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THE LAW AND ECONOMICS OF THE MODERN FIRM: A NEW GOVERNANCE STRUCTURE OF POWER RELATIONSHIPS

Mots-clés : Économie de la firme, droit, firme moderne, gouvernement, pouvoir.

Key words : Economics of the firm, Corporate law, Modern firm, Corporate governance, Power.

1. INTRODUCTION

Traditionally, the capitalist system has been based on the close relationship between finance and industry. The dynamics of capitalism are significantly linked to changes in both industry structure and the financial system of market economies. At the firm level, the relationship between finance and industry is crucial because it influences both the governance of the capitalist firm and its configuration of “socioeconomic” power. The evolution of the modern firm has been configured by the development of the international financial markets concomitant to the transformation of the structure of industry in the 20th century. This paper aims to study the impact of the industrial changes – linked to the changes in economic growth and financial systems – on the governance structure of power relationships in the modern firm.

The nature of the firm remains. The *raison d’être* of the firm was, is and will be to produce the collective action necessary to serve human needs. What changes, however, is the institutional and economic environment from which firms evolve. Thus, firms have changed over time. When economists have evaluated firms, they have focused on the vertically integrated firm whose capital

was owned by shareholders who hired managers to maximize their utility. Legal mechanisms, notably contracts and ownership, have served the interests of these corporate entities.

From the 1930s to present day, the industrial landscape has changed considerably. The modern firm has evolved in parallel with the rise of the competition, globalization and financialization that began in the early 1980s. Firms became vertically disintegrated, with inalienable assets and management strategies that maximized “shareholder value”. This result was the consequence of the increasing development of both financial capitalism and an economy based on knowledge and highly technological systems. Legal mechanisms are not able to protect the rights of all stakeholders. In fact, a large part of the competitive assets of the modern firm cannot be the object of contracts or property rights. At the same time, the corporate governance of firms – the set of institutional mechanisms by which the firm is governed – has become a widespread issue. The traditional models of governance inspired by Berle and Means (1932) have been profoundly transformed and have moved toward new forms of corporate governance that go beyond legal and economic theory.

This article considers that the modern firm and its governance should be analyzed from the lens of power, not only the forms of managerial power held in and by the top hierarchical levels, but also all forms of power that enable the modern firm to be productive and competitive. Power should be understood as a collective dimension – in the view of the philosopher Arendt (1969, p. 44), as “the human ability not just to act but to act in concert” because “power is never the property of an individual ; it belongs to a group and remains in existence only so long as the group keeps together.” Therefore, the research question is as follows : what are the implications of the new institutional and industrial environment of the firm on the governance structure of power relationships ? In the case of the traditional capitalist firm, power is significantly linked to the ownership of capital assets. However, the power relationships of the modern firm are defined by two distinct structures : the internal power structure and the external power structure. The internal power structure is characterized by the threefold relationship between authority, *de jure* power and *de facto* power, which result from employment contracts, ownership structures and resource dependence/complementarity effects. The external power structure, which refers to relationships between firms, is only based on the *de facto* power that results from economic dependence. In the case of external power structures, “the innovation of managing supply through long term relations” sheds light on an informal architecture that seems to be more important than the formal one (Roberts, 2004, p. 214). As a main consequence, some important policy implications should be outlined concerning the law and economics of the modern firm.

This paper draws on insights from both economic, corporate governance and corporate law literature and is organized into four sections. Section 2 gives a theoretical background of the firm in both economics and law where the para-

digm of the nexus of contracts dominates, to the detriment of the objective social reality of the firm. Section 3 sets out the four core features of the modern firm, which clearly go beyond the law and economics of the classical firm. Section 4 shows the new structure of the power relationships that have resulted from the emergence of complex economic organizations. Section 5 concludes and extends the scope of the paper.

2. THEORETICAL BACKGROUND

Since the beginning of the last century, one of the more important questions in economics is: why do firms exist in a market-based society? A growing body of the existing law and economics literature suggests that contractual arrangements matter for the nature of the firm. This argument allows for the reconciliation of the doctrine of law and the theory of the firm. Such a complementarity is essential for corporate governance as it brings some microeconomic terms into corporate law (Williamson, 1984). Before analyzing the core features of the modern firm, it is indispensable to briefly outline the place of the firm, both in economic theory and in corporate law.

2.1. The firm in economic theory

The theory of the firm is a well-known research field where mainstream theories and alternative theories coexist in a complex way. *A contrario*, in a very simplistic way, it is possible to discern these theories as follows: mainstream economists focus on the firm as an institutional and legal device, whereas alternative economists (1) focus on the firm as an organizational and productive entity. Here, only the first class of theories is kept in consideration regarding the research object. Therefore, three main theories need to be summarized, even though some more recent contributions deserve to be mentioned.

The first, called the theory of the nexus of explicit contracts is the more orthodox approach and refers to the respective works of Alchian and Demsetz (1972), Jensen and Meckling (1976), Fama (1980) and Cheung (1983). These economists considered that the nature of the firm is based on the organization of a bundle of some different contractual arrangements. A contract is the central modular mechanism that is able to play both a coordinating and an incentive-providing role within and between the firms. Jensen and Meckling (1976, p. 312) insist on the fact that “most organizations are simply legal fictions, which serve as a nexus of contracting relationships among individuals.” Such

(1) See Langlois, Yu, and Robertson (2003) for an exhaustive review of alternative literature on the firm.

a contractual analysis implies some sense of continuity between the firm and the market. Contractual relations are the essence of firms and human beings are the parties to this nexus of contracts. Individuals exist only in regard to the contracts. There are no strict ontological differences between a contract and an organization because the organizations should be seen as contractual arrangements through which transactions pass smoothly. The firm conceals the features of an efficient market. For example, Alchian and Demsetz (1972, p. 777) argued that the firm “has no power of fiat, no authority, no disciplinary action any different in the slightest degree from ordinary market contracting between any two people.”

