Agency Theory, Evolution, and Austrian Economics

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Abstract

This paper analyzes the evolution of agency theory and shows how Austrian economists and, in particular, Mises largely anticipated these developments. Our analytical framework is the evolution of agency theory and we argue that it is a quest for more realism that has been the driving force of this evolution. We analyze how the agency literature has evolved since its first developments with the standard principal-agent models by integrating into the analytical framework the role played by implicit incentive mechanisms to minimize the problems associated with asymmetric information and conflicts of interest. We analyze how research in different fields has contributed to agency theory's evolution and we show that these developments can be traced back to the work of Austrian economists and, in particular, to Mises's works. We finally argue that despite the fact agency theory has largely improved its analysis of agency problems and of the remedies to mitigate these problems, it has not yet incorporated in its analyses a crucial contribution made by the Austrian economists, which is the role played by the entrepreneur.

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1 Introduction

This paper analyzes to what extent Austrian economists and, in particular, Mises have anticipated many of the developments that agency theory has known since the early 1970s. Our analysis finds its rationale in two interconnected puzzles. The first puzzle is the absence of reference to the works of the Austrians in the agency literature.[1] This observation is even more puzzling given the fact that Austrian economists were internationally recognized and omnipresent in economic debates until the mid-30s.[2] It is probably during the 1920-1930s, during the socialist calculation debate in which Mises (1920/1935, 1936) and Hayek (1948) debated the socialist economists such as Lange (1936, 1937), that their international influence reached its pick. The second puzzle is that, beyond the importance of the international influence of Austrian economists during this period of time, their work and, more specifically, Mises's work on the socialist organization but also on bureaucracy is in direct relation with the problem of incentives addressed in the agency literature. It is therefore puzzling to observe this absence of reference to the work of the Austrians and, particularly, Mises's work.

To be sure, as it has been argued, Mises's main focus in his criticism of socialism or in his analysis of bureaucracy was on the problem of economic calculation (Rothbard 1991). However, as we shall see, the problem of incentives has also been thoroughly analyzed by Mises and the Austrian economists because socialist economists considered it as the very problem of the socialist organization. And, while Austrian economists in general do not use the same terminologies than agency literature, their analyses tackle the same problems analyzed by agency literature.

Therefore, it is these two interconnected puzzles that will drive our analysis and in order to conduct our research it will be necessary to analyze the present state of agency literature. As we shall see agency literature has undergone an important evolution since the beginning of the 1970s with the first principle-agent models notably through the analysis of implicit incentive mechanisms. It is with regard to the analysis of these mechanisms that Austrian economists largely preceded agency theorists. Moreover, as we shall see, even though agency literature has

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[1] One exception is Hayek's seminal 1945 article on "The Use of Knowledge in the Society" but even with regard to this paper there have been many misunderstandings among mainstream economists. See, for example, Kirzner (1992, pp. 139ff.) and Thomsen (1992, pp. 31ff.).
[2] See Salerno (1999).

"implicitly" integrated many of the Austrian insights, Austrian economists are still ahead notably through the analysis of the role played by the entrepreneur who has been largely ignored in agency literature.

In Section 2 and 3, we present the standard agency theory. We describe how agency theory analyzes agency problems and their solutions. There are two broad categories of solution to agency problems: the explicit incentive mechanisms and the implicit incentive mechanisms. In Section 2, we present the explicit incentive mechanisms that were originally the main focus of agency models. These models were focusing on the reduction of agency problems through the design of contract. However, agency theorists have progressively been confronted with the reality test of their models and started to redirect their attention toward the analysis of implicit incentive mechanisms. In Section 3, we present the different implicit incentive mechanisms and argue that these mechanisms were originally studied by "non-agency theorists." We argue that it is in different fields of research that we find the first analyses of these mechanisms. In Section 4, we argue that Austrian economists and, in particular, Mises's analyses precede in many respects agency analyses notably regarding the study of implicit incentive mechanisms. We finally argue that, while one might argue that the agency literature has fully incorporated the Austrian insights in its analyses, agency economists still have to incorporate in their analyses the role played by the entrepreneur. We argue that agency theory may learn something from the Austrian theory of entrepreneurship notably because its offers an explanation regarding the nature and emergence process of the various implicit incentive mechanisms analyzed by agency theory.

2 Agency Theory and Explicit Incentive Mechanisms: Principal-Agent Models and Contract Design

Principal-agent models deal with problems resulting from conflicts of interest that may emerge in contractual relationship when parties are differently informed or uncertain. The main of objective of principal-agent models is to explain how contracting parties design contracts to align incentives between contracting parties and minimize costs associated with such problems. As we shall see while principal-agent models have evolved following economists' observation of inconsistencies between principal-agent models and real-life contracts, these models have been largely criticized for their lack of realism.

