CORPORATE GOVERNANCE RELATIONSHIP AND VALUE CREATION: AUTHORITY COMBINED WITH RESPONSABILITY

ALFIO CARIOLA[*] and MAURIZIO LA ROCCA[**]

Università della Calabria
Campus di Arcavacata - Via P.Bucci - 87036 - Rende (CS)
Tel: +39-0984 49 2273

ABSTRACT:

This paper tries to describe the corporate governance relationships through the interaction between authority, as the most valuable source of incentive to offer to the manager for firm-specific investment, and responsibility, as a mechanism to avoid opportunistic behaviors. The two functions authority and responsibility, minimizing their distance, let *to maximize the value of the CG relationships and enhance the firm value.* It is through the "interaction" between the authority and responsibility that managers resolve hold-up problems at the beginning and, after, moral hazard problems. These two factors balance the incentive problem with the need of a constraint to the manager's activities and explain the way to incentive innovation and managerial creativity to reach firm's success.

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[*] Associate Professor in Business Economics and Finance - University of Calabria (Italy); e-mail a.cariola@unical.it.

[*] Assistant Professor in Business Economics and Finance - University of Calabria (Italy). Corresponding to m.larocca@unical.it.

1. Introduction

The performance of a firm is strongly influenced by managerial decisions about which markets to enter, what products to manufacture, how to price goods, how to respond to competitors' actions, and so on. The quality of these decisions depends not only on the ability of the managers but also on the incentives managers have to make decisions that create value for stockholders. Managers may decide to exert less effort on the job or to consume more perquisites than stockholders would like. Managers may also select investment, operating, or financial policies that fit their risk or time preferences rather than those of the stockholders.

Assessing how mangers behave is an important dimension of the analysis of any firm. It requires understanding the relationships between managers and stockholders - or, more specifically, understanding where the incentives of managers and stockholders may diverge - and understanding the effectiveness of various governance mechanisms in aligning those interests.

Nowadays This topic became more relevant according with the changed nature of the firm (Rajan-Zingales 2000b); the human capital, as inalienable resource (Hart-Moore 1994), became very important to manage the firm in those environments were the source of competitive advantage is strongly based on knowledge and intangible resources (Nahapiet-Ghoshal 1998).

The important role of this intangible asset, to manage the complex environment and the different contingencies, amplified the incompleteness of the contracts changing the nature of the Corporate Governance (hereafter CG) relationships (Rajan-Zingales 1998 and 2000b) and highlighting the role of the manager. He has the access to critical resources; he owns good ideas, skills, competences and techniques and knows how to act and to compete in complex environment. In this environment the source of competitive advantage, value creation and the most efficient answer to the different contingencies is based on the *Intellectual Capital* of Management (hereafter ICM) *as a set of managerial competences and capabilities that concur the formulation and implementation of new and innovative strategies and investment's projects* and let the firm creating growth opportunities.

The primary role of intellectual capital (Nahapiet and Ghoshal 1998), is first of all, due to human resources who who make *firm-specific* investment on the asset in place of the firm Hart and Moore (1994) and Rajan and Zingales (2000b).

Therefore, increasing the relevance of the intellectual capital of the management (Zingales 1998, Rajan-Zingales 2000b, Goldman-Gorton, 2001), it has to increase the discretionarity of the manager who owns this competences and capabilities. This situation makes sharpen the agency problems (Rajan e Zingales, 2000b, Bamberg, Spremann, 1987, Conner, Prahalad, 1996; Roe, 1996) and brings up the role of Corporate Governance relationships and systems[1].

According to the positive intellectual contribution of the manager to compete, the goal of this paper is to integrate the capabilities perspective, that raises the role of the manager's competences, and the incomplete contract perspective, that raises the role of

[1] *CG relationships* as a set of economic relations between the different stakeholders of the firm. The optimal set up of these relationships, toward common shared mission and vision, and through governance mechanisms, gives rise of an efficient *CG system* oriented toward the value creation for all the stakeholders.

agency problems, to describe how the CG relationships work in high competitive and complex environments.

The paper is structured as follow. After the identification of the goal of the paper, a specification of the perspective adopted and an overview of the related literature and in the third paragraph there will be an analysis of the authority and responsibility concepts that describe the CG relationships. Afterward, in the fourth paragraph, there will be an analysis of the relation between CG, intellectual capital and sustainable growth of the firm. The analysis ends up to highlight the coordination role of the organizational capital to mediate and mitigate the combination of authority and responsibility and define good CG relationships which sustain creation of value for the firm.

2. Perspective of the paper and related literature

In this paper there is an effort to combine a concept of firm as a contractual entity (Jensen-Meckling 1976, Hart 1995) with a concept of firm as a bundle of capabilities (Teece 1990), according with the perspective adopted from Zingales (1998) and Rajan and Zingales, (1998 and 2000b).

Giving a role to the intellectual capital, the classical principal-agent approach varies and needs to be rexamined according to the change in the nature of the firm and through the definition of the CG relationships.

This paper is related to the vast literature on the theory of the firm[2]. A basic tenet of economics' discipline is the proposition that prices allocate resources efficiently. The invisible hand applies a system of prices that contain information, without the necessity that each market participant has to bear the full cost of producing that information. But when a firm forms a closed-market, resources that were previously allocated via the invisible hand of the price system are now allocated by the visible hand of managerial authority within the firm.

Since it is the manager, not owner, who allocate resources inside corporation, we must have a model in which there is a separation of ownership and control, first discussed by Berle and Means (1932) and later by Jensen and Meckling (1976)[3].

A firm, considered as legal entity[4] separated from the shareholder, needs to be directed by someone who may be the owner, or an agent of the owner, and who, in any case, has the authority or right to decide how resources (e.g., managers' efforts) are to be allocated (Goldman-Gorton 2002).

A classic principal–agent relationship arises when stockholders delegate decision-making authority to managers. Managers view the firm as a source of salary, perks, self-esteem and as a means of creating value from their human capital. To protect and enhance

[2] See Holmstrom and Tirole (1989) and Hart (1989) for surveys.

[3] The economic importance of the modern corporation results from combining the capital of many dispersed stockholders with the operational skills of a professional management team. Separating the ownership and management functions gives corporations the access to a much larger pool of capital than is available to most sole proprietorships or partnerships. Corporations may thus pursue projects and production levels at a scale beyond the reach of other forms of business organizations. Realizing the benefits from these pools of capital, however, usually requires delegating day-to-day control of corporate assets to professional managers with specialized skills.

[4] The principal has limited liability and hence brings this "firm" to be a separate legal entity.

these multiple sources of benefits to managers, only one of which is equity value, sometimes managers make decisions that benefit them personally at the expense of stockholders.

Managers have considerable latitude over allocating resources within their sphere of influence. The relation between managers and stakeholders is based on trust: managers behave in the interest of the stakeholders. According to the difficulty to observe what they are doing and to the high cost of monitoring who does what, the firms may prefer to evaluate on the basis of the bottom line, that is the output. This is probably the more appropriate interpretation of the assumption on non-contractibility of tasks (it is not possible to fix by contract all different behaviours that can emerge for every state of nature).

Building on the work of Simon (1957), Williamson (1975) observes that a fundamental source of transaction costs is the impossibility of planning all future contingencies in a relationship. As a result, a loss of information revealed by market prices, jointly with a complex environment, leads to a moral hazard problem which raises the role for CG relationships.

If managers collect skills, for example, by carrying out tasks and specializing their capabilities, and this increases their authority, discretion and their private benefits, it is not surprising that they have an incentive to overeat (overinvest in his skills and in innovative and too aggressive strategies and projects) if they are not responsible for their behaviors.

According with the change in the nature of the firm (Rajan and Zingales 2000b), the governance of the firm gets a meaning toward the capabilities and competences of the manager and not anymore based on the property right (Prahalad e Hamel, 1990). Almost everyone agrees that people are the prime resource today.