The second theory, called the modern theory of property rights (see Grossman and Hart, 1986; Hart and Moore, 1990; Hart 1995), defines the firm as a collection of nonhuman assets and argues that firms arise where market contractual relationships fail. The collection of assets view of the firm states that the understandings of the nature and the boundaries of the firm are intimately correlated and explains the firm boundaries in terms of the optimal allocation of asset ownership. The assets that are held by the firm form the firm and not others. The holder of the residual rights of control (2) over the nonhuman assets in a coalition has power over the human capital owners, who need nonhuman assets in order to be productive such that “control over a physical asset in this line can lead indirectly to control over human assets” (Hart and Moore, 1990, p. 1121). The firm becomes a single “owner” and has the residual rights of control on the assets. The nonhuman assets constitute the glue that keeps the firm together. Without this glue, the firm is “just a phantom” (Hart, 1995, p. 57).

The third dominant theory of the firm is the so-called transaction cost economics (see Coase, 1937; Williamson, 1975, 1985). This approach defines the firm as a governance structure that is coordinated by a hierarchical authority (Williamson, 2002). Williamson considers authority as the heart of the employment relationship individuals have with the firm. Thus, Williamson takes up the premise of the analysis of Coase, which is that the employment relationship is a superior/subordinate relationship, and the firm differs by nature from the market. For Williamson, the nature of authority is found at two distinct and complementary levels. The legal rules, embedded in an institutional environment, shape a legal framework. However, contractors have the latitude to arrange this framework in accordance with their preferences and goals in order to implement the best governance structure, that is, the best normative private ordering. Williamson refers to the works of the lawyers Llewellyn (1931) and MacNeil (1978) to affirm a legal pluralistic perspective that the contract constitutes only a simple legal framework that is necessarily incom-

(2) The residual right of control of an asset is “the right to control all aspects of the asset that have not been explicitly given away by contract” (Grossman and Hart, 1986, p. 695).

plete, owing to the bounded rationality of the individuals. Therefore, Williamson's transaction cost economics offers a better understanding of the internal organization of the firm when compared with the two first theories described above.

Contracts, property rights and authority are the main mechanisms that are used to analyze the institutional and legal perspectives of firms. However, from this theoretical background, some economists have recently proposed to extend the scope of these mechanisms by including the informal and relational organization of the firm. In a 1998 paper, Holmström and Roberts argued that these approaches need to expand their horizon and to recognize that other incentive mechanisms aside from contracts and ownership can be used "to deal with the joint problem of motivation and coordination" (p. 92). At the same time, Aghion and Tirole (1997) have shown that beyond the formal authority of the principal exists what they call a "real authority" that is determined by the structure of information flow. Rajan and Zingales (1998) have introduced the concept of power by arguing that access to the critical resources of the firm is more efficient than ownership in terms of incentive motivation. Baker, Gibbons and Murphy (2002, p. 39) have explained that "relational contracts – informal agreements sustained by the value of future relationships – are prevalent within and between firms". Recently, Hart and Moore (2008) and Hart (2009) have attempted to broaden the scope of the property rights approach and have introduced the idea that contracts are "reference points" in order to relax the assumption that decisions are *ex post* noncontractible.

Arguably, the refinements of these mainstream theories (see table 1) have been proposed to better suit the conditions of the modern industrial world, but are they sufficient for understanding the complexity of modern economic organizations ? If not, does the law move in a more clarifying way ?

TABLE 1 : The definition of the firm in contract economic theories

Paradigms	Main Authors	Nature of the Firm
The theory of the nexus of explicit contracts	Alchian & Demsetz (1972); Jensen & Meckling (1976); Cheung (1983)	The firm as a bundle of different contractual arrangements
The modern theory of property rights	Grossman & Hart (1986); Hart & Moore (1990); Hart (1995)	The firm as an aggregation of nonhuman assets
Transaction cost economics	Coase (1937); Williamson (1975, 1985, 2002)	The firm as a governance structure based on private ordering
Recent complementary contributions	Aghion & Tirole (1997); Holmström & Roberts (1998); Rajan & Zingales (1998); Baker <i>et al.</i> (2002); Hart & Moore (2008)	Real authority, coordination and motivation problems, nexus of complementary specific investments, relational contracts, reference points

2.2. The firm in corporate law

Corporate law never defines the firm and legal scholars have rarely asked the question of what the firm is. In addition, there are significant differences between European, American and Japanese business entities. However, in all jurisdictions, some clear similarities exist that allow one to distinguish “firms” as corporations from other business entities (see Hansmann, 1996), but not for the firm as a social entity. What is clear is that the nexus of explicit contracts view is as influential in economic theory as in corporate law theory.

The description of the firm as a nexus of contracts is “poor” because in this view, “we do not exactly know what a firm is.” The firm is “a shorthand description of a way to organize activities under contractual arrangements” (Cheung, 1983, p. 3). Therefore, it is impossible to distinguish the firm from other economic organizations. Corporate law permits a firm to negotiate and sign contracts by giving it the right to act as a single contracting party that is distinct from the individuals who own or operate the firm. Thus, some lawyers consider it more suitable to define the firm as a “nexus *for* contracts, in the sense that a firm serves, fundamentally, as the common counterparty in numerous contracts with suppliers, employees, and customers, coordinating the actions of these multiple persons through exercise of its contractual rights” (Armour, Hansmann and Kraakman, 2009, p. 6). The nexus of contracts theory does not recognize the firm distinctly from its parts, but determines its nature in regard to the relationship between its aggregate parts. In this view, Bratton (1989, p. 1498) concludes that “some transactions involve the fictive firm entity as a party, but only as a matter of convenience”. These arguments can be summed up by the term “legal personality”, which is the first core feature of the corporation.

The main attribute of the legal personality is a separate patrimony. This attribute is at the heart of the concept of the firm as a nexus of contracts and highlights a significant distinction between the assets of the firm, as recognized by the law as “the owner”, and the other assets that are owned by the firm’s shareholders, “the owners”. Thus, the principle of legal personality is significantly linked to the principle of limited liability. Indeed, limited liability means that creditors of the corporation can only make claims against the assets held by the firm itself. In other words, creditors cannot have claims against the assets the shareholders hold in their own names. Hansmann, Kraakman and Squire (2006) used the term of “entity shielding” to designate the function of separate patrimony that shields the assets of the corporation from the creditors of the corporate entity’s members. In this sense, it appears that ownership has a crucial place in the nexus of contracts paradigm because property rights on capital assets provide the rights of use, exclusion and transfer, and thus, ownership is supposed to affect the efficiency of the utilization of these rights.