2.1 The Principal-Agent Model: Introduction

There is an *agency relationship* when the actions of one individual affect both his welfare and that of another person in an explicit or implicit contractual relationship. The agent who undertakes the actions if the *agent* and the person whose welfare, measured in monetary terms, is affected by agent's actions is the *principal*. The agent is the *informed* party while the principal is the *uninformed* party. The typical case of agency relationship is the one that exists between an employer (the principal) and his employee (the agent).

In an agency relationship, the principal wants the agent to act in the principal's interests. However, the agent is expected to have his own interest and consequently, he may not act in the bests interests of the principal. Therefore, the principal's problem is, then, to design an incentive contract that try to align the agent's incentives with those of the principal or, at least improve somewhat on the situation where the incentives are completely misaligned. However, the principal is confronted with various problems traditionally of informational nature in designing such types of contract which result in two types of problem: a *moral hazard* and/or an *adverse selection* problem.

2.2 Moral Hazard and Incentives

A *moral hazard* situation may be defined as a situation where the agent undertakes self-interested *unobservable* (hidden) actions at the detriment of the principal's own interests. Traditionally, such situations can arise for two main reasons. First, there is a positive cost for the principal of monitoring agent's actions. Second, the principal does not necessarily have the expertise to know whether or not agent's actions are in his best interests and, consequently, monitoring is also imperfect.

When such situations arise, principal-agent models traditionally show that the solution to the moral-hazard problem is to design a contract contingent on the observable outcome of the agent's hidden actions. However, there are additional problems that arise.

First, it is traditionally assumed that the agent exhibits risk-aversion because it is more difficult to diversify his risks to the extent he is limited in his ability to make undertake different actions at the same time or, for example, having multiple jobs. Second, the outcome, which is the variable correlated with the agent's hidden action that the principal observes, is not deterministically related to the agent's actions. In other words, the relation between the outcome and agent's actions is stochastic. In such situations, the agent is induced to choose selfishly the action that is the least costly for him and, in general, this action is chosen to the detriment of the principal.

To resolve moral-hazard problems, the standard principal-agent models show that contracts must have a "carrots and sticks" format.[3] That is, the principal must design a contract that trades off risk-sharing and incentives. This means that, while the agent's compensation should not depend too strongly on the outcome, the principal must provide incentives for the agent to adopt the best course of action. In other words, traditionally, the principal will design a contract that rewards the agent when the desired outcome is relatively more likely due to his actions and penalizes him if the desired outcome is relatively less likely due to inappropriate action by him (Kreps 1990, pp. 592-593).

Other principal-agent models have been further developed to address other real-life moral-hazard type problems. We have so far assumed that there is only one agent working for one principal and the principal only observe one indicator: the outcome. However, there are many cases, in which the principal can observe at low cost several indicators that might not have any "intrinsic economic value" though bring information on the action chosen by the agent. When such cases arise, the principal should condition the compensation contract on all the low-cost signals he receives, assuming that these signals are not already contained in the main indicator which is the outcome. The literature calls this principle the *sufficient statistic theorem* (Holmstrom 1979, 1982; Salanié 2002, p. 126) or *informativeness principle* (Brickley, Smith, and Zimmerman 2001, p. 381). For example, as shown by Holmstrom (1982), the principal can extract important information about one agent's action by implementing *relative performance evaluation*, that is, by observing the output of other competing agents performing similar tasks. The implication of the *informativeness principle* or *sufficient statistic theorem* is that the compensation of each agent should depend on the productions of all (Salanié 2002, p. 127). This type of compensation contract is called *relative performance contract* (Brickley, Smith, Zimmerman 2001, p. 381).

In early models, it was generally assumed that all decisions taken by the agent could be summed up in a single variable. Traditionally, in these models, incentive contracts are usually *high-powered*, that is, they make agents' compensation depends strongly on performance

[3] The expression is due to Mirrlees (1997).

particularly when it is more difficult to distinguish whether or not the agent has taken the appropriate action. However, there are two problems with such models.

First, the empirical literature tends to show that real-life incentive schedules offered to employees in firms are actually less *high-powered* than those described in theoretical models (Baker, Jensen, and Murphy 1988). Second, as pointed out by Brickley et al. (2001, p. 383), most jobs involve a variety of distinct tasks, each one requiring from the agent or agents effort and attention.