Now that the nature of the firm is changed, what was unexplained in the neoclassical approach – the quality of the management – is become a critical asset (Rajan and Zingales 2000b). The new firm tend to be human-capital-intensive based, because this is the better way to face a highly competitive environment.

The source of power in the firm has changed too; it is not based anymore on the ownership of physical assets. The power of ownership is severely limited by the crucial role of the management's capabilities, that can quit the work's relationship and take away with him his human capital and knowledge.

According to the literature on agency theory[5], the most important agency problem was to avoid expropriation of value by the managers against the shareholder, through different behaviours and actions based on stilling, less effort, underinvestment, overinvestment (empire building), lots of perquisites, etc.

Nowadays the most crucial asset is an intangible asset (the intellectual capital owned by the manager), that increases the incompleteness of the contracts and also changes the nature of the CG relationships; a key problem is to incentive *firm-specific investment* of the manager and, also, to avoid that he will leave the company taking with him his intellectual capital. As a result, the problem of "appropriability", rather than managerial shirking, may now be a crucial issue of governance (Zingales 1998).

The most important point, in order to have a good manager, is to enhance his sense of responsibility to try to potentially constrain the manager's inefficiencies and limit the range of possible strategies he can formulate, according to his authority, at the more profitable one.

As topic of this paper, corporate governance is the study of how the authority (decision power) is allocated and exercised and, above all, of how there is an allocation of

[5] For a survey of the most important agency problems and the related solution see Denis (2001).

authority on a manager, combined with the need of protection and safeguard (responsibility) of the interest of all the other stakeholders.

The three main components related to the CG relationships are the:

- definition of the firm's goal, referred to the entity called firm, for the common shared benefits of all the stakeholder[6];
- efficient allocation of authority (decision power) ex-ante;
- efficient distribution of the surplus and reallocation of authority ex-post.

The incentive problem, on which the previous agency literature focused, is still important, but there is another point of view from which to observe the governance of the firm. Under the incomplete contract approach it is relevant to find the right source of incentive, not only to prevent ex-post expropriation of value but also in order to:

- apply, ex-ante, for *firm-specific investment* of the manager in the firm activities;
- tie the human capital, and his intellectual capital, at the company.

To solve the first above mentioned incentive problem, which, in literature, was analyzed on different prospective, is not enough to look at ownership incentive[7]. A better source of incentive for firm-specific investment in the firm's activities is better based on granting authority[8].

The agency problem, or the now better called CG problem, is that giving too much authority can self-defeat the firm.

The manager can have opportunistic behaviors ex-post, exerting less effort in his job, consuming perquisites, but also by exploiting the growth opportunities outside the firm by his own. As it is well known, the value of the firm is equal to asset in place plus growth opportunities (Myers 1977); it is the manger, thanks to his knowledge and competences, to create and catch growth opportunities. But he can avoid to share the benefits of the growth opportunities with the other stakeholders and appropriates completely of the value, creating his own newco (as in the case of Intel and FairChild).

[6] This explains why companies spend a lot of time to define and update their *mission* and *vision*. It is important to emphasize, in a corporate governance definition, the importance of linking governance to the achievement of an organization's *mission* and *vision*. The object of the firm isn't anymore the simple maximization of shareholder's value but, as highlighted by Jensen (2001) and Freeman (2002), there is a need for an enlighten stakeholder orientation of the firm scope. The Corporate Governance system has to take care about the definition of the firm's scope, because only this way it will be possible to address an efficiently the allocation of resources and the surplus-sharing.

[7] Since the work of Jensen and Meckling (1976) to solve governance problems and iprove corporate performance was thought to the role of *managerial (insider) ownership*. Nevertheless, other theoretical and empircal analysis highlith the lack of direct relation between *managerial ownership* e *performance* (for a survay see Demsetz and Villalonga (2001). Moreover, Pilotti (1991) said that the corporate governance doesn't apply just for a strickly economic instrument.

[8] The company needs the firm-specific investment of the manager to compete in the market and create value. Without the capabilities that the manager can develop on the firm's activities, the companies will be unable to reach the economic success. As it is common known in literature, if a manager specializes his competences on the firm's asset, creating "complementarities", he burns "outside option". For this reason the manager has to be incentivated to specialize. The most valuable way to incentive the manager to specialize is giving him authority. With specialized human capital the firm will be able to create and catch growth opportunities, and the managers who had specialized their human capital to the firm, creating complementarities, will get a greater piece of reward. Behind this, as source of reward, he acquires prestige because everyone will recognize him as the owner of the capabilities to manage the complex environment.

Therefore, source of firm's competitive advantage and source of value is the ability to retain human capital and exploit growth opportunities. And so, it is relevant to bond the power of manager. This is nowadays the role the owner of physical assets has, which emphasizes the needs of responsibility in the hand of the management[9].

A balanced allocation of authority and responsibility can improve the management's incentive for firm-specific investment subordinated to the interest of all the stakeholders.

In this paper there is an attempt to describe the relation between authority and responsibility through the need to incentive the firm-specific investment of the manager and the need to bound, through responsibility, the temptation of power-seeking and opportunistic behaviors.

Under this prospective the CG system has the role to incentive firm-specific investment (specialization of the human capital's competences on the assets in place of the firm) to capture the growth opportunities, to efficiently and proportionally reward everyone for the different kind of effort faced and to set complementarities between the intellectual capital of the manager and the asset in place of the firm, moving toward an intellectual capital owned by the company.

This point of view emphasizes the role of the organizational capital and the moral and ethic rules. Both these factors can have, for example, as output, the creation of "reputation" and both of them depend on the efficient allocation of authority combined with the sense of responsibility.

3. CG relationships: authority combined with responsibility

In the adopted perspective, especially for complex and evolutive contest, the CG problems, object of analysis, concern of an ex-ante *hold-up* problem, referred to the need to incentive firm-specific investment, recognizing its relevance and compensating for it, and an ex-post opportunistic or a moral hazard problem (Williamson 1996), referred to the possibility that a manager with competences and capabilities specific on the asset in place of the firm, thanks to his authority and discretion, extracts more private benefits.

Williamson (1985), analyzing the governance structure of the firm as competitive factor as important as capital and technology, highlighted the relevance of the corporate governance problem as an hold-up problem ex-ante (as the tendency to underinvest according to the increased uncertainty on the yield and the lock-in effect), combined with the need of protection ex-post of the investors.

The figure 1 shows the CG problems as object of analysis of the paper.

[9] The manager has to take care about the interest of the stakeholder and, overall, of the firm; there is a need of remuneration for the investors' investment. If the manager doesn't behave in the investors' behalf he will be penalized, first of all, by the job-market. There is no space for managers with no moral or ethic behaviors and with careless attention for the investors' interest. As much the manager is self-fish as much he will be penalized.

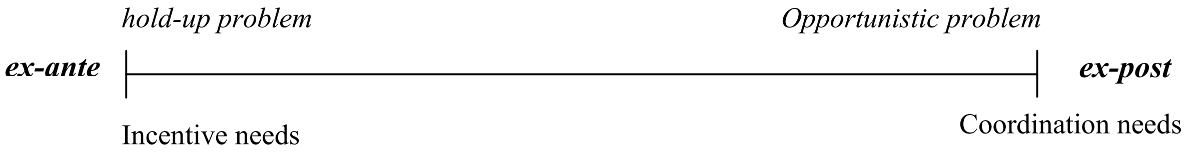

Figure 1 - *Timing* and CG problems object of analysis.

This paper tries to describe the interaction between authority, as the most valuable source of incentive to offer to the manager for firm-specific investment, and responsibility, as a mechanism to avoid opportunistic behaviors. Prahalad and Hamel (1990) argued that in the long-run the competitiveness of a firm derives by the ability to build, faster and at lower cost, the core competences which create innovative products and a competitive advantage.

The forthcoming observations are valid under some specific situations and assumption, not omnicomprehensive, that can better fit very specific, high complex and evolutive contests.