Legal personality is a strong instrument of corporate law that was instituted to promote the corporation for the organization of productive activities (3). Likewise, the corporation is legally recognized through three other core functions (Armour, Hansmann and Kraakman, 2009):

1) *Transferable shares*. The business corporation is characterized by the transferability of its shares. This full transferability allows the business activities to continue even if there are changes in the shareholders.

2) *Delegated management with a board structure*. Corporate law institutes a central authority over corporate affairs and creates what is called a “board of directors”, who are elected by the firm’s shareholders. The decision-making processes are delegated to this board, which creates a separation between control, management and ownership (see the seminal work of Berle and Means, 1932).

3) *Investor ownership*. The business corporation is based on a particular regime of ownership. Being an owner of a firm is associated with both the right to control the firm, even though control can be delegated, and the right to receive the firm’s net earnings.

However, it is crucial to remember that the legal entity of a corporation is merely a fictitious entity created from a nexus of contracts and nothing more. The real social entity that is the firm – which includes the social relationships between the individuals within the firm – differs conceptually from the legal entity. Indeed, as Berle wrote (1947, p. 343), “classically, a corporation was conceived as an artificial person, coming into existence through creation by a sovereign power.” The corporation and the related rights of the owners and the capital associates are recognized, rather than the real social entity, as the legal entity by the law – even though the social conception of the firm is clearly more plausible. The firm entity can be applied in many fields of corporate law in order to better suit the real-world organizations (see Chassagnon, 2010b, 2011a) such “that the entity commonly known as corporate entity takes its being from the reality of the underlying enterprise, formed or in formation” (Berle, 1947, p. 344). The sharp opposition between the nexus of contracts theory and the aggregate theory of the firm to the real entity theory of the firm that was advocated by American legal commentators after the 1920s has been substantially discussed by Phillips (1994, p. 1062) as follows:

“The real entity theory assumes many forms, but common to them all is the claim that corporations are real, naturally occurring beings with characteristics

- (3) However, this legal principle must not obscure the real nature of the firm. Treating the firm as fiction is similar to saying that the firm does not exist. Because the firm does not exist, it cannot have responsibilities. Yet, the corporation has rights and liabilities in tort. Furthermore, the firm, as an institution, has responsibilities that go beyond the residual claims of the owners of the capital (Collins, 1993). Thus, behind the so-called legal personality of the corporate entity, there is a collective-oriented entity.

not present in their human members. Thus, the real entity theory differs sharply from the familiar aggregate theory of the firm, according to which a corporation is the sum of its human constituents. Because it asserts that a corporation is a set of contracts and because those contracts must have parties, the nexus of contracts theory also is an aggregate theory of the firm”.

In line with these arguments, it is clear that economists and lawyers often share a common vision of the legal entity called a corporation. According to Iacobucci and Triantis (2007), economic considerations dominate corporate law and are responsible for introducing the contractual paradigm and the property rights of the firm. Undoubtedly, economic considerations have been important in the choice of shareholder value as the main principle of corporate governance (see Shleifer and Vishny, 1997 ; Lazonick and O’Sullivan, 2000, 2004). As owners, shareholders receive the firm’s residual earnings, but does this really mean that shareholders own the firm ?

In the spirit of the nexus of contracts view, shareholders circumscribe the legal entity called “the firm.” However, shareholders do not own the firm ; they simply own the firm’s shares because no one owns the firm. In other words, “corporate assets belong not to the shareholders but to the corporation itself” (Blair and Stout 1999, p. 250-251). Consequently, the firm cannot be treated as a set of individuals aggregated into a homogenous group of interests called “the owner.” The firm must be recognized as “an end in itself”, which needs a model of corporate governance to give it existence that is independent from its shareholders (Kay and Silberston, 1995). The lawyer Ireland (1999, p. 56) rightly argues that “by facilitating recognition of the corporation not as an owner, nor as an object capable of being owned, but as a network of social and productive relationships, it would enable us to begin the process of reconceptualising the corporation and corporate property.” As contracts, ownership is incomplete and does not match the evolution of the firm, which is based on inalienable specific assets and on long-term networked relationships. In this sense, the question of the governance of the modern firm is a fundamental one and developments in corporate governance should be linked to the evolution of industrial dynamics.

3. THE MODERN FIRM

Since the beginning of the 1980s, the international industrial landscape has greatly changed. In short, we have moved from the integrated traditional firm, as described by Chandler (1977), to the disintegrated modern firm based on highly idiosyncratic resources. This change in industrial context has had some important consequences for corporate governance. To appreciate these changes, it is necessary to give attention to the new core features of the modern firm. Precisely, the four main characteristics are as follows : (1.) financialized industry, (2.) specific human capital, (3.) intangible capital, and (4.) vertically networked activities.

3.1. Financialized industry

The development of international financial markets has facilitated the access of firms to financing. In other words, the question of financing a firm's activities has become less important. Financial globalization, deregulation, disintermediation, institutional reform, technological progress, and even managerial innovations have played significant roles in the growth of the financial markets. Capital is quicker and more readily available. Rajan and Zingales (2001) link this process to a "financial revolution." What is certain is that these institutional and technological changes have considerably affected the corporate governance of the firm. Without available capital, alienable assets are very important because they are at the heart of the production processes of the business activities. However, as soon as it is easy to find financing for these assets, they become less and less important for the firm. Hence, alienable assets, such as plants, equipment, and machines, are considered as a matter of form. With time, more and more sophisticated and exotic financial mechanisms have been developed to make access to capital and industrial financing easier, but "as the organization of investment markets improve, the risk of the predominance of speculation does, however, increase" (Keynes, 1936, p. 158). Therefore, the financial revolution has led to the shareholder value paradigm.

Corporate governance has traditionally been characterized by the maximization of the shareholder's value (see Fama and Jensen, 1983). This reality is not new. In short, the aim has been to reduce the agency cost to limit the rent absorbed by the top managers. However, the move from a growth regime based on productive investments to a growth regime based on financial investments coincided with the financial revolution. In Chandler's firm, there was a real complementarity between financial capital and managers. The latter acted for the future and made decisions to make the business prosper and support the firm's long-term growth. The former accepted because they knew that they would grab profits. With the growing dominance of the international financial markets, it is no longer the productive value of the firm that must be maximized but its financial value. Top managers are often rewarded by stock options and the managers select the investments that maximize short-term equity returns and not growth opportunities. The firm is reduced to a financial placement and feeds on speculation. The essence of the firm is to be a set of financial claims and nothing more. Such a corporate governance model is largely related to the assumption of efficient financial markets of which it is legitimate to give the priority to the shareholder's interests. This influence has resulted in the financialization of the capital accumulation process, namely, a pattern of accumulation in which profits come from financial channels rather than from trade production (Krippner, 2005).