Holmstrom and Milgrom (1991) develop a multitask principal-agent model to explain why real-life employment contracts differ than those predicted by the theory. In the model, the agent or agents have several tasks to perform or the agent's task has several dimensions to it. Holmstrom and Milgrom show that when the principal designs the contract, he must take into account this multiplicity of tasks. In other words, when the principal chooses the contract, he must write a contract that induces the agent to "strike the appropriate balance among the different tasks." In multiple-tasks situations, "incentive pay serves not only to allocate risks and to motivate hard work, it also serves to direct the allocation of the agents' attention *among* their various duties" (p. 25).

Therefore, the principal's problem is the following: When the agent must perform several equally important tasks and only some of the tasks generate an (imperfect) observable signal (measurable output), the principal must pay attention not to provide the agent with too much incentive to perform the tasks generating an observable signal because, if he does, the agent will be induced to focus his effort and attention on these tasks and, as a consequence, will forgo the other tasks that do not generate any observable signal. To solve this dilemma, Holmstrom and Milgrom (p. 34) show that the principal must design a compensation scheme which pays a fixed wage to the agent and contains no incentive component. Their model helps to understand why "piece rates are relatively rare in manufacturing and, where they are used, they are frequently accompanied by careful attention to monitoring the quality of the work" or why "where individuals spend part of their efforts on individual projects and part on team production, and assuming that individual contributions to the team effort are difficult to assess, it would be dangerous to provide incentives for good performance on the individual projects" (p. 35).

Holmstrom and Milgrom use the same type of multitask models to explain Williamson's (1985) observation that incentives offered to employees in firms are generally "low-powered" compared to the "high powered" incentives offered to independent contractors (pp. 35-38).[4] The difference between employees and independent contractors is that the latter use and develop their own assets while employees use and develop assets owned by others (shareholders). Whether they are employees or independent contractors, agents still have two different tasks to perform: *asset value enhancement* and *output production*. Holmstrom and Milgrom noting that "assets are notoriously hard to value," assume that there is no performance indicator (no observable signal) for the asset enhancement activity while the output production activity generates an observable signal. The two alternative organizational modes described by Holmstrom and Milgrom differ in who is going to be the claimant of the change in asset value. In the *contracting* organizational mode, the change in asset value accrues to the agent who is the asset owner as opposed to the *employment* organizational mode where the change asset value accrues to the principal or asset owners. However, with regard to the moral hazard problem arising in multiple task situations, "the crucial difference between these [two organizational modes] lies in the incentives for the agent to engage in the two kinds of activities," knowing that only output production generates an (imperfectly) observable signal (p. 36). Holmstrom and Milgrom focus their attention on situations where it is highly desirable for the principal to induce the agent to devote a positive amount of effort to both activities. When analyzing such type of situations, they show that whenever the optimal organizational mode is independent contracting, it involves "high-powered incentives." On the other hand, whenever employment contracts are optimal, they always entail paying a fixed wage. Furthermore, their model show that, when the values of the parameters measuring risk aversion, variance of asset returns, and variance of output-production indicator measurement error are low, independent contracting is the optimal organizational mode (p. 56-57).

Holmstrom and Milgrom have also extended their model to explain "how the principal might try to manage the agent's access to outside (private) activities." They show that the easier it becomes to measure the agent's performance or the less risk averse the agent becomes, the more agent's marginal reward for performance will be raised and the less his personal business activities will be curtailed (p. 42).

The different predictions of Holmstrom and Milgrom's models offer interesting results that are consistent with various empirical studies developed by Anderson and Schmittlein (1984) and

[4] See also Holmstrom and Milgrom (1994).

Anderson (1985). Their studies analyze the nature of organizational modes in the electronic-components industry. They find that the main variables explaining the choice between in-house sales agents and independent representatives in sales region were found to be the difficulty of evaluating performance" and the "importance of nonselling activities" (Holmstrom and Milgrom 1994, p. 987.) Their findings are also to some extent consistent with empirical studies on the difference in incentives between franchisees and owner-managed firms in the fast-food industry (Brickley and Dark 1987; Krueger 1991).

We turn now our attention to the adverse-selection problem and the solutions developed by the standard literature.