Manager is granted with authority (and more discretion) because his *firm-specific investment*, and the intellectual capital developed on this way, is the most valuable resource for the firm to compete in the market.

Authority reduces the uncertainty of the contest where the firm operates and the problems of the incompleteness of the contracts generated especially in human-capital based contests (Rajan e Zingales 1998). It works until it is able to coordinate the different expectation of the different stakeholders, addressing the business toward a common shared mission and vision.

This observation raises the relevance of the authority combined with the relevance of the need of protection of the stakeholders against opportunistic behaviors of the manager (responsibility). So, it comes up the role of the CG relationships.

If it is important the role of the authority to guide the firm to better compete in the market, it is important as well the corrective role of the "corporate responsibility".

Arrow (1974) notes that to have a positive contribution of an effective authority to create value, from a social point of view, it is important, to have a positive contribution of a developing sense of responsibility. Arrow (1974) highlighted the role of a responsible authority to guide the firm.

The observation, which the paper is based on, raises the relevance of the managerial control to face the complex and variable environment, jointly with the need of protection against opportunistic behaviors of the management.

Under this prospective the CG explains the combination of authority and responsibility which drives the organization system to keep the business going.

In literature[10], there is a common shared opinion about the difficulty to formalize the role of the CG relationships for the value creation process; it appears not monotonic OR linearly related to the performance of the firm (see Demsets-Villalonga 2001 for a survey).

For this reason, according to Arrow (1974) and the related literature (Williamson 1985, Feiwel 1987, Aghion-Tirole 1994 and 1997 and Barca 1994), the "corporate governance

[10] For an interesting example and review of the perversity of the definition of CG relationships see: Demsetz-Villalonga (2001).

relationships " can be explained, according to the level of Intellectual Capital of Management or hereafter ICM (the *x* in the function), through the relationships that can evolve in trade-off between its two components:

- Authority, $A_{(x)}$, and
- Responsibility, $R_{(x)}$.

This prospective describes the CG relationships as a function of authority $A_{(x)}$ and responsibility $R_{(x)}$, through the level of intellectual capital of management:

$$\text{CG relationships} = f_{\text{ICM}}\,[A_{(x)}, R_{(x)}]$$

The level *x* of intellectual capital is not contractible; it means that it is not possible to fix by contract the right amount of intellectual capital to face the complex environment and better compete. Manager will decide the right level of intellectual capital according with the different contingencies. According to the level of ICM, it will let vary the intensity of authority and responsibility functions.

In the figure 2 is synthesized the corporate problems object of analysis.

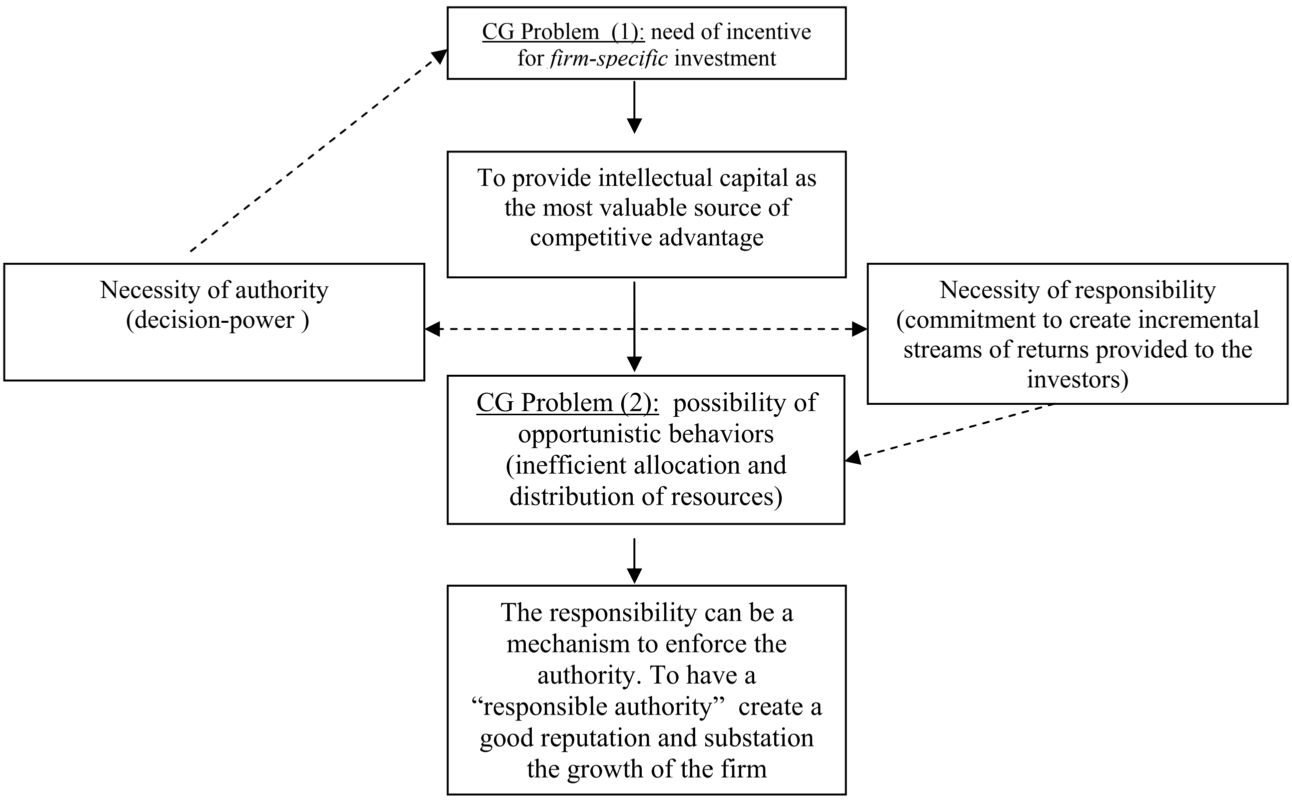

Figure 2 - CG problems as object of analysis.

When there are good CG relationships there is a good fit between $A_{(x)}$ and $R_{(x)}$. However, in many cases, according to Barca (1994) and Arrow (1974), there are some problems to get a good fit between them. At the beginning the manager has to receive an incentive to specialize his skills on the firm's assets in place; this is achieved through the release of authority, without the right incentive an hold-up problem is present, because the firm needs the firm-specific investment of the manager (intellectual capital) but the manager, according to the point of view of Hart (1995), is scared to specialize too much his competences and become too dependent on the firm asset, losing his human-capital value in the labor market (lock-in effect).

Authority is a kind of "return to skills" which needs to be accompanied by responsibility (to whom authority function is subjected); otherwise it ends up being selfishly oriented. As pointed out by Barca (1994) in a good management, authority and responsibility proceeds together, but, after a certain level of ICM, it could emerge a trade-off between $A_{(x)}$ and $R_{(x)}$. In this case it raises the role of the corporate responsibility.

This is similar to the trade-off between authority and discretion pointed pout by Williamson (1996), Aghion and Tirole (1997), Baker *et al* (1999 and 2001). Nevertheless, it appears more fruitful and interesting to compare the role of authority with the role of responsibility. Recently a work of Foss e Foss (2002), analyzing the delegation of control's process had considered the interaction between authority and discretion with an exponential and a logarithmical function. In this paper, I will suggest to look at the authority and responsibility function similarly (the same kind of functions).

3.1 Authority dimension

The concept of authority was first discussed by Coase (1937)[11] and, then, defined by Simon (1951)[12] as the right to select actions affecting part or the whole organization (decision power). As pointed out by Grossman and Hart (1986) and Hart and Moore (1990), authority may be conferred by ownership, giving to the owner the right to chose about the use of the asset. Authority may result, more generally, from an explicit or implicit contract allocating the right to decide on specified matters to a member, or group of members, of the organization.

