages of multinationals in terms and the tacit and/or public goods nature of knowledge and speed of intra-firm knowledge transfer, have subsequently

[17] See Pitelis, 2002b

and independently been developed by Buckley and Casson (1976), Teece (1981a, 1981b, 1986b), and Kogut and Zander (1993) as new theories of the MNE.[18]

Teece's (1986a) focus on an innovator has direct implications on market failure and the nature of the firm. As recently observed by Helfat et al (2007)

> "A striking example of thin or nonexistent markets is the market for know-how and for intangible assets more generally. As Teece (1981) noted more than two decades ago, 'unassisted markets are seriously faulted as institutional devices for facilitating trading in many kinds of technological and managerial know-how. The imperfections in the market for know-how for the most part can be traced to the nature of the commodity in question.' The same is true with respect to intellectual property and other intangibles. Mutually beneficial trades frequently don't happen because the property rights may be poorly defined (fuzzy), the asset difficult to transfer, or its use difficult to meter. When arm's-length market trading is impaired, internal resource allocation and asset transfer within the firm achieves greater significance. This is of course a managerially directed activity." (p. 23)

The authors conclude that

> "In short, fuzzy property rights (as with intangibles), appropriability issues, and co-specialization are among the reasons why asset markets can be thin. This renders market transactions difficult. Whenever this occurs, managers have a distinctive role that differs from the role of traders and arbitrageurs." (p.24)

In addition,

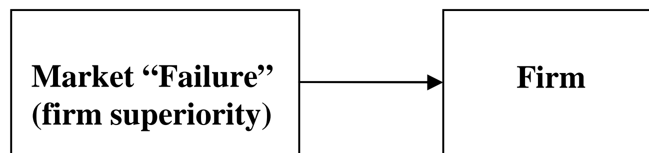
> "The coordinating and resource allocating activities performed by managers shape markets as much as markets shape the business enterprise (Chandler, 1992; Simon, 1993). Put simply, the business enterprise and markets co-evolve. Managers shape this co-evolution." (p.26).

It follows that the internalisation of complementary, co-specialised assets does not necessarily relate to protecting assets against opportunities recontracting; rather, internalisation (at least for innovating firms) can be driven by value creation and value capture consideration.

[18] More recently, resource, capabilities and learning-based theories of the MNE have been proposed by Augier and Teece (2007) and Pitelis (2000, 2007).

It is possible to synthesize extant theories on the market failure/firm superiority-based nature of the firm in terms of Diagram 1 below

**Diagram 1. Market-failure – Firm Superiority-based theories of the firm**




- transaction costs / asset specificity (Coase/Williamson)
- metering and (self-)monitoring (Alchian and Demsetz)
- property rights-incomplete contracting (Grossman, Hart and Moore)
- knowledge as a public good (Buckley and Casson)
- uncertainty and insurance of the timid against risk (Knight)
- co-specialised and complementary assets (Teece)
- knowledge protection (Marglin, Liebeskind)
- speed and efficiency of intra-firm transfer of tacit knowledge (Kogut and Zander)
- coordination-continuity-learning advantages of firms (Demsetz, Kogut and Zander; Langlois and Robertson)
- rivalry reduction-control advantages of firms (Hymer)
- knowledge, innovation and productivity - engendered value creation advantages of firms (Penrose/Pitelis and Wahl)
- firms better than markets in terms of motivation and enabling of employees (Simon)

Despite significant progress, we submit that the market "failure" – firm superiority-based approach of the nature of the firm -- cannot fully explain why firms exist from a situation of no-firms at all;[19] moreover it fails to integrate the issues of the essence, nature and objectives. More important than all, it fails to capture the role of the firm

[19] This is also true for syntheses of the above, for example the Penrose-inspired argument that firms are likely to be better than markets in terms of judgmental decisions, not least on which activities to

as a market creator and co-creator, and not just a protector/guardian of value already existing. It is particularly the last two arguments on which we will be building below. In particular we claim that a focus on DCs can help achieve the objective of integrating the nature and essence of the firm.