2.3 Adverse Selection, Signaling, and Screening

An *adverse-selection* problem appears when the agent possesses information that may prove useful to his decision-making and the principal does not know it. Therefore, the principal cannot know if the agent has made the most appropriate decision in light of the information possessed by the agent precisely because the principal does not have this information. In a case of an adverse-selection problem, the costs of monitoring an agent's actions are not at stake insofar as the principal is not in possession of the information held by the agent; consequently, he is not able to know if the agent's actions were appropriate.[5]

Akerlof's analysis of adverse selection and its effects on the market for used cars starts from an analogy with Gresham's law, which says that "bad money drives out the good."[6] The problem is as follows: On the market for used cars, sellers (agents) can better observe the quality of cars that they sell while buyers (the principals) can only observe the average quality. The consequence is that the sellers have an informational advantage over the buyers and, consequently, the former can sell low quality cars at the same price as high quality cars since buyers cannot tell the difference between a good and a bad car. The principal effect of this adverse-selection problem is that it generally results in inefficient market allocations and, consequently, the used-car market will essentially consist of "lemons": "the 'bad' cars tend to drive out the good" (Akerlof 1970, pp. 489-490). Akerlof shows also that the extreme consequence of the adverse-selection problem is

[5] We should note that since Akerlof (1970), who first "identified" and analyzed the adverse-selection problem in the context of the market for used cars, the concept of adverse selection is more reserved for problems where the quality of the product or agent is hidden to the principal.
[6] However, as Akerlof points out, this analogy is not complete because Gresham's law assumes that individuals are able to make the distinction between good and bad money.

that no market can exist because the only equilibrium price of the market is zero and therefore no transactions occur at all.

Wilson (1980) pursued Akerlof's analysis and generalized it by showing that when buyers have heterogeneous preferences, there may be multiple equilibria and, in particular, that the nature of equilibrium varies with the nature of the institution or convention which sets the price. He demonstrates that the nature of equilibrium is different when a Walrasian auctioneer sets the price, buyers set the prices, or sellers are price-setters. He shows that when a Walrasian auctioneer sets the price, the presence of adverse selection may lead to multiple Walrasian equilibria that can always be ranked according to the Pareto criterion. In the same way, he shows that when buyers are price-setters, if the average quality of the goods offered for sale increases sufficiently with the price, some buyers may prefer higher prices to lower prices and consequently the market will be characterized by a distribution of prices with excess supply at all but the lowest price.[7] In the third situation analyzed by Wilson, sellers are price-setters. In this case, the seller will announce a price that depends upon both his expected probability of making a sale at each price and the value he attaches to the car. However, the probability of selling a car at any price will actually depend on how many buyers submit bids at each price, which in turn depends upon their expectations about how quality relates to price. The form of the equilibrium will vary with the expectations of both buyers and sellers.

With the development of the analysis of markets with adverse selection, economists have traditionally used models to find solutions to adverse-selection problems. The theory principally identifies two mechanisms to reduce adverse-selection problems: *signaling* and *screening*.

The first method to reduce adverse selection is market signaling. First investigated by Spence (1973) in the context of the labor market, the idea is that the workers with higher productive capability will try to signal their quality by purchasing education, which is less costly to them than to workers with low productive capability.[8] Two *self-selection* conditions are however necessary for this sort of situation to be sustainable. First, the level of education chosen to signal high productivity must be such that low-productivity workers are unwilling or unable to attain it.

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[7] The lowest price is the announced price at which buyers, who value increases in quality less, will buy cars from those sellers who were unable to sell at the higher price because of the excess supply.

[8] This assumption that the costs of signaling are negatively correlated with productive capability is general to all models of market signaling. However, this negative correlation can exist for one type of productive capability but not with another. In other words, investing in education may be considered as a signal with respect to some jobs but not with respect to others.

If this condition is not met, then the low-productivity workers are going to take as much education as the high-productivity workers, and the education signal will convey no information. The second condition is that failure to obtain the particular level of education should accurately signal the person is not highly productive; it should not be the preferred choice of highly-productive workers. Essentially, for these two conditions to hold, achieving a given level of education must be cheaper for the high-productivity workers than for the low. The issue is to align the costs in such way that only the more able will be willing to pay the costs of acquiring a particular level of education and the less able will not, even though doing it would lead the market to infer that their ability is high and to offer them higher wages. These constraints are necessary to ensure that the signaling mechanism is *credible* and reliable for the employers (Brickley, Smith, Zimmerman 2001, p. 155.)

Signaling has been used to explain a wide variety of phenomena. For example, in the product market, the signaling device works in the same way; sellers of higher-quality products will try to signal the quality of their products by undertaking some activity (such as guarantees) because it is less costly for them than for sellers of lower-quality products. In credit markets, borrowers will use collateral to signal their creditworthiness (Bester 1985; 1994).