However, this shareholder value paradigm seems to be neither sustainable nor suitable with the real-world industry. On the one hand, the 2008-2009 financial crisis, along with the related need to rethink how financial systems must be regulated, cast doubt on the durability of such a model. On the other

hand, the governance of the modern firm should undertake the industry-specific aims. It appears that the agency and the shareholder value models should be replaced by the trustee model (4), which aims to balance the divergent interests of different current stakeholders linked to each other by long-term trust relationships (Kay and Silberston, 1995 ; Donaldson and Preston, 1995). It is time to reconsider the positive relationship between the firm's performance and the industrial operations, and to preserve corporate coherence (Rumelt, 1991 ; Teece *et al.*, 1994).

3.2. Specific human capital

In traditional capitalist firms, alienable assets constitute the glue that keeps the firm together. However, financial capitalism has made the inalienable assets the more critical resource to the firm. Indeed, inalienable assets have become less and less dependent from the financial resources. In a knowledge-intensive economy, specific human capital seems to be the more fundamental asset in competitive advantage creation. In the same way, Rajan and Zingales (2000) have considered that the availability of financing has made specific human capital increasingly important. The question of the emergence conditions of cooperation and of firm-specific human investment is more significant in an economy where the main competitive resource is human capital. Hence, employees, like shareholders, matter to corporate governance. But, if economists give significant attention to the contractual arrangements that protect the firm-specific material assets, too little attention is given, both in economics and in law, to institutional arrangements that might protect the firm-specific human capital. Yet, for any external observer, it is a heresy to exclude the employees from the governance of the firm field. The knowledge-based economy needs to recruit skilled workers because the innovativeness of industry comes from its employees rather than from its shareholders. Indeed, "the key assets a corporation uses in production is intellectual capital, that is, the knowledge and experience residing in the minds of its employees, rather than in the hands of its shareholders" (Blair and Stout 1999, p. 261). Individuals are the key constituents of the firm in a knowledge-based economy. This argument has been hidden by the nexus of contracts view of the firm that does not include employees in the analysis of the nature of the firm. Arguably, employees should play a significant role in corporate governance. To quote Summers (1982, p. 170), because the firm is conceived "as an operating institution combining all factors of production to conduct an on-going business", employees are "as much members of that enterprise as the shareholders who provide the capital."

Becker (1964) was the first economist to examine employees' skills and knowledge. He refers to the term "human capital" to focus on the investments

- (4) By "the trustee model", I mean a governance structure that acts for the greater common purpose rather than for the short-term interests of certain constituencies and parties (notably, the shareholders).

hidden behind the skills and knowledge required to make a specific industrial operation. As a result, a firm-specific human investment has a much higher value in a given firm than it has anywhere else because the knowledge is valuable in the context of a particular employment. In traditional firms, human capital was immobile and exclusively dependent on physical and tangible assets. In modern firms, human capital is more mobile, but specialized human investments have greater value in the existing employment relationship than in alternative uses. In this view, Blair (1999, p. 62) writes that “knowledge and skills that are specialized to a given enterprise are assets at risk in much the same way that equity capital is at risk once it has been committed to a given enterprise.” In a knowledge-based context, the empowerment of human capital is a resulting feature. Employees accept their dependent relationship, even if they know that they will also be engaged in real economic inertia that limits their reemployability because they could get a promotion, rent and more power (see section 4).

Specific human investments need protective governance structures (Williamson, 1985) and appropriate incentive schemes (Milgrom and Roberts, 1992) because the specialized human capital facilitates the firm’s growth. In human capital intensive firms, the opportunity given by property rights is often proposed (employee shareholding plan). However, it is clear that specific human capital, which encourages long term relationships, cannot be protected only by property rights or by explicit contracts; they need relational and informal means as well (Baker, Gibbons and Murphy, 2002) (5). Participation in management, like in Japanese or German firms (see Charny, 1999), seems to be an informal and nonlegal mechanism for creating a collective social identity. There, labor management interacts with corporate governance (Damiani, 2009). As a consequence, cohesion of the group cannot be analyzed separately from corporate governance. Therefore, norms, corporate culture, organizational goals and social relationships have to be taken into consideration (see Rajan and Wulf, 2006).

3.3. Intangible capital

The availability of financial resources has considerably weakened the role of the alienable assets in the control of corporations by outsiders, which gives a greater power to the inside stakeholders. At the same time, the physical assets have become less important to value creation when compared with human assets and intangible assets. The maximization of shareholder value no longer leads to the maximization of the value of the firm in a knowledge-based economy that is not strictly based on market prices. Therefore, we need a model of “corporate entrepreneurship” where all stakeholders are collectively invol-

(5) See the Williamsonian notion of organizational atmosphere (notably in his 1975 book) and the paper of Baudry and Chassagnon (2010).

ved in the innovation process (Krafft and Ravix, 2009). The main limit of the nexus of contracts model is indeed focused on the distribution of the surplus and is not about the creation of value. Such a perspective necessarily leads one to analyze inalienable assets, such as human and intangible assets, separately from the corporate governance. Yet, a crucial feature of the modern firm is to be linked to a dynamically changing environment that needs to implement organizational structures based on intangible and distinctive assets. These assets, which are neither physical nor financial, appear to be a source of sustainable advantage in the economic value creation process at both the micro- and macroeconomic levels. “Old” institutionalists have previously elucidated the role of intangibles in the evolution of capitalism. For example, Commons (1931, p. 649) writes that “the typical case of liberty and exposure is the goodwill of a business ; this is coming to be distinguished as intangible property.”