## V. Dynamic Capabilities, the Nature and the Essence

Some of the limits of the market failure / firm superiority-type theories, vis-à-vis the genesis of firms (from a situation of no firms at all), are provided in Pitelis (2002b, 2005). As the author observes,

> "To explain firms from a situation of no firms at all, one requires an entrepreneurial idea aimed to be put in practice. Selling the idea in the open market (or even sharing it with one's own employees) may be hard for at least two reasons. First, being tacit, it may be hard to transmit. Second, if in addition (which is possible) this idea also has public good characteristics, explaining it to anyone can lead to it being expropriated. So we have a two-pronged type of market failure, which, however, is not directly linked to transaction costs. Transaction costs enter the story if one suggests that in their absence one could conceive of contractual means of addressing the problem. This presupposes the counterfactual of a potential existing market, even when it does not exist (2002a: 9).

Moreover

> "The control afforded to entrepreneurs on their ideas, in the cohesive shell of the firm can be an adequate initial reason for not selling the idea in the open market […] it may well be as dangerous to explain to employees-to-be what your idea is all about, as it is to tell if to anyone else.) If so, efficiency gains from transaction costs (or productivity or other sources of benefits) may not be an adequate explanation for employees voluntary accepting to work for employers. Other factors must be in place such as 'insuring the timid against the risk' having a reputation for entrepreneurial flair (obtained, for example, in one's previous experience as an employer or a merchant), control over labour, etc." (2005: 71-72). [20]

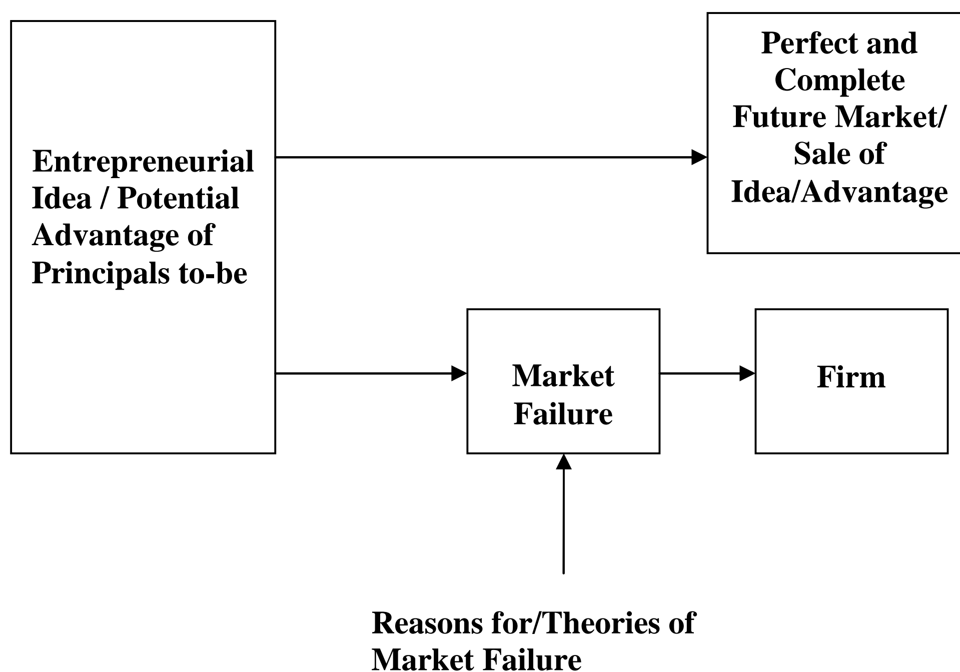
internalise, see Pitelis and Pseiridis (1999); on the role of judgment in the theory of the firm and entrepreneurship, see Casson (2005), Foss and Klein (2005).

[20] " Some of the themes above would surely have been recognised by people in the area, in, for example, the work of Knight (1921), Marglin (1974, 1984) (on labour control and obtaining and protecting organizational knowledge, and also Liebeskind (1996) on knowledge protection" (ibid: 72).

There are two major implications from the above quotes on which we build here; namely, in the case of an entrepreneurial idea, there may well not be markets to start with – therefore a market failure-based explanation is suspect. Second, one needs to identify the *differentia specifica* of firms, *vis-à-vis* other organizations, such as universities for example, in order to explain their nature. In this context, we submit that issues of essence and objective are part and parcel of the question of the nature of the firm.