On a similar vein, Aghion and Tirole (1997) analyzed the allocation of "real" and "formal" authority within organizations, as has based on asymmetric information. Formal authority enable the allocation of decision (right to decide), while real authority is concerned to whom effectively makes the decision (effective decisions control). In this paper real authority is determined by the structure of information and by the complexity of the environment. Real authority is, in the ends of people that actually hold information and also gain specific knowledge about firm's environment applied to firm's activities, developing intellectual capital[13]. People with formal authority will exercise real authority if, and only if,

[11] Coase, defining the firm as a "set of conscious power in an ocean of unconscious cooperation which needs the role of the authority to drive the cooperation", pointed out the role authority in managing firm's activities. Arrow (1974) highlighted the coordination role of the authority too.

[12] Beginning with him, there is a large literature that takes contract incompleteness as given condition due to transaction costs, and then explores the implications of this for efficient governance. He argues that giving one agent *authority* over another, economizes on transaction costs by allowing one to delay decision making until after uncertainty has been resolved.

[13] Not only information, but also knowledge is not symmetrically distributed and strategic decisions can be biased. High complex decision needs the core competencies and the capabilities of the management and this

actually acquires information and knowledge about business; otherwise it will follow the recommendation of the other party. Formal authority wins when the principal is informed and skilled (in general when the environment is steady). On the other side, a poor informed an unskilled principal who just rubber-stamps the subordinate's proposal, gives to the agent (manager) real authority.

The role and the allocation of authority is related to the resource-based literature (Penrose 1959, Wernelfelt 1984) and on the Intellectual Capital (Nahapiet J., Ghoshal S., 1998 developed the concept of intellectual capital that in this paper is strictly related to the people who makes *firm-specific investment*). This is due to the complexity and specificity of these resources related to the particular assets of the firm and to the tacitness of this knowledge. This is also related to the impossibility to apply ex-ante for a certain level of ICM; it is the manager that will find the right way to face the different contingencies.

In particular, on the role of the human capital and managerial capabilities there is a huge literature, starting from the contribution of Gary Becker (1962), which is concerned with the old saying that "knowledge is power".

Real authority, with the meaning of power to make decisions and implement behaviors which influence part or the whole organization, matches the role of the managers which face the market competition and resolves problems thanks to their skills and capabilities.

It is assumed that by carrying out tasks, agents will gain skills that increase future productivity[14]. Making firm-specific investment the manager improves his skills and capabilities and so increases the intellectual capital available for the firm. The intellectual capital of the manager, as source of competitive advantage, lets the manager be granted with authority.

In particular, especially in high competitive markets, the firm competitive advantage is based on intellectual capital, and the manger, providing this intangibles resource, gains authority as reward.

Therefore, in this paper a*uthority is described as a "return to skills" the manager gets by his firm-specific investment.*

The concept of authority concerns to the real power to take decision about the allocation of the resources, influencing part or the entire firm.

Authority comes to the manager as reward of his effort and firm-specific investment. It is a real authority, or better called power, which does not need property rights because it is based on the unique and very relevant "intellectual capital" and let him earn a kind of return more valuable that a pecuniary return because is composed of profit jointly with power and prestige.

It is further assumed, but it is not so irrealistic, that these skills translate, jointly with decision power, into higher wages (Backer, 1964). An immediate implication is that the increase in the managers' skills increases their wages, as a related consequence, at the increase in their authority. Agents gain skills and enhance their intellectual capital working and carrying out tasks; it is common assumed that these skills translate into higher wages

means that, expecially in high complex sectors, it is important the role of the manager in undertaking innovative and complex strategies or projects, and face the very turbulent and challenging environment.

[14] For example, by operating a machine, a worker is assumed to develop an understanding of how it works and when it is likely to break down and, in this case, what to do. Similarly, holding a client's account may provide information on the client needs.

and, as a common implication, this implies wider private benefit (Zingales, 2000). Furthermore, the manager will try to increase as much as he can his authority, as the most valuable reward, because it is strictly related to the possibility of appropriating of more private benefit (Zingales, 2000).

The level of authority a manager gets is related to the private benefit of control, which is not only a simple economic issue based on the perquisites and economic benefits, but also on his status, his prestigious role in the firm and in the society, his self esteem and so on.

The level of reward for the manager is low for low level of ICM (which can be provided by many managers in the labor market) and, instead is *exponentially* higher because of the exponential relevance of the ICM for the creation of value.

To explain the exponential shape of the authority function is strictly saying that, as for a money capital, for authority there is a *compounded* return for the intellectual capital (*firm-specific* investment). The authority's function has an exponential function described by the possibility to apply the principle of coumpounding to the intellectual capital. As for a financial capital invested at a specific rate after a certain period increase the wealth exponentially (the interest are calculated every time on the capital plus the past interests accumulated), in this case coumponding the intellectual capital will increase exponentially the wealth (authority) of the manager.

deduction 1: authority is positively related to the level of the Intellectual Capital owned by the manager and it increases exponentially with a marginal increase of ICM.

According to the explanation given above, and to the deduction 1 the relation between authority and intellectual capital (ICM, or our x in the model) can be approximated and represented as an exponential function:

$$A_{(x)} = \beta_0 + e^{\beta_1 x}$$

where:

- $A_{(x)}$ is the (real) authority the manager gets increasing his firms' specific investment (level of ICM specific on the firm's asset in place);
- x is the level of Intellectual Capital of the Management (ICM);
- β_0 is the intercept and has a positive value; it means the minimum level of authority a manager gets without any firm specific investment. A manager gets a high or a low level of authority just in the moment he becomes in charge. It is the basic level of authority the manager gets just for the role he recovers.
- β_1 is the sensibility of the authority to x. The basic level of $A_{(x)}$ the manager gets just for the role he has (β_0) can increase if the manager does firm-specific investment, with a speed which depends on the curvature of the $A_{(x)}$ function (β_1). The curvature depends on the kind of organization the firm has, the sector which belongs, the level of competitiveness or stability of the environment.

The positive relation between authority and ICM ($A'_{(x)} > 0$) is also intuitive. The manager wants to increase his level of skills if this means an increase of authority. At the beginning, marginal increase of ICM does not mean a sustainable enhancement of authority - the manager could be still substituted with another manager because his firm-specific investment is low. At this time, there is no lost of value for the firm to change the manager for another manager. The firm does not lose value in changing the manager for another manager. Furthermore, the manager specializes his competences developing ICM and becoming an important resource for the firm.

The manager wants to increase ICM, and is encouraged to do so, in order to get as reward more authority. It is possible to picture that, especially in sectors very competitive and turbulent, there is an exponential increasing effect of ICM on the authority of the manager ($A''_{(x)} > 0$). Jointly with the compounding explanation there are many and further explanations for this exponential relevance of the authority's function according to the level of ICM:

The importance of firm-specific human investment for the firm, to acquire a competitive advantage[15];

- The relevance of firm-specific human investment for the manager who increases his personal value[16];
- The assumption that people never get satisfied of authority.

I argue that in high competitive and complex contests, the managers are more willing to make firm-specific investments adopting new and innovative strategies or projects. If these strategies or projects are not implemented for opportunistic goals, the labor market, in case of distress or bankruptcy, will appreciate the value of these capabilities too and, according with the assumption that "managers learn from their mistakes" and that "there is a great need of highly qualified and skilled managers", they will find another good job in another firm (*high employability*)[17]. The managers of firm involved in the internet bubble were able to get another good job after the distress or bankruptcy of the previous managed firm.

The change in the nature of the firm enhanced the need of innovation and managerial capabilities. The financial capital becomes more available (thanks to the role of venture capital and business angels and the role of the private equity market) and the availability of human capital highly skilled becomes more important.

The assumption is that the "managers learn from their mistakes", implementing better answers in the forthcoming situations. This is an assumption that could be realistic for high complex sectors were the knowledge accumulated on-the-job training is the most valuable resource. An increase in the level of ICM increases the skills and competences of the manager outside the firm too. Naturally, if the manager is fired for reasons related to his opportunistic behavior, this penalizes his value in the job market.