The other device that allows principals to face adverse selection is the *screening* device. The idea is that, for example in the labor market, principals will use a set of observable characteristics that are correlated with the parameter of interest, to screen and rank applicants' prospective job performance on the basis of their endowment of characteristics. The observable characteristics that principals can use to screen applicants are numerous in the labor market: sex, race, appearance, educational records, past work experience, etc. In the same way, in the credit market, banks will use past credit records to screen applicants. As for the signaling mechanism, the self-selection constraints described previously are also necessary to achieve screening.

Under the same category of screening device, we find another kind of device labeled *self-selection*.[9] The *modus operandi* is nevertheless different. Behind the concept of self-selection, there is the idea of action/reaction. Principals will screen agents by inducing them to signal their "quality". First analyzed by Rothschild and Stiglitz (1976) in the context of insurance markets, the idea of self-selection is that the principals (insurers) offer a "menu of (contingent) contracts" to the agents (action) and the latter by selecting one type of contract reveal their actual "quality"

[9] In some way, self-selection can also enter in the signaling category. See Spence (1976).

(reaction). Salop and Salop (1976) in their analysis of self-selection to minimize turnover costs incurred by firms provide the "best case of self-selection", which is recorded in the Old Testament. When King Solomon, pretending to apply the law of dividing disputed property, threatened to cut the baby in half, he induced each "mother" to reveal her true feelings for the baby and hence her true identity.

In their analysis of labor market, Salop and Salop show how firms incurring turnover costs can use a Two-Part Wage (TPW) as a self-selection device to identify slow quitters among its applicants and therefore minimize turnover costs by hiring them.[10]

Guasch and Weiss (1981) identify another self-selection device to sort applicants labeled *test-cum-fee* strategy. The reasoning is to require applicants to pay a fee for being tested by the way of an examination or an apprenticeship program.[11] Such a strategy has the effect of discouraging applications both from individuals who believe their probability of passing the examination is low and from less able workers.

2.4 Questioning the Realism of Principal-Agent Models

There is no doubt that the principal-agent model that constitutes the core of agency theory has improved contract theory and the understanding of markets by underscoring the omnipresence of uncertainty and the existence of asymmetries resulting from the division of labor and knowledge. Its contribution consists particularly in its underscoring that real-life contract forms differ from contracts that would prevail in a hypothetical world where there would be not cost and no uncertainty.

However, while the principal-agent models have received many refinements and extensions, economists have come to observe that principal-agent models have themselves some limits and, particularly, they are not consistent with those observed in reality. Arrows (1985, pp. 48-49; emphasis added) observes:

> But it is perhaps more useful to consider the extent to which the principal-agent relation in actuality differs from the models developed to date. Most importantly, the theory tends to

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[10] Without entering in the details of their analysis, a TPW consists of making the employee pay the firm an entrance fee, in return for which he receives wages consisting of the market clearing wage plus a premium. Salop and Salop show that at the equilibrium the entrance fee must be equal to the worker's own turnover costs, which correspond to his own training costs.

[11] The fee for being tested is the difference between the applicant's wage in the training program and the wage he could obtain elsewhere.

> lead to very complex fee functions. It turns out to be difficult to establish even what would appear to be common-sense properties of monotonicity and the like. *We do not find such complex relations in reality*. (…) In some cases, where principal-agent theory seems clearly applicable real-world practice is *very different from the model*. (…) Even in situations where compensation systems seem closer in form to the theoretical, there are *significant differences*.

As Kotovitz (1987) notes:

> The nature of the reward schedule is sensitive to the nature of the information available, the residual uncertainty and the degree of risk aversion of the agent and principal. This observation is troubling because incentive contracts observed in reality are generally simple and uniform across a variety of agents and information sets.

As underscored by Salanié (1997, p. 175), principal-agent models have "obviously" some limits that explain these discrepancies between theory and reality:

> I have assumed so far that contracts are complete. This is obviously a very strong assumption, since it implies that all contingencies that may affect the contractual relationship are taken into account in the contract. In the real world, negotiating a contract is a costly business which mobilizes managers and lawyers. It must therefore be that at some point, the cost of taking into account an improbable contingency outweighs the benefits of writing a specific clause in the contract; the contract should then be signed without this clause. The inability (or unwillingness) of courts or other third parties to verify ex post the values taking by certain variables observed by all contractants is another reason why contracts will be incomplete: It is not use conditioning the contract on a variable if nobody can settle the disputes that may arise. Even if we abstract from the costs associated with negotiating and writing the contract and from the constraints due to the legal system, bounded rationality may force the parties to neglect some variables whose effect on the relationship they find difficult to evaluate.