Intangible capital refers to different types of assets. Certain types of assets can be the object of property rights, such as with intellectual property rights for patents, trademarks, designs and copyrights. Intellectual property rights have a market value and are elements of goodwill (6). Other intangible assets, which are embedded either in social and relational capital (7) or in the organizational capital (8) of the firm, cannot be the objects of contracts or traditional property rights enforced by the law (Mahoney, Asher and Mahoney, 2005). Intangible assets are idiosyncratic to the firm and are difficult to be materialized and measured. Thus, they cannot be clearly enforced by property law. The concept of ownership does not apply to things like loyalty or friendship. That is why some economists prefer using the term of implicit or relational contracts as a means of shaping decisions. In sum, “the people, the networks among them, and the routines they follow must give the firm the capabilities it needs to create value” (Roberts, 2004, p. 283).

Such idiosyncratic immaterial assets are a significant cause of both contract incompleteness and complementarity. This exists “when the unit and the firm can together create more value than they can (by) going their own separate ways” (Rajan and Zingales, 2000, p. 215). In other words, complementarities mean the whole system is worth more than the sum of its parts and members (see Baron and Kreps, 1999). These complementary effects are based on firm-specific information, knowledge and personal networks. The aim of the management is to protect the integrity and the durability of the whole corporate entity by considering these cognitive and relational elements. Essential legal prin-

- (6) Goodwill can be defined as the market value of the firm’s specific intangible assets.
- (7) The social and relational capital refers to trust, confidence, reputation, informal commitment, mutual identification, motivation and corporate culture. These elements encourage employees to make human-specific investments.
- (8) Dynamic competency, ideas, strategies, know-how, specialized skills, knowledge, routines, learning and cognitive capabilities are included in the organizational capital of the firm.

ciples, particularly contract and ownership, can only link shareholders and tangible assets to the firm, whereas complementarities can economically link stakeholders and intangible assets to the firm.

A large part of the alternative theories of the firm has shown the growing role played by inimitable resources and competencies in the composition of the firm's assets and long-term business sustainability (see Penrose, 1959; Nelson and Winter, 1982; Barney, 1991). Trust and knowledge-based assets are necessary out of the capital market, which has significant implications for corporate governance, accounting, financial reporting and board structure (Biondi and Rébérioux, 2008). One of the more crucial questions is about the value of intangible capital. Intangible assets are not marketable and seem to be far from the efficient market hypothesis. Furthermore, the development of intangible assets needs important resources that should be provided by shareholders. However, such investments are risky, which is due to their irreversibility. Because of this growing part of intangible assets, links between vertically autonomous firms have been strengthened to both share risks and access to technological and industrial complementarities.

3.4. Vertically networked activities

The modern firm, the main institution of the new economy, has easy access to financial resources, which gives specific human capital and intangible capital a critical role to play in competitive advantage creation. However, these new trends in the industrial world have led firms to inter-firm cooperation. These changes have redefined the nature of the relationships between the modern firm and its suppliers, "often replacing simple arm's length dealings with long-term partnerships" (Roberts, 2004, p. 2). The developments of these inter-firm relationships have taken two distinct directions: horizontal cooperation (like strategic alliances, joint ventures and technological licensing) and vertical cooperation (like outsourcing and externalization). Horizontal cooperation takes place between competing firms whereas vertical cooperation takes place between different firms positioned along a single supply chain. Chandler's traditional firm was a vertically integrated firm. In addition, in terms of diversification, large conglomerates dominated the industrial landscape. However, changes in the last decades have led to the break-up of the conglomerate firm and a movement toward vertical disintegration. This movement is explained by the weakening of the control of the outsiders who own the physical capital. This trend towards vertical disintegration results in a qualitative and quantitative transformation of inter-firm relationships that leads firms to concentrate on their core businesses. This leads to the claim that firms should concentrate on the activities for which they are the best suited for and outsource the activities that are far from their core competencies (Bettis, Bradley and Hamel, 1992). Thus, the governance of the modern firm should incorporate new institutional agreements such as the development of trust and long term relationships with subcontracting suppliers that secure the compo-

ment quality, just-in-time management and flexible responses to the changing market conditions.

In a world of vertically integrated firms with recourse to equity ownership, property rights economists used their theory of optimal assignment of assets to analyze the boundaries of the firm that were relatively stable and easily defined. However, owing to the movement toward vertical disintegration and the development of complex productive systems, definitions of the firm and analyses of its boundaries based exclusively on asset property rights are no longer sufficient. Vertical, inter-firm cooperation processes that have profoundly affected the relationships between legally independent economic entities and the so-called network-firms are the best evidence of this tendency. The network-firm refers to a productive entity, such as Nike, Toyota, Airbus or IBM, that unifies a set of legally independent firms that is vertically integrated and coordinated by a main firm called the hub-firm, “which are the firm that, in fact, sets up the network and takes a proactive attitude in the care of it” (Jarillo 1988, p. 32), to produce a specific good or service. Firms are vertically integrated without recourse to equity ownership. This complex economic organization is based on some form of control that exists independently of the subscription of the employment contracts and from the integration of vertical ownership.

From this definition, we have to consider four important elements to understand the complexity of such networked firms (Chassagnon, 2010a; Baudry and Chassagnon, 2011). First, the partners of a network-firm are situated either upstream or downstream in the supply chain. Second, the internal architecture of the network-firm is structured in a pyramidal form composed by two, three or more levels that are coordinated by the hub-firm, which implies a significant delegation of responsibility. Third, most of the exchanged products in the network-firm do not pre-exist the market transaction. Thus, intra-network exchanges are “non-market exchanges” (Hodgson, 2002). Fourth, the network-firm is built on narrow links between different firms that are economically interdependent, owing to the complementarity and the difficult orchestration of their specific resources. Therefore, the inclusion of such relational consideration needs to go hand in hand with a reconsideration of the traditional corporate governance.

Regarding the four core features of the modern firm, it seems necessary to move toward a new model of corporate governance. Precisely, corporate governance should be based on a new model of power relationships that are derived from other sources than asset ownership. Such a perspective needs to supplement the more orthodox legal and economic theories of the firm.

4. CORPORATE GOVERNANCE AND POWER

The new institutional context described previously has implied significant organizational changes from within and between firms. Such changes can be observed through the lens of power relationships. The concept of power is at

the heart of the corporate governance issue. In addition, it appears that the modern firm coincides with the vanishing hand of management (see Langlois, 2003), which results in the redistribution of the power between the individual entities. The corporate governance of the modern firm should fulfill two requirements: an internal one and an external one. The former refers to the structure of intra-firm power, and the latter refers to the structure of inter-firm power.