For this reason, in case of bankruptcy, the manager keeps, for assumption, a part α of $A_{(x)}$, where α is a fraction of $A_{(x)}$ the manager keeps outside according with the reputation, trust and respect of ethic and moral principles after the relation between the stakeholders and the manager breaks down.

For this reason specializing doesn't burn outside option. It is the opposite in this case.

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[15] A marginal increase in ICM has an enhanced value for the firm, which increases the source of competitive advantage and the ability to face the contingencies compared to the others competitors. For marginal increase in ICM the manager becomes even more essential for the firm's activities and this rises the exponential trend of A(x);

[16] An increase in ICM increases the visibility of the manager on the market - for low levels of ICM there is no visibility to earn; for high levels of ICM there is a high level of visibility to earn. This leads to an increase in his private benefit (economic and social). His value outside the firm, in the job market, increases under fair and transparent behaviors.

[17] Fama (1980) was one of the first researchers to point out the role of the labor market to mitigate the agency problems.

The manager increases ICM because, this way, he can increase $A_{(x)}$ and, through the appreciation of the market, he can also keep a part of the value of these skills outside the firm. How much value the manager keeps outside the firm depends on the level of fairness, trust and reputation of his behavior.

3.2 Responsibility dimension

The model depicted in this paper points out two kinds of power. A power related to the capabilities to make decisions which influence a part or the entire firm, such as a power related to the real authority, jointly with a power related to the capabilities to bound the owner of real authority when he is power-seeking oriented, toward opportunistic behaviors.

An increase in an agent's real authority promotes initiative, incentive firm-specific investment and improves the probability to exploit growth opportunities. On the other side, an agent's real authority implies a loss of control in the principal[18].

If the ICM is the source of competitive advantage and value creation, it is important to analyze how to incentive managers to increase their ICM, or better, to encourage them to make firm-specific investment. The better incentive is to give them authority. On the other hand, too much authority can take to power-seeking problems. This means that it is important to incentive firm-specific investment, to improve the level of ICM and the quality of the management, creating value, but it is also important to bound to excessive power-seeking, settling good CG relationships.

The manager, especially when his role is very important to face the complexity of the environment, can use the authority he gets for personal interests. Managerial theories argue that management often uses its discretion in inefficient ways; Marris (1964) argued that managers may be growth maximizers, while Shleifer and Vishny (1989) contend that managers may pursue strategies which make themselves indispensable to the firm.

Having and increasing authority could mean, on a negative perspective, that a manager has more discretion power to implement opportunistic behaviors. For this reason, on the other side of the coin, there is space for the role of *responsibility* in the CG relationships.

The *responsibility* is complementary to the managerial authority and defines the span of the managerial power. *Authority is subject to responsibility that is defined as a commitment of the manager to create incremental streams of return thanks to the intellectual capital developed.*

It is a concept that, implicitly, is analyzed in many definition of Corporate Governance, for example, Shleifer e Vishny (1997) considers the CG ad a set of mechanism to guarantee to the stakeholders a return from their investment; this means that the manager has to ensure to the stakeholders a certain stream of return from their investment.

A responsible manager should show and let perceive to the stakeholders the positive incremental streams of return that will be possible to obtain thanks to new and innovative strategies (which can create value toward growth opportunities). In this case it raises the role for the "investor relations" activities which let the manager to reduce the asymmetric information between his strategies and investment projects and the expectation of the stakeholders. To adopt strategies and projects too innovative can move the major part of the

[18] Control means (Zingales, 1998) to have the access to the most valuable and critical resources of the firm, to be able to use, work and create complementarities with them.

firm's value on the growth opportunities part (in this case it will be possible to see the benefits in the future).

If the value of the firm is mostly based on growth opportunities, the positive streams of returns could be postponed to far in the future, with a higher uncertainty to materialize. The stakeholder could not appreciate innovative strategies that do not translate in tangible returns in a medium term; if the value of the firm is strongly based on growth opportunities the stakeholders could be scared that the new strategies and projects carry opportunistic behaviors. This could penalize the market value of the firm. For example, a manager of a high-tech firm, after the realization of the new DVD system, could take care about new investment for a holographic system without push to let the new DVD system becomes a standard in the market. The stakeholders are ready to trust the manager for new strategies and projects, but the management has to show some benefits in the medium term.

The responsibility, as highlighted in the stakeholder approach, is a complement of the necessary managerial discretion, owned by the manager to face firm's problems, promoting the creation of and the sustainability of a competitive advantage and, at last, to enhance the firm's value.

Responsibility provide the consistency and trust required for profitable cooperation and reputation-building while unethical behavior can have high costs for the company and for the society.

Recent contributions found that firms that demonstrated a high level of corporate social responsibility tend to lead to an increase in the number of institutions that invest in their stock (Prendergast, 1995).

As the ICM increases, the more innovative strategies formulated by the manager let the firm's value become more based on growth opportunities. From a stakeholder approach A firm's value more based on growth opportunities means to postpone the manifestation of streams of return, that can be subject to a wider set of contingencies. On this way an increase of ICM lets marginally decrease the commitment of the management to create incremental streams of return.

For higher level of intellectual capital developed by the manager the sense of responsibility increases with a decreasing intensity compared with the increase of authority.

deduction 2: responsibility is positively related to the level of the Intellectual capital owned by the manager and it increases logarithmically for marginal increase of ICM.

The relation between responsibility and intellectual capital (ICM) can be represented as a logarithmical function, also because it comes after (later) the first order priority (authority) in the manager's mind and is equal to:

$$R_{(x)} = \delta_1 * \log\left(\frac{x}{\delta_0}\right)$$

where:

- $R_{(x)}$ is the responsibility of the manager and, in general, the need of protection and safety of the stakeholders' interests against opportunistic behaviors. The stakeholders want to make sure there will be a certain stream of returns (not too far in the future), to appreciate the value of the high levels of ICM;
- x is the Intellectual Capital of Management;

δ_0 is the intercept, it means the point in which, after an encouragement to the manager to make firm-specific investment, the stakeholder needs to make sure that the manager behaves in stakeholders' behalf. If the environment is stable, with a low level of competitiveness, the sense of responsibility starts later (after ICM reaches a high level). On the other hand, in a very complex context, the stakeholder needs the firm-specific investment of the manager to face the market competition but, at the same time, the stakeholder needs to appreciate the sense of responsibility of the manager (the responsibility function starts very soon) paying attention to the timing of the streams of return in the future.

δ_1 is the sensibility of the management's responsibility to x. It addresses the level of attention that the manager has to have towards the stakeholders. If the curvature is high, the stakeholder pays a lot of attention to the quality of the strategies and projects adopted by the manager in correspondence of the level of ICM. The curvature depends on the kind of organization firm has, the sector which belongs, the level of competitiveness or stability of the environment.

Nowadays, especially after the Enron's scandal and the following troubles in others companies, the role of these coefficients becomes very important. The attention of the stockholders starts very soon, already for low level of ICM, looking at the expected stream of returns[19].

$R'_{(x)} > 0$ and $R''_{(x)} < 0$ means that the sense of responsibility increases, marginally, less than the increase of ICM. This because an increase of ICM generates a lot of growth opportunities compared to the stream of returns. If the risk-return profile of the firm's investors is fixed, when the value of the firm is mostly based on growth opportunities, the value of the streams of return might decrease because its volatility increases.

The manager has to be *responsible* and protect the financial investment of the stakeholders and he also has to show to investors that he deserves trust. If the manager increases the level of ICM and his authority, implementing in the firms more innovative strategies or projects, probably, the streams of returns will become positive later in the future.