It is in an attempt to resolve these inconsistencies and a search for more "realistic" theoretical description of agency problems and contracts that we can find the explanation of the evolution of agency theory. The next section analyzes further developments endured by agency theory and, particularly, how agency theorists' analyses of the implicit incentive mechanisms.

3 Agency Theory and Implicit Incentive Mechanisms: From Reputation to Institutions

This section analyzes how agency theorists have gradually taken into account the role played by implicit incentive mechanisms to complement the contract and mitigate agency problems. As we have above seen, agency theorists have progressively acknowledged the limits of their analyses of the contract design. Consequently, agency theorists have progressively given their attention to the analyses of other mechanisms: the implicit incentive mechanisms. These analyses traditionally come from other fields of research. There are four axes of research in which we can find the origins of the analysis of implicit incentive mechanisms: game theory, theory of the firm, corporate governance literature, and the analysis of social and economic institutions.

3.1 Repeated Games, Repeated Interactions, and Reputation[12]

Game theory teaches us that, when transactions between self-interested individuals do not recur much or even occur only once, if one of the trading parties has the opportunity to gain more by abusing the other party's trust rather than honoring it, the opportunist, if given the opportunity, will systematically abuse trust. The main implication of such a model is that no transaction will take place because the party to be abused will be better off without engaging in the transaction. As a result, both parties will be worse off than they would be if both parties had cooperated. This story is a one-sided version of what literature labeled the *prisoners' dilemma*. It is meant to represent the archetypal moral hazard or adverse selection problem as described in principal-agent models. The principal must invest some resources into preparing for a transaction with the agent, who is going to make an opportunistic decision at the principal's expense to achieve a personal gain to an extent that makes the entire transaction worthless for the principal. To be sure, we could argue that the agent signed a contract that binds him to honor principal's trust and the principal is entitled to ask courts to enforce the contract. However, enforcing the contract can be costly or the contract cannot be enforced because courts are unable to assess whether there was breach of contract (Kreps 1986, p. 232).

The key result of the prisoners' dilemma is that the individual maximization of pay-offs does not result in a situation where both players are better off than they were before playing the game. However, one might wonder whether the outcome of the game would be the same when the game is repeatedly played over time by the same players.

Game theory shows that when people interact over time, this opens the possibility for individuals to tie their current decisions to what their trading party has done in previous periods. Interacting over time allows individuals to make threats and promises concerning their future behavior in response to what the other party has done previously. These threats and promises

[12] The material discussed in this section is borrowed from Kreps's (1986) analysis of corporate culture. For a modeling approach of repeated and reputation games, see Fudenberg and Tirole (1991, Chapters 5 and 9).

concerning future behavior are going to influence contracting party's behaviors and cooperation between individuals may arise. Put in an agency relationship perspective, game theory states that if the probability that principal and the agent will meet again is large enough, given that both parties want to maximize their winnings from the sequence of plays and the expected gains in the future for the agent from honoring his contract with the principal outweigh the immediate gain from abusing in the given round, the agent will honor his contract and, as a consequence, cooperation will arise. To be sure, there are some necessary conditions for this to work. First, the agent must always have some substantial stake in the future if this is to work. If the probability of a continuation of the game is very low, therefore, the agent will rationally abuse principal's trust if the immediate gain outweighs the expected profits in the future of honoring principal's trust in the current round. Second, the punishment must be large enough to give incentives to parties to cooperate. This sort of result is subject of what the literature calls the *folk theorem* of noncooperative game theory (Kreps 1986, p. 233).

The *folk theorem* shows how cooperation can arise when two individuals engage in a transaction repeatedly.[13] Nevertheless, the *folk theorem* is limited in the sense that there are many transactions that only occur once and, hence, we should expect that when individuals are locked-in in the one-shot game situation we have described above. It is when this type of settings occurs that the reputation effect mechanism comes into play.