Diagrammatically, the question of the starting point (the entrepreneurial idea), leads to a modification of Diagram 2, as follows:

**Diagram 2. The Nature and Objective of the Firm**



For Diagram 2 to be appreciated we need an understanding of why one needs/wants to sell an entrepreneurial idea.[21] We submit that the agents (in this case firm principals-to-be or Coasean entrepreneurs) objective should therefore be part and parcel of the argument. We submit that this objective, is not profit maximisation or satisficing by existing firms but rather the capture of value out of (profit from) appropriable value creating advantages (to include just ideas) by aspiring principals – entrepreneurs-to-be. This collapses the nature and objective in one – firms exist in order for their principals-to-be to capture value (profit from) their appropriable value creating advantages. Like in Coase, principals-to-be may well decide to sell their ideas (advantages or capabilities) in the open market, were such a market to exist and be characterized by perfect foresight, rational expectation and mutually consistent expectations of the net present value of the advantage/idea. The absence of such markets makes it unsatisfactory to rely on a business model which depends exclusively on licensing (Teece 1980, 2006, 2009b) except in rare cases, which also involve strong appropriability (Teece, 1986a).

The problem, we submit, is not simply that markets are unlikely to exist, and/or be thin, especially in the case of intangible, co-specialised and complementary assets, as argued above. It is not even uncertainty or divergent views on the value of assets *per se*. The main problem is far deeper and arises from the fact that the Net Present Value of an idea, asset, or capability (advantage), cannot be known without factoring in the

[21] We refer to principals-to-be or Coasian entrepreneurs (namely entrepreneurs who have chosen to design and set-up a firm). The use of the term in much of the entrepreneurship literature is broader in that it can refer to individuals, social, political and institutional entrepreneurs. It is also more narrow in that our principals to-be may choose not to become (Coasian) entrepreneurs. Whether principals to-be and/or entrepreneurs need to set-up a firm is an important question on which our article contributes, see Witt (1998) for a perspective based on "cognitive leadership". Shane (2001) analyses technology attributes that are more likely to require new firm creation. For recent literature on entrepreneurship, see Feldman (2001) Ricketts (2002), Shane (2003) Casson (2005), Alvarez and Barney (2007), Foss et al (2008), Klein (2008).

very planned and emergent actions of a firm and the impact of these on the eventual value of the advantage, and the way in which this value is being affected/transformed as a result of the actions of either market players, to include new entrants-competitors, supplies, and buyers leading to the co-creation of additional value. These cannot be known in advance for the simple reason that the future is being co-created through the very actions of economic agents such as principals-to-be, their firms, customers, suppliers, employees and the economy at large.

The above analysis points to a market-co-creation theory of the nature of the firm; namely that in many cases firms exist because of their (dynamic) capabilities which enables entrepreneurs and managers inside firms to co-create markets (as well as to responding to market failures).[22] They do this by making the investments necessary to stimulate economic activity and market demand for new product and processes (Teece, 2009b).

Two implications follow. First, the need to orchestrate co-specialised and complementary assets could be seen as a raison d'être and the genesis of the firm, not only because of market failure, but also because the very creation of a credible player (firm) with a chance to realise its objectives by shaping, extending and especially creating markets, presupposes the co-assembly of co-specialised and complementary assets, capabilities and skills. Second, and most importantly, market co-creation is a *raison d'être* (in our argument the *raison d'être*) of the firm because of its superior value co-creation (through investment) and value capture capabilities, not least through co-creation of markets for ideas, advantages and capabilities.

[22] Our argument relates to but goes further than the creation theory of entrepreneurship that focuses on 'opportunity creation' by entrepreneurs, see Shane (2003), Alvarez and Barney (2008) and Foss et al (2008) for a critical account and debate.

The market co-creation function of firms is alien to neoclassical economics, although aspects of market creation (like market extension) have not failed to obtain the attention of IO scholars (see for example work on advertising, product promotion and proliferation etc, e.g. Cabral, 2001). However, it is relatively recently that scholars such as Kaldor (1972), Chandler (1977), North (1994), Nelson and Winter (2002) have paid attention to the market creation role of firms. In strategy scholarship, the concept of industry extension and/or creation has been employed in the "red" versus "blue oceans" literature, see Kim and Mauborgne (2005). In entrepreneurship literature, Shane's (2003) approach to the creation of new means-ends frameworks by entrepreneurs can incorporate the possibility of new firm creation. None of these scholars, to our knowledge, has suggested that the conjectured expected (dynamic) capability to co-create markets and realise in this way the intended objective of their principals (to-be) is the very *raison d'être* of the firm.[23]