4.1. The internal governance of the modern firm

Neo-classical economists reject the notion of power because they first considered the relationship between things (*i.e.*, the relationship among inputs and outputs), rather than interpersonal relationships. Consequently, they cannot appreciate the role of power in the creation and sharing of cooperative rent. In contrast, some economists are opposed to the neo-classical dismissal of power and have shown that power is a socioeconomic fact of the real world. From this perspective, power can be considered as a unit of analysis useful for understanding the capitalist system and the firms that make it functional and durable. To Galbraith (1979), it is inaccurate to isolate the economics from the real world by avoiding any discussion of power and by refusing to consider economics in the context of the political sciences.

Bowles and Gintis (2008) have stated that 1) power is interpersonal; 2) the exercise of power involves the threat and use of sanctions; 3) the concept of power should be normatively indeterminate; and 4) power must be durable and sustainable. In this view, nonorthodox economists analyze power in economics independently of contractual considerations and this viewpoint differs significantly from the orthodox view of market power. What is clear is that in considering socioeconomic power in the theory of the firm, it is necessary to go beyond the pecuniary and business principles that “are corollaries under the main proposition of ownership” and “principles of property” (Veblen 1904, 66), and to reintroduce the real industrial purposes of the firms. Power relationships appear crucial as soon as one considers the production process and its associated industrial relationships.

In an alternative view to Dahl’s one-dimensional and individualistic definition of power from 1957, we define power in a whole system as an individual or collective entity’s ability (that will be exerted or not) to structure and restrain choices and actions of another individual or collective entity by some particular mechanism intrinsic to the given social relationship that may be formal, as well as informal (see Chassagnon (2010b) for a more theoretical and empirical discussion on the concept of power).

In the property rights paradigm, power is dependent on ownership and is exclusively dedicated to palliate contractual failures when contingencies occur (Hart, 1995). If contracts were complete, power would not exist. Consequently, power is more a manifestation of inefficiency as opposed to a source of efficiency (Williamson, 1996). This phenomenon explains the denial of power

concept in the economics of the firm. However, power can be resurrected in economics under the condition that theorists reconsider the positive relationship between power and the productive efficiency of the modern firm. This assertion comes from the fact that power, as a vehicle of collective cohesion, leads to cooperation. This relationship between power and cooperation, despite the possible struggles and conflicts, has been emphasized in the famous work of Lukes (2005 [1974]), in the traditional “French view” of economic power of Perroux (1973), in a theory of the firm perspective by Dockès (1999) and more recently by Chassagnon (2009, 2010b). Similarly, Bierstedt (1950, p. 735) concluded that “without power, there is no organization, and without power, there is no order.”

Why do employees cooperate? This is one of the main questions of the theory of the firm. First, the ownership of man by a man is impossible without allowing slavery. One cannot force employees to cooperate. But, the employment contract formally gives an existence to the employer-employee subordination. Therefore, the root of the employment contract is not power, but authority, which is hallmarked by “unquestioning recognition by those who are asked to obey; neither coercion nor persuasion is needed” (Arendt, 1969, p. 45). But, does this mean that power *stricto sensu* is not present in the employment relationship?

The answer is clearly no because, if labor law creates obligations for employees, it does not create subordination. The law simply recognizes it. Besides, subordination is a latent decision in the allocation of tasks. Within this contractual area of obedience, the actors’ positions are formally frozen and there is authority. Authority refers to a mutual arrangement that stops when the contract expires (Palermo, 2000). Outside this instituted area of obedience, actors’ positions are not frozen and there is power. Power happens when authority vanishes. Power emerges in situations of confrontation that are the result of insubordination in the Foucauldian philosophy (see Foucault, 1982). In this view, power is, by nature, different from authority, which is the institutionalization of power and a distinct moment in the power process.

The employer has authority because he is formally and legally responsible for the control and the preservation of organizational efficiency (Lattin, 1959). This authority is necessarily unique, whereas power can be observed in each relational node. Formal authority that results from an employment contract matters in the firm because it is an important source of cooperation that establishes an ontological distinction between the firm and the market devoid of any authority (Williamson, 1975). However, authority is not exclusive but coexists naturally with different powers in the modern firm. Thus, it seems interesting to propose a typology, which takes into account the two sources of power that are different from authority.

1. The first, called *de jure*, comes from the legal system of private property that confers the right to exclude (discharge). It is because entity A can deprive

entity B of its work, which B has valuable competences such that A has *de jure* power over B (see Grossmann and Hart, 1986). Ownership is a formal resource. This argument is close to the Marxian theory. Most of time, only the employer or top managers have this resource and the right of exclusion is delegated by sovereign shareholders. However, the structural transformations described previously have significantly tempered the impact of this argument.

2. The second, called *de facto* power, does not strictly result from contractual and legal mechanisms but from an informal device: access (9) to the critical resources (Rajan and Zingales, 1998). It is because B is involved in an employment contract and invests in human capital that B has access to the key resources of the collective entity controlled by A, and therefore, B has *de facto* power over A. Thus, if the law is, via contract and ownership, a formal source of authority, power and the core resource of the employer, access to critical resources is the informal source of the employee's power. The vehicle of power is the specialization of human capital that is at the heart of resource interdependence. The employees who are specialized get control over a new critical resource: himself. This new critical resource gives them a part of the power. *De facto* power is in the hands of the employer and his corporate executives as well as in the hands of the employees because each of them participates in the intra-firm knowledge-creating process. The industrial evolutions mentioned in the previous section have made the *de facto* power greater.

The argument of the enhancement of *de facto* power has been interestingly put in light by the works of Rajan and Zingales (1998, 2000), who proposed one of the last major theoretical contributions to the theory of the firm. This singular approach to the incomplete contract economic theory has the merit to bring aspects of the organization theory to the theory of the firm (see Chassagnon, 2011b). This is in order to reintroduce power, to cast doubt on the role attributed to ownership and owners in the creation of production value and to reconsider human capital and the employees' skills (*i.e.*, the "labor factor") faced with the hegemony of capital. Even though the definitions of power and the firm are not suitable, and their recognition of the legal and social nature of the firm is insufficient, these authors have come in from the cold on the concept of power to place it in a nonneoclassical view of the firm.