The argument is similar to the situation with repeated games except a little twist has been added to the model. Instead of assuming that there are only one principal and one agent, we can examine what is happening when there is a sequence of principals who must decide whether or not to trust one single agent. As before, the first principal must decide whether or not to trust the single agent and the agent must choose to honor or abuse principal's trust. In addition, there is a high probability that the agent will find himself in the same situation but, this time, with another principal. Therefore, the argument goes, if the principals are able to observe agent's past behaviors and they condition their behavior on agent's past actions, that is, all principals follow the rule that none will trust the agent if trust is ever abused, the agent will always honor principals' trust. In other words, agent's observable past behaviors are agent's reputation and his reputation sends a signal to the principals who must decide whether or not to trust the agent. If

[13] For a more formal presentation of the folk theorem in repeated games with discounting information, see Fudenberg and Maskin (1986).

agent's reputation is unsullied, it means that he has, at least in the most recent past transactions, honor principal's trust. On the other hand, if his reputation is sullied, that is, principals have observed that in the past the agent has not cooperated, principals will refuse to trust the agent. As a consequence, the agent will honor principals' trust because to abuse it will preclude or substantially limit opportunities to engage in future valuable transactions (Kreps 1986, pp. 237-238). However, as Kreps emphasizes, a crucial element for this mechanism to work is that there is no last round. If there is a last round, individuals face again a prisoner's dilemma type situation. Because there is no future opportunity, the agent will abuse principal's trust and, as a consequence, the principal will have no incentive to trust the agent because the latter has no incentive other than abuse trust since it is the last round. An example would be the case when the agent retires. Nevertheless, by introducing another refinement, we can resurrect the reputation construction and show how it gives incentives to the agent to cooperate with the principal.

Instead of considering only one short-lived agent, that is, an agent who is going to play the game for a finite number of rounds and leave the game, let's assume that there is a succession of agents that are going to play successively the game for a finite number of rounds. We can further assume that the agent who is going to play the game first for a finite number of rounds is also the owner of the firm. If the agent-owner of the firm has a reputation for never abusing trust and the principal(s) claim to be ready to trust any member of the firm but not otherwise. Therefore, the argument goes, not only will the agent's successor have an interest to pay a premium to his predecessor, that is, to buy his predecessor's reputation, in order to have the opportunity to undertake a transaction with the principal(s) but, moreover, each successive agent-owner will continue to honor trust in order to increase the firm capitalized value resulting from an increasing trust reputation. Doing otherwise would mean destroying or significantly harming the firm reputation and, as a consequence, the capitalized value of the firm would reflect this loss at the next sale (Kreps 1986, pp. 239-240).

Game theory offers many interesting results regarding the role of reputation as self-enforcement mechanisms. However, despite the many refinements, reputation constructions are relatively simple and a number of qualifications are often necessary if one does not want to see the reputation construction collapses as a house of cards. As Kreps (1986, p. 242) emphasizes:

> The reputation construction is decidedly fragile: If reputation works only because it works, then it could fall apart without much difficulty.

Moreover, Reputation effect mechanisms and their game theoretic treatment have some limits and weaknesses that result from their "simplicity". As Williamson (1996, p. 156) comments:

> Reputation effect mechanisms are no exception to the general proposition that all theories … must eventually be confronted by the realities.

And, as many theories and models when they abstract from nonessentials, reputation models suffer from some limits due to reality constraints. First, while the Folk Theorem does state that cooperation (trust-honor strategies) between the contracting partners might emerge as an equilibrium outcome, it also allows many other equilibria to emerge and, consequently, offers in itself poor predictions as to which equilibrium is going to emerge. Moreover, an important condition for cooperation to emerge is that agent's actions must be observable by the principal(s). When it is not the case and instead the principals can only observe their own payoff and if this payoff is not deterministic but is stochastic, then the principals have to decide whether the bad outcome is due to the agents' defection or is explained by an unlucky draw (Williamson 1996, p. 153). As a consequence, the noisier and indirect observations are, the more difficult the problem of finding self-enforcing arrangements is (Kreps 1986, p. 236). Another problem to which reputation mechanisms must be confronted is the existence of unforeseen contingencies which are at the origin of incomplete contracts. Because, by definition, these contingencies are unforeseen, it is impossible to specify "in advance how to meet all possible contingencies and then observe that advance specifications have been fulfilled" (Kreps 1986, p. 250). These contingencies are observable when they arise but how do contracting parties, particularly, the principals know that they have been met as they are supposed to be met (Kreps 1986, p. 250)?

Following up on Williams (1988), Williamson (1996, pp. 153-154) identifies other problems associated with reputation mechanisms that undermine their effectiveness. First, there are some problems that take the form of cognitive limitations. The most important one is that not only are individuals "imperfectly informed about other people's preferences and about their assessment of probabilities" but also acquiring such knowledge or information can be either impossible or costly (Williams 1988, p. 4). There are also problems of communication. The player may know that the other party has cheated but it may be difficult for him to communicate this information accurately or without cost to the other members of the group or network of which he is part. Williamson also emphasizes the *hubris* problem which is that the successor(s) of a principal who has been cheated believe they are clever than their predecessor and discount that experience.