The market evalues the firm according to the expected FCFO (free cash flow from operation) the Wacc and the rate of growth g; when the manager increases the level of ICM[20], the innovative strategies formulated enhance the value of the firm based on the role of the growth opportunities; this means that now the FCFO' is divided by the Wacc' minus an enhanced growth rate g'. The stakeholder can feel, in adopting too innovative strategy, the risk to get a stream of returns (FCFO) too late in the future, that becomes more volatile. The firm value, based too much on the growth opportunities, could be penalized by a higher Wacc'. If the difference between Wacc' and g' becomes higher of the previous Wacc – g (Wacc – g < Wacc'– g') the value of the firm decreases and the strategies and projects adopted by the manager can be seen by the market as opportunistic behaviour of the manager

[19] In Italy, the relevance for these coefficients is revealed by the intensive attention to the new reform of the firm's regulation (the Vietti reform which should come up next December 2002) and with the D.Lgs 231/2001 which takes care about the management responsibility against opportunistic behaviours.

[20] I would like to mention that the value of the firm (FCFO / Wacc – g), using as discount rate the Wacc, allows to get good results only if D/E is constant and calculated at market values. If it is assumed no debt in the capital structure, the FCFO is equal to the free cash flow for equityholder and the Wacc is equal to $K_{e\,(Unlevered)}$.

against S[21]. Intuitively, if the expected FCFO increases of 10%, for example, from 100 to 110, the difference between Wacc – *g* could increase more of 10% because of the enhanced risk perceived for the innovative strategies or projects adopted. This could cause a lost of the firm's value in the market. If the strategy adopted is strongly innovative, the value of the firm will be strongly based on the growth opportunities, and the shareholders will probably feel the strategy as riskier and less profitable.

On the other hand, if Wacc'– *g'* < Wacc – *g*, the value of the firm perceived by the market is higher and the stakeholder appreciates the ICM developed by the manager.

From this example raises the need for the manager to communicate the goodness of a higher level of ICM (and so of the strategies and project formulated or adopted), showing that his behavior is responsible and that he takes care about the wealth of the stakeholder. It means it raises a need to be responsible jointly with a communication of this responsibility. This is one of the reasons why the role of the "investor relation" is developing in the companies. A commitment to increased levels of disclosure reduces the possibility of information asymmetries arising between the firm and its shareholders. This, in turn, should reduce the discount at which firm shares are sold and, hence, lower the costs of issuing capital.

4. Efficient CG relationships and value creation

The intuition behind the two functions $A_{(x)}$ and $R_{(x)}$, and their interaction, is similar to a fundamental theoretical work in nuclear physics about the "atomic structure". The large repulsive electrostatic forces between the protons should cause the nuclei of atoms to fly apart (Coulomb force). Obviously, most nuclei are stable. It is the "nuclear force", strong enough to overcome the repulsive force between the nuclear protons (positively charged), which binds both protons and neutrons into the tiny nuclear volume. The protons are subjected, at the same time, at an attractive force because of the electromagnetic force (Coulomb force) and at a repulsive force because of the nuclear force. These two forces work as function of the distance; the electromagnetic force is defined at wide range because it works on wide distances while the strong nuclear force is of short range because its influence does not extend very far beyond the nuclear "surface" (it works on short distances).

The *nuclear force* works as a glue that has a weak span and keeps together the nucleons when they are very close. Close to nucleus, the nuclear force works stronger then the Coulomb force; far from the nucleus, the Coulomb force is stronger (Halliday *et al* 2001, pag. 1069).

As in this nuclear analogy, in the economics' contest of the CG relationships, there are two forces: one which attracts authority and responsibility (incentive effect) resolving hold-up problems[22] and another which tends to diverge these two (moral hazard effect) and can overcome the coordination effect of the internal organization.

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[21] The higher FCFO is compensated by the higher Wacc'– *g'* which penalized the overall firm value perceived from the stakeholder.

[22] I refer to the difficulty to attribute the merit of firm-specific investment in ICM made by M who will not receive any return for his effort and commitment which, instead, is essential to create firm's value. In this case M will not specialize his human capital on the asset in place because of the low return for his effet and commitment. To go through on the hold-up problem: Williamson (1985).

The coulomb force and the strong nuclear force operate in different ways according with the distance; in the firm's contest, incentive effect and agency effect operate according with the level of ICM.

For low levels of ICM there will be an incentive versus firm specific investment of the manager in intellectual capital, getting authority as a reward, and increasing the firm's value.

If the too high level of ICM causes a wide distance between authority and responsibility, the CG relationships breaks down because of the predominance of the repulsive (opportunistic) forces and the firm's activities do not create value anymore. In this case, it rises the relevance of the internal organization with the role to coordinate the relationships between the manager and the stakeholder (see figure 1 for the timing of the events).

According with this analogy, it is interesting to combine the effect of the two functions, $A_{(x)}$ and $R_{(x)}$, and to analyze their *common interaction*. These are two functions, with opposite patterns, which have the capacity to combine efficiently the firm's economic resources and to enhance their value.

In literature[23] is common shared the opinion about the controversial relation between governance (approximated as managerial ownership) and performance. Many different works on this topic have found different theoretical and empirical evidence. The two most important perspective pointed out that there is not a relation between governance and performance (Demsetz and Lehn, 1985) or that there is a positive relations between them (Morck, Shleifer, and Vishny, 1988), while in other works it appears a non monotonic relation (Demsetz e Villalonga 2002).

In this paper, according to Arrow (1974), Aghion and Tirole (1997) and Rajan and Zingales (1998 and 2000b), the power in the firm depends on who has really the control on the most valuable asset of the firm. If the intellectual capital of the management is the most important resource to manage the high complex and competitive environments, it follows that who really own the intellectual capital has the authority to allocate resources in the firm. Property right (firm's ownership) is just one of the other component that can support the proper behavior of who own intellectual capital but what is very important is to align the management behavior using multiple instruments.

Therefore it is remarkable to synthesize the corporate governance relationships through the relations between authority and responsibility, according to the level of intellectual capital developed. It's the combination of authority and responsibility that allows, setting efficient CG relationships, the right allocation of resources, enhancing the firm's value.

The best governance system is related to the right incentive (authority) to develop intellectual capital and to the right way to reduce opportunistic behaviors (responsibility) of the owner of authority.

The two functions, $A_{(x)}$ and $R_{(x)}$, depend on the firm's characteristics of the two subjects, the manager and the stakeholder. According to their risk-return profile, it is possible to move to the optimal level of ICM to minimize the distance between $R_{(x)}$ and $A_{(x)}$.

[23] For a interesting analysis on the controverse relations between governance and performance, and a survay of the most important empirical works, see: Demsetz e Villalonga (2002).

deduction 3: to maximize the value of the CG relationships and enhance the firm value, the distance between $R_{(x)}$ and $A_{(x)}$ has to be minimized

The level of $A_{(x)}$ and $R_{(x)}$, correspondent to a certain level of ICM, fits the goal of both the manager and the stakeholder.

The firm's objective function, oriented toward the creation of value, has to be subject of the CG trade-off between authority and responsibility. It means that firm's objective function is subject to Min $[A_{(x)} - R_{(x)}]$, or better[24]:

$$\min_{x} \{[\beta_0 + e^{\beta 1\, x}] - [\delta_1 * \log (x / \delta_0)]\}$$

[24] the graphic solution of this minimization problem is found thanks to Mathcad 10, under the following range of coefficients:

$0<\delta_1<10$ between an absolute indifference of M to the needs of S, through a median or sufficient attention to the S' needs, until a maximum (10) attention to S' needs;

$0<\delta_0<1$ depending on the time, the needs to take care of S' investment rises;

$0<\beta_1<1$ which depends if the firm operates in a stable sector with no needs of ICM or in an hypercompetitive sector where the ICM is the most important source of competitive advantage;

$0<\beta_0<10$ which depends on the minimum level of authority that M gets just for the role he has.