In reviewing Chandler's *Scale and Scope*, Teece (1993) noted over a decade ago that business history teaches that managers shape markets. This is contrary to economic theory, which tends to assume the opposite. Our theory in effect posits the existence of a "reluctant Coasian entrepreneur" (an entrepreneur-principal-to-be who designs and builds a firm in order to realise his/her objectives). With few exceptions (such as for the pure "love of the game" (Penrose, 1959)), one would not be willing to enter the vagaries of building a firm if one could realise the net present value of conjectured value creation from their ideas-advantages through a simple sale. Entrepreneurs enter

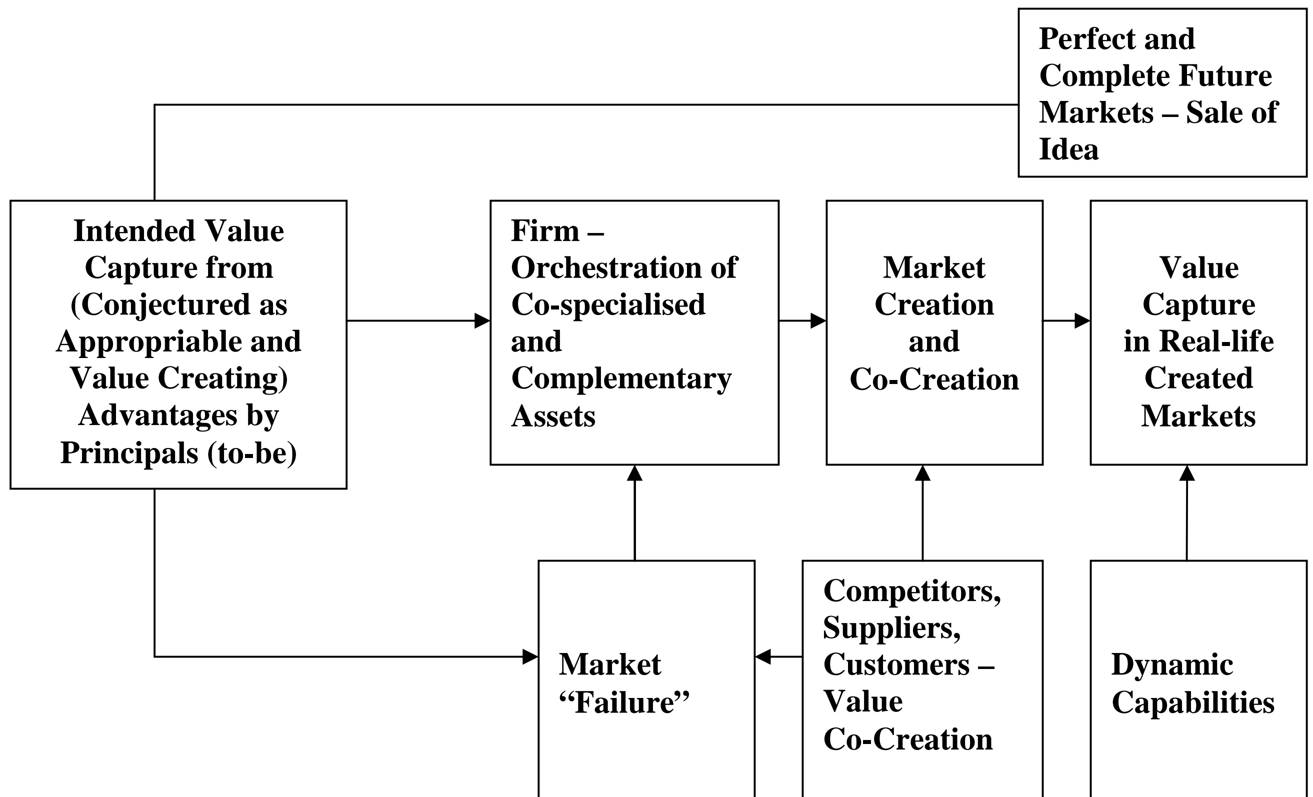
[23] Casson (2005) considers the identification of a market-making opportunity that results from "entrepreneurial synthesis of information" as a reason for vertical integration (pp 335-336). He also discusses how entrepreneurs as "information managers" can try to convince potential stakeholders (including employees) about the prospects of their intentions without, however, undermining their own indispensability in effecting these.

the game because it is generally necessary to first co-create markets before it is possible to capture value from inventions and from innovation.[24]