Therefore, if a successor contracts with the abuser, the reputation mechanism is compromised. In the same way, *forgiveness* can pose the same type of problem when the principals forgive the agent who has broken his contract or his successors. When this type of "phenomenon" arises, the reputation mechanism is weakened. Another issue is when there is competition between principals and strategic behaviors arise. A principal may choose strategically not to reveal his experience or provide incomplete or distorted information to his rivals in order to disadvantage them. Another problem arises when firms are not owner-operated as it is in the case in most firms today. How does the reputation mechanism work in large, diffusely owned, and hierarchical firms? How does the reputation mechanism work when the agent or manager is not owner or only owns a small part of the firm?

There are indeed some limits to the effectiveness of reputation mechanism. Reputation effect mechanism is not a perfect mechanism. However, if Williamson et al. are right in underscoring these limitations, we should not forget that these models traditionally abstract from nonessentials in order to analytically isolate the effects of a particular mechanism or phenomenon such as reputation. In other words, it is true that the "real world" is much more complex than the one described in game theory models but it is also true that reputation effect mechanism does not stand alone in the real world. There are other mechanisms complementing reputation mechanism. Those mechanisms have been analyzed within the framework of other research fields.

3.2 The Nature of the Firm: Transaction Costs, Ownership, and Property Rights[14]

The role played by ownership and property rights in agency theory can be traced back the theory of the firm which goes back to Coase's pioneering article, *The Nature of the Firm* (1937), which explains that the emergence of the firm in a specialized exchange economy can be better understood as an optimal accommodation to *contractual* constraints rather than production (technological) constraints. Coase proposed to consider firms and markets as alternative methods of coordinating production (p. 41). Therefore, the question that Coase attempted to answer was to determine when production should be organized through market transactions and when it should be organized within the firm through managing. Coase argued that transaction costs are the

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[14] We should note here that the purpose of this section is not to offer a complete overview of the theory of the firm but rather to highlight how research on the theory of the firm has contributed to enhance agency analyses by emphasizing the crucial role played by ownership and property rights in providing incentives within an incomplete contract framework. For surveys on the theory of the firm, readers should refer to Holmstrom and Tirole (1988), Milgrom and Roberts (1988), and Hart (1989).

decision factor to explain this "division of labor" between markets and firms in the organization of production: Production should be organized within the firm when transactions costs of using markets become large relative to the costs of organizing production through managing. The main cost of transacting in the market is the cost of learning about and negotiating over the terms of trade, this cost can be particularly large if the transaction is a long-term one in which learning and negotiating must be perform repeatedly (pp. 38ff.)

By establishing a firm and allowing some authority to direct resources within certain limits, some of these contract costs are greatly reduced (p. 39). Therefore, according to Coase, "this authority is precisely what defines a firm: within a firm, transactions occur as a result of instructions or orders issued by a boss, and the price mechanism is suppressed" (Hart 1989, p. 202). However, organizing production within the firm brings costs of its own. As the transactions which are organized by the authority increase, the authority is more likely "to fail to place the factors of production in the uses where their value is greatest, that is, fails to make the best use of factors of production" (p. 43). These errors generate costs that lead to greater administrative rigidity. In Coase's view, the boundaries of the firm occur at the point where "the costs of organizing an extra transaction within the firm become equal to the costs of carrying out the same transaction by means of an exchange on the open market or the costs of organizing in another firm" (p. 44).

While Coase's analysis was pathbreaking, Alchian and Demsetz (1972, pp. 784ff.) showed that it suffered from "a conceptual weakness in the theory's dichotomy between the role of authority within the firm and the role of consensual trade within the market" (Hart 1989, p. 202). More particularly, Alchian and Demsetz argue that Coase overlooked "the difficulty in metering outputs and the problem of shirking" which arise in joint or team production situations. What ensures that the employee obeys the employer's instructions? In Coase, there is no real discussion of this issue as no such a problem could arise. Therefore, according to Alchian and Demsetz, Coase's view that firms are characterized by authority relations does not really stand up (Hart 1989, p. 203).

Built upon their criticism of Coase, Alchian and Demsetz have developed a theory that centers on the incentive problems of joint production and monitoring. Because of metering problems and asymmetric information and moral hazard problems, shirkers not bearing the full consequences (costs) of their actions have incentives to shirk. The solution to this problem in

Alchian and Demsetz's model is to introduce some monitoring. However, there is still a problem of incentives because the monitor being himself a worker may not have the incentive to monitor. To solve this dilemma, Alchian and Demsetz (1972, p. 783) argue that the