It follows that:

$f(x) = \beta_0 + e^{\beta 1\, x} - [\delta_1 * \log (x / \delta_0)]$ with the optimum in:

$$\frac{\beta_0 + e^{\beta 1\, x}}{\delta_1 * \log (x / \delta_0)} = 1$$

$$\beta_0 + e^{\beta 1\, x} - [\delta_1 * \log (x / \delta_0)] = 0$$

$$e^{\beta 1\, x} = [\delta_1 * \log (x / \delta_0)] - \beta_0$$

This expression will never be verified for β_0 and $\delta_1 > 0$ or with $\beta_0 \sim 0$ and $\delta_1 > 0$

It will be possible to reach the minimum when $\beta_0 > 1$, $\delta_1 \sim 0$ and β_1 is small. In the exponential and logarithmical functions, if the parameter β0 is equal to zero and, also, if β1, δ0 and δ1 are equal to 1, the two functions of authority and responsibility become a simple exponential and logarithmic function (e^x and log *x*) which depends on the level of ICM, our unknown variable in the model. As it is noted, log(x) is specular to e^x; it means that a bisectrix cuts the two functions into two equal parts.

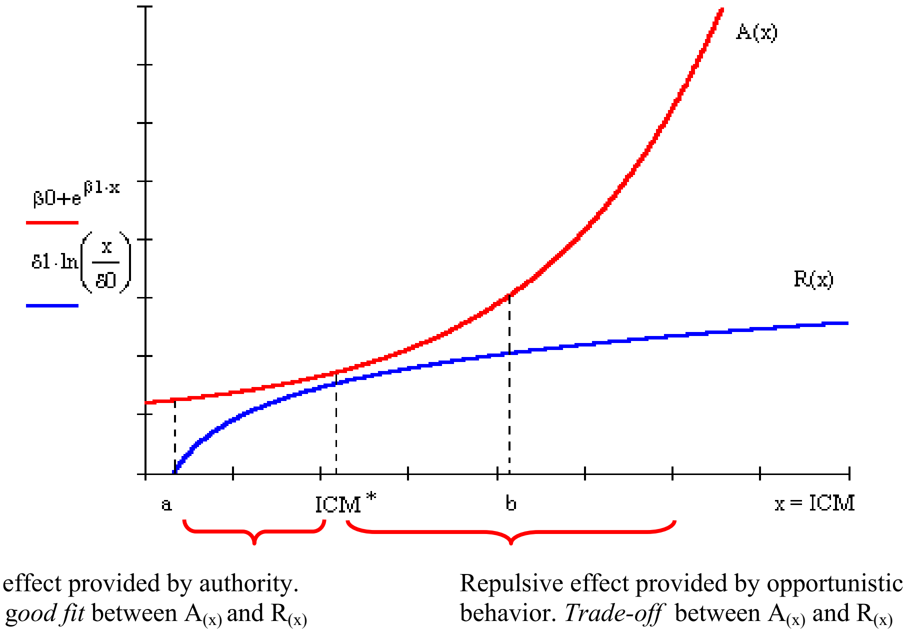

Figure 3 – Authority and Responsibility functions.

It would be optimal to find the level of ICM which minimizes the distance between the manager and the stakeholder and gets the best CG relationships. There would be a convergence of interests and efforts. The firm is able to better operate, exploit growth opportunities and create value thanks to the right combination of authority and responsibility.

As in the nuclear framework, in the firm's contest, authority and responsibility try to stay together and closer and the glue seems to be reputation and internal organization.

After the threshold *b*, a marginal increase of ICM involves more authority for the manager. Hereafter, it is possible to see the *dark side of privileged access* to critical resources: *excess power-seeking* (Zingales, 1998)[25]. If the distance becomes to far, $A_{(x)}$ and $R_{(x)}$ move away, the good CG relationships break down.

The manager knows that increasing ICM can improve his power and prestige in the company and his personal value in the job market too (high-skilled managers are valuable also after a bankruptcy, under the idea that you learn on your mistakes and that it is better a manager who learns from his errors working in other companies).

At the beginning there is just the need to let, and incentive, the manager to choose if starting to specialize on the firm's activities or not, afterwards it raises an attractive force that links an increase on authority with an increase on the sense of responsibility. As in the nuclear force's case, here also there is a mediator of the force that tries to keep close authority and responsibility; for example, trust reputation, ethics and moral principles and institutions. A lack, or inefficiency, of these institutions gives space to the repulsive forces that split down $A_{(x)}$ and $R_{(x)}$.

[25] The threshold *b* is quite hard to quantify and it differs according to the idiosyncratic characteristics of the firm and to the factors on the environment and in the sector.

In a *first phase*, the stakeholder encourages the firm's specific investment of the manager because thanks to his skills it could be possible to manage the firm in a complex environment. the manager has the power to break up the relation and to go out of the firm, or to specialize and determine the success of the firm. It means that the manager is the owner of real authority or decision-power.

In a *second phase* there will be a "convergence" of interests and a common shared vision of the strategy to create value, between the manager and the stakeholder - good CG relationships – that add value to the economic resources used in the firm's activities.

In a *third phase* a "divergence" of interests starts between the manager and the stakeholder that could end up to lose the good CG relationships. The manager begins to have too much authority and, if he is selfish, he can easily expropriate value from the firm. the stakeholder has the option to bargain and the power to break up the relationships. This trade-off between a resource-based approach and opportunistic-based approach is similar to the work made by Conner and Prahalad (1996).

The internet bubbles can be set into this framework. The "*internet companies"* implemented very aggressive strategies and projects without taking care about the need of the stakeholders' investments. The investors gave a lot of credit to the managers, who had a lot of authority; but when the distance between $A_{(x)}$ and $R_{(x)}$ became too high, the lack of responsibility gave rise to the lost of reputation and trust versus the manager, and jeopardized the business relations between the manager and the stakeholder.

There is not a sequence in these three phases; a firm can stay for a long time in the first one or in the second one and another can stay in the third one for a long time, exploiting a monopolistic situation that can support a state of inefficiency.

Thanks to good CG relationships, staying in the second phase lets the firm use economic resources in the most efficient way creating value for all the stakeholders.

Through the formalization above, it is possible to highlight that the goodness of the corporate governance relationships depend on how much close $R_{(x)}$ and $A_{(x)}$ are. It means that as much as R(x) is close to A(x), the CG relationships are good, the firm is able to create enterprise value. In particular, comparing authority and responsibility:

$R_{(x)} / A_{(x)} = 1$	There are optimal CG relationships and, on this way, there is an efficient allocation of resources and risk inside the firm. This is the most efficient context in which the strategies and projects adopted are oriented towards a common shared scope, and create value for the company and the all stakeholders. The level of IMC* lets the manager implement the programs he believes more profitable according with the interests of the stakeholder. This way the manager acquires a good reputation compared to the stakeholder and compared to the job market; and the firm is able to enhance its value in the market as well.
$R_{(x)} / A_{(x)} < 1$	Most of the time this is a common situation in which the manager has more authority than sense of responsibility. He first thinks to face the competitors and the markets, and then to take care about the stakeholders' interest.
$R_{(x)} / A_{(x)} > 1$	The level of responsibility is higher than the level of $A_{(x)}$. The stakeholders have a lot of influence on the management activities.

For the wealth of the company, the optimum level of IMC* is when $R_{(x)} / A_{(x)}$ is equal to 1 (or very close to). The problems rise if $R_{(x)} / A_{(x)}$ is too high or too low (as showed in the figure below). In these cases, the corporate governance relationships do not efficiently create value any more.

The problems could rise when the level of authority becomes too high and there are power-seeking problems. This situation can take the manager to reduce his level of attention to his responsibility and, in general, can bring at a reduction of the value creation by a simply combination of economic resources compared with the value added by the synergies offered by good CG relationships.