The exploitation of *de facto* power is a salient property of cognitive capitalism. This form of power is a direct result of the development of inalienable assets. The starting point is that employees do not have resources other than their specific human capital in capitalist firms, so they must be indispensable, productive and effective in order to obtain part of the power. It is economically more efficient to grant employees access to the critical resources of the collective entity

(9) Access results from contracts but is not contractible *per se*.

rather than to confer to them property rights on these resources. Indeed, ownership seems to be less efficient than access because ownership has adverse effects on the incentives to specialize and prevent from exclusion. From this argument, Rajan and Zingales (1998) concluded that ownership must be held by a third party. A large part of the shareholders do not directly participate in the production process, and ownership must be given to the shareholders (see Zingales, 2000). Thus, capitalism is source of power, but the traditional relationship between ownership and power is no longer exclusive. It is not ownership, but the absence of ownership of productive assets that gives employees *de facto* power by inciting them to specialize and invest in human capital.

The main conclusion of the “triptych” presented here is that the more a firm is based on specific human capital, the greater the *de facto* power is compared to the *de jure* power, and the more total power and rent are redistributed between the different individual entities. Consequently, the more an organization is based on specific human capital, the less power the employer and his executive team have over the employees (Zald, 1969) – so long as the relational resources are inalienable. This argument weakens the role of the ownership in the definition of the firm. Thus, it is necessary to add that the development of the knowledge-based economy is sustainable only if employees, who have intellectual resources, become identified with the firm and are loyal (Alvesson, 2000). In such a context, the internal governance of the modern firm is based *ex post* on the threefold relationship between formal authority (of Williamson), *de jure* power (of Grosmann, Hart and Moore) and *de facto* power (of Rajan and Zingales), as shown in Figure 1. Finally, the internal governance of the modern firm is based on widespread forms of power that tend to reduce the role of ownership and outside shareholders in corporate governance, as the development of outsourcing practices and inter-firm networks do as well.

4.2. The external governance of the modern firm

The modern firm is often based on outsourcing strategies (see Williamson, 2008). The main consequence of this outsourcing is to make two distinct models of how power relationships exist. Indeed, the origins of power are different within and between firms. It was shown that intra-firm governance rests on formal and informal mechanisms that are linked with authority and power. However, at the inter-firm level, there are no employment contracts that regu-

late the subordinate relationship between order taker and order maker. Power no longer coexists with authority. Even though member firms of the network-organization are not integrated into the same legal structure, the legal contractual autonomy does not imply that the different parties have equal economic power (Sacchetti and Sugden, 2003). In an employment relationship, the transfer of power is held in its legal definition, whereas in an inter-firm relationship, it is the economic dependence that is at the origin of this power. Yet, inter-firm network actors are interrelated in the interdependent activities of a single social system, which are identifiable but not recognized by the law (labor law, commercial law, or corporate law).

These relationships of power assume a legal particularity that differs from an employment relationship, even though contractual clauses are susceptible to control by the actions of the partners. Masten (1988) identified the aspects that distinguish the firm from the market by comparing employment law and commercial contract law. He sought to establish whether any rights or authority of the employer can be replicated in commercial contracts, that is, between legally autonomous firms. His main conclusion was that the law does not invariably treat commercial transactions and employment relationships. Consequently, if both parties have the right to sue, the “real authority” of the hub-firm does not have the same base when compared with the formal authority of the employer. In other words, a firm cannot legally aspire to a formal authority on the employees of its subcontractors. Therefore, authority, which is a formal vehicle of cooperation within firms, is not present in inter-firm relationships. Similarly, *de jure* power that results from the ownership of assets is not a characteristic of inter-firm governance. Power does not work in the same way within and between firms. Only *de facto* power that results from resource dependence is a source of coordination.

Inter-firm contracts, such as subcontracts, franchising, technological licensing, and strategic alliances, differ substantially from simple commercial contracts. The main difference lies in the fact that trust, which results from the distribution of power, makes inter-firm networks relational organizations (Powell, 1990). The coordination of intra-network activities is not strictly contractual but depends on the relational aspects as well. Relational interdependence promotes incentives for long-term cooperation and palliates the absence of formalized control systems of authority (Uzzi, 1997). If one of the more important properties of hierarchy is to complete employment contracts by instituting a regulatory authority, one of the more important properties of inter-firm relationships is to complete buy-sell contracts by establishing a relational governance that distributes power. The integration of the entire inter-firm network is not based on formal contracts or on a specific allocation of property rights but is based on power relationships. The property rights law no longer seems to be suitable for the explanation of the inter-firm diffusion of power. Power plays an important role in the coordination of outsourcing activities (Caniëls and Roeleveld 2009), but there is no equity ownership dilution

to the actual subcontracting parties. To strengthen this argument, it is interesting to focus on the network-firm that does not involve capital participation.

The question of coordination is increasingly important because of the higher degree of organizational complexity in the “new economy.” The functioning rules of the network-firm show that the distribution of power between actors is a crucial coordinating mechanism in a vertical network of production. The analysis of the relationship of power in the network-firm reveals the absence of any legal basis for professional subordination. There is no authority in the network-firm. There are only contractual obligations, which regulate the enforcement of commercial commitments that come from the subcontracting relationship. Consequently, the network-firm is directly based on power but strictly devoid of authority (see Table 2). This complex organization is an extended and growing form of the modern firm based on a small part of intangible assets and specific human capital that goes beyond its legal boundaries. The production of a specific good or service is vertically fragmented and is made by cooperating firms, often of different nationalities. In this precise case, the governance of the modern firm needs to maintain the internal and external orders that are related to the durability of the collective social identity and the preservation of one’s reputation, the latter being the key resource of the network. Reputation appears to be the most important intangible asset for the network-firm because it legitimizes the dominant position of the hub-firm compared with the other peripheral partners by giving them access to a “conquered market.” Similarly, the reputation of the hub firm ensures that the network’s firms do not act opportunistically. The hub-firm conceals an ordering power on its subcontractors that is justifiable by its key strategic role in the coordination of the whole network. However, power is not unilaterally distributed in the network-firm. Due to the dependence between the members of a network, power is more widely dispersed and accrues to key actors having made specific investments around a critical resource of the network-firm. The complementarity effects are significant in the network-firm. Each legal entity of the network is in a situation of economic dependence with the other, which requires compliance between the actors.