The market (and price) creation (and co-creation) role of firms brings centre stage the literature on (dynamic) capabilities. Dynamic capabilities can be thought of as the essence of the firm. While it is not our intention to recapitulate the arguments here,[25] we draw on the referenced studies to claim that the sensing and seizing and the SCA maintained by the DCs of firms (Teece, 2007), and their impact on market and price co-creation, can be seen as part and parcel of the nature of the firm (the reason a firm is set-up to start with). Indeed it is arguable that market and price co-creation (that engenders value co-creation) alongside the value capture (see Teece, 2008, Pitelis, 2008) are firms' DCs *par excellence*. Achieving this also involves other capabilities, not least enabling "cognitive leadership" and the managing of information.[26] Our discussion is summarized in Diagram 3 below:

[24] As noted by Lippman and Rumelt (2003) the majority of intra-firm resource allocation decisions by managers pertains to unpriced resources. While we acknowledge this, we add that firm market co-creation capabilities aim in part to engender prices for those resources the organization may wish to monetize in some fashion.
[25] See Teece (2007), Helfat et al (2007) and Teece (2008).
[26] See Simon (1993), Witt (1998), Casson (2005), Pitelis (2007a), and Teece (2008).

**Diagram 3: Firms Objective equals their Nature equals their Essence**




In Diagram 3, firms exist because of the intentions of their principals-to-be, their perceived to be superior advantages and importantly their market and price co-creation advantages and capabilities. Market co-creation (or its absence) is as much an explanation of why firms exist as is market failure – indeed in our view more so. Firms exist because of the ability to create and co-create markets, which allow them to realise their objective of capturing value out of their appropriable advantages and (dynamic) capabilities. Firms are created by "reluctant Coasian entrepreneurs," individuals or teams who bring together and orchestrate co-specialised and complementary assets, in the clear realisation that this is the best way through which the markets and prices they need (in order to realise their objectives) will be co-created.

## VI. Summary and Conclusion

We claimed that it is neither necessary nor useful to distinguish between the objective of its principals-to-be, the nature of the firm and the essence of the firm. We suggest instead that firms exist because they facilitate the realisation of the objective of their principals, which is to capture value (profit) from their value-creating activities. This happens because of the ability (and necessity) of firms to combine (and manage) co-specialized assets, develop appropriability mechanisms, and if necessary create new markets. This enables firms to capture value by creating, leveraging, adapting, upgrading, and combining their assets internally and/or through inter-firm cooperation. We downplay the role of authority which is what both Coase (1937) and Simon (1951) used to illuminate the nature of the firm.

In reality, creating markets and making markets work often depends on the very actions of firms. In this sense ours is not a theory of market failure or firm superiority of the traditional Arrow-Williamson type, but rather of firm advantage in orchestrating assets to create both firms and markets. This is what entrepreneurial and management activity, using the firms as a fulcrum, can do. It is an essential aspect of the nature of the firm.

In thinking about the theory of the firm, it makes less sense to start from an assumption of market failure[27] because in our context causality goes mainly from firms to market creation rather than from market failure to firms. Clearly markets,

[27] We therefore align ourselves to Simon (1993) who mocked the assumption in transaction cost economics (TCE), that in the beginning there were markets.

firms, market "failure" and firm "failure" coexist and co-evolve, but the causality is often from firm creation to market creation. It is a far more complicated story than Coase, Arrow, or Williamson seem ready to acknowledge, at least in their writings.

*Vis-à-vis* alternative explanations of the firm, our analysis recognises merit in much of what has preceded the dynamic capabilities framework. In Diagram 3 transaction costs can help explain why principals-to-be bring together and orchestrate co-specialised and complementary assets inside the cohesive shell of an organization, rather than doing it through bilateral market contracting. The co-specialised and complementary nature of assets can help explain why organizations will be superior in terms of transaction costs and revenue-engendering characteristics. The orchestration of assets, notably human, can help explain the superior productivity benefits of hierarchy, whether in terms of control (Marglin, 1974) and/or incentive alignment, metering, self-monitoring and/or enabling (Simon 1995, Pitelis, 2008). The tacitness, and public goods aspect of knowledge can help explain the superiority of organization as a governance structure *vis-à-vis* extant markets.

None of the classical theories, however, recognizes market creation and asset re-configuration by firms as the very *raison d'être* of their existence. The firm's essence, in our view, is its managers that both design businesses and run them. The resources/dynamic capabilities framework does a better job of capturing this essence than do the classical theories,[28] especially in the context of innovation.

[28] Of course we recognize that the dynamic capabilities approach draws from the classical theories in many important ways.

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