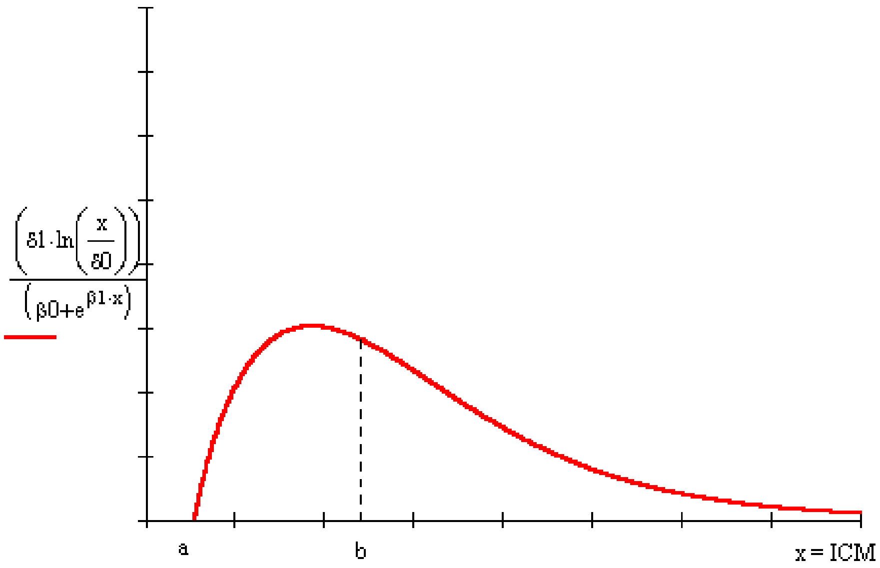

Figure 4 - Value added to the economic resources by efficient CG relationships.

deduction 4: the maximization of the CG relationships allow to maximize the firm's value.

The way the CG relationships' function works (figure above), is very similar to the effect of the nuclear force which explains the force that holds protons and neutrons in the nucleus[26].

Looking at the CG relationships' function showed in figure 4, in presence of perfect and efficient market the manager would not move to a level of ICM higher that ICM*; in presence of asymmetric information, and after a certain level *b* (afterwards the manager and the stakeholder would have different points of view about what's going on) the CG

[26] The nuclear strong force has to be strong to overcome the electric repulsion between the positively charged protons. Its force depends by the distance. At short distance the nuclear force is strong, at wider distance its effects decrease to give space to Coulomb force. For this reasons the density of nuclei is limited by the short range repulsion and the maximum size of nuclei is limited by the fact that the attractive force dies away extremely quickly (exponentially).

relationships would be compromised; as in nuclear analogy, after a certain level, the attractive force decreases and the repulsive one (as the Coulomb force) overcomes the first one.

The two functions can have different features. The figures below summarize the impact of a specific level of ICM on authority and responsibility.

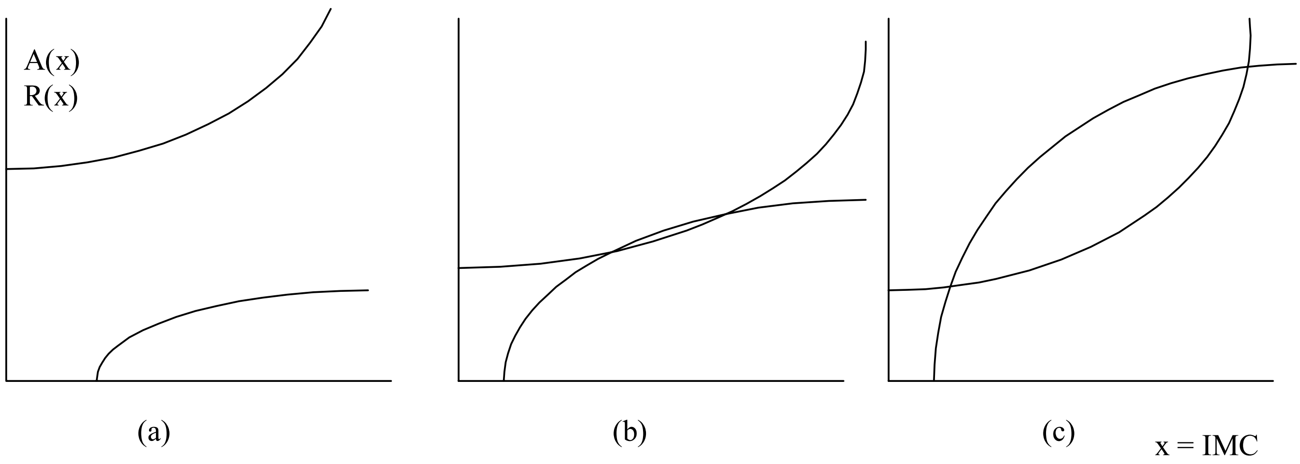

Figure 5 - Different kind of characteristics of $A_{(x)}$ and $R_{(x)}$.

A relevant distance between authority and responsibility functions, as in the figure 5(a), increases the difficulty to manage CG relationships between the managers and the other stakeholders; causing, probably, inefficiency in the resources' allocation. This example can identify situation of monopoly of knowledge, in which the manager has a huge power and there are problems of *free riding* among the all different stakeholders.

If the functions $R_{(x)}$ and $A_{(x)}$ overlaps or are very close, as in figure 5(b), there will be almost convergence about the strategies and projects to implement.

In some cases, figure 5(c), the role of stakeholders or of institutional investors could be very predominant in increasing the relevance of the sense of responsibility in the management. The function of $R_{(x)}$ overhangs $A_{(x)}$. The manager role is subordinate to the accomplishment of the shareholders. The stakeholder thinks to be able to give the right advice to manage the company, without the capabilities of the manager, who is constrained in such a way to miss growth opportunities. BLU is an example; the fourth Italian mobile telecommunication operator which operated under the pressure of British Telecom, BNL, Italgas, Autostrade and Edizioni Holding with the aim of supplying personalized solutions for the firms; the stockholders did not leave the management available to operate in the best way, that was subordinated to a mission and vision dependent from other shareholders' mission. Efficient CG relationships support the definition of the firm's goals. It takes a lot of time for well defining mission and vision, enabling firm's activities toward economic success.

Without good CG relationships it is difficult to manage a firm and implement successful strategies and projects.

The level of authority has to be as close as possible to the responsibility function to have all stakeholders' approval, and also a common consent on the strategies and projects developed. If the level of authority is too high there will be a lack of efficient allocation of resources and the manager will be free from stakeholders' behalf control. The agency cost will rise because the manager will get an incentive to increase his intellectual capital, in order to enjoy private benefit more that to guarantee a stream of returns to the stakeholders.

At the same time, if the level of responsibility is a lot higher of the level of authority, the manager does not have the availability to implement innovative strategies or projects because the stakeholders want to see a tangible stream of returns as soon as possible. Especially the shareholders will be available to innovative strategies but their trust on the managers' behavior will need to see a stream of returns.

Thinking at the recent problem of CG that rose by the *Enron scandal* and followed by other big companies problems, this framework highlights the need to increase, as in figure 5(a), the sense of responsibility in the management and reduce the distance between authority and responsibility until a point, or a range, which minimizes such a distance. It is not the aim of this paper to formalize the possible instruments to solve the problem and minimize the distance but it is, first of all, important to understand what are the CG components, and to analyze them. At the forthcoming papers the aim to indicate which solution to implement.

5. Conclusion

The intuition of this paper, using the lens of the incomplete contract theory and the strategy approach, appears very useful to interpret the CG problems in high complex contests.

The problems of contract incompleteness in a relationship are resolved by an appropriate allocation of power, through ownership of intellectual capital and promotion of responsibility. In this contest, ownership of physical assets is an useful instrument to bond excess power-seeking.

It is through the "interaction" between the authority and responsibility that managers resolve hold-up problems at the beginning and, after, moral hazard problems. These two factors balance the incentive problem with the need of a constraint to the manager's activities and explain the way to incentive innovation and managerial creativity to reach firm's success.

The most valuable resources of a firm are the unique talents of the human capital involved in the firm's activities that build up "complementarities" with the asset in place, and create a unique combination that cannot be instantaneously replicated outside.

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