TABLE 2 : The respective attributes of internal and external governances

Type of Power	Source of Power	Internal Governance	External Governance
Instituted Power (Authority)	Employment Contract	Yes	No
<i>De jure</i> Power	Ownership of Assets	Yes	No
<i>De facto</i> Power	Access to Critical Resources/Economic Complementarities	Yes	Yes

Concerning *de facto* power, the theoretical analysis of the emergence of intra-firm cooperation can be transposed to the inter-firm level. The different legal entities (employees) dedicate their key resources to the hub-firm (employer) and participate to the knowledge-creating process of the entire

inter-firm network (firm *stricto sensu*). The hub-firm initially grants the selected network partners the possibility to put their own resources into the collective entity and to develop the resources of the whole network. The hub-firm allows each individual entity to acquire a part of the power. The exploitation of *de facto* power is at the origin of the emergence of the network-firm and strengthens its integrity. The term, contract, needs to be used with caution in the analysis of the network-firm so as to not distort the legal nature of the modern firm. Legally autonomous entities are integrated and coordinated by the controlling and ordering power of the hub-firm that does not originate in explicit contracts but in organization itself. If economic relations take place between legally distinct firms, the firms of the network seem to form together and draw the economic boundaries of a single entity. The economic perimeter of the network-firm transcends the legal boundaries of the firm *stricto sensu*. Under these aspects, the modern firm extends the boundaries of corporate governance.

The threefold relationship to the power relationships observed in the case of the internal organization of the modern firm cannot be transposed to its external governance when only *de facto* power exists. Thus, the emergence of the network-firm, particularly in the form of the modern firm, appears to be based on a legal incompleteness as this complex organization goes beyond the legal rights and duties that result from equity ownership and employment contracts.

5. CONCLUDING REMARKS AND POLICY IMPLICATIONS

The traditional economic and legal theories of the firm do not seem to be appropriate for understanding the modern industrial environment. The core features of the modern firm and its associated power structure have important policy implications. The law and economics of the modern firm have highlighted the legal incompleteness that surrounds the emergence of this complex institution of the new capitalism. Such incompleteness gives room for private regulation and so-called “soft law.” The idea hidden behind this statement is that it is better for business. The private sphere takes place in the globalized context where public regulation is deemed to be a barrier to progress of the business. However, the current crisis seems to claim for the intervention of the State in economic governance in some circumstances, as is the case for the regulation of financial markets. More clearly, this claims for global worldwide governance in response to economic, social and environmental imperatives. There are urgent needs in the economics of the firm that imply moving toward some new protective rules provided by the law (Chassagnon, 2011a). The two main questions that should be raised are (1) who is the employer and who are the employees of the modern firm? and (2) who is responsible in and what are the boundaries of the responsibility of the modern firm?

Historically, the employment contract was a single employer-employee relationship that constituted the “institutional glue.” For example, Tsuk (2003, p. 1862) concluded that “there is no one group of people more identified with a corporation and more responsible for its day-to-day conduct than corporate workers.” Yet, the evolution of the firm shows that it has been based on highly

specific human capital that may extend beyond the firm's legal boundaries. In more general terms, the recent trend toward outsourcing productive modules places the employment relationship beyond the range of employment protection laws (Collins, 1990), and the question becomes the following: is a vertical disintegration strategy a means to escape from employment duties? What is sure is that the development of complex economic organizations, where there are multiple employers, has significant implications for both the legal and the socially constituted nature of the employment relationship (Rubery *et al.*, 2002). The relationship between employment and security has to be reassessed because of the unclear line between the *de jure* employer and the *de facto* employer. In the modern firm, some employees work for different legally recognized entities. These networked firms challenge the labor law in a way that forces economists and lawyers to find and implement legal reform while taking into account the problem of identification and responsibility of the "real" employer and the associated rights of the employees.

The modern firm is characterized by the dilution of responsibility. Again, the question becomes the following: is a vertical disintegration strategy a means to escape legal liability? There are no *de jure* sources of liability without equity ownership. However, the law needs to be reconsidered in regard to modern organizations that have become a complex and multilevel phenomenon for lawyers and economists. Hansmann and Kraakman (1991) have explained that disaggregate organizations raise the problem of capital boundaries because the networks benefit from the power to manipulate the capital boundaries in order to reduce or eliminate any potential legal liabilities. There are often plenty of small legal units that are economically linked to the modern firm, which leads one to question whether the whole entity or the legal individual entity should be the relevant unit of analysis. Some lawyers consider that it is necessary to keep the whole entity in certain cases (Orts, 1998), such as corporate torts, fraud prevention, legal evasion or employees' rights. In this view, because the modern firm is an integrated functional economic unit, it must also be a liability unit. For Teubner (1993), these new forms of action attribution generate new risks and "pierce the contractual veil", which should result in the institutionalization of a selectively combined liability of the whole entity.

The law and economic issues are linked to the question of the boundaries of the modern firm. It seems evident that the firm should be bound by the perimeter of its economic and social responsibilities. Firms are institutions of capitalism whose main purpose is to serve social and human needs. Thus, Roberts (2004, p. 20) argues that "performance ultimately is how well the firm does at serving these needs." In this sense, the concept of corporate social responsibility (CSR) seems to be applicable (see Davis, Whitman and Zald, 2008). A growing amount of managerial literature is dedicated to the analysis of CSR. However, CSR should not be rhetorical and is only mentioned to make some commercial practices and self-regulation more attractive and legitimate. Put differently, it is not the financial or the strategic value of CSR that matters here, but it is the explicative power of CSR in the boundaries of the firm, that is, what new insights are provided by CSR that delimit the responsibility of the modern firm. This view of CSR places the firm in a dynamic societal context. It is in this spirit that in 2001, the European Commission recognized the concept of

CSR as, “whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis”, out of legal compliance. Both economists and lawyers are now interested in the concept of CSR and it seems clear that this normative principle should be analyzed in a threefold dimension: ethical, economic and legal. However, should CSR be institutionalized by (hard) law ? Or should CSR continue to be a mechanism of soft law based on voluntary participation and private ordering ? These questions open the door to new research directions in the law and economics of the firm, especially in terms of regulatory models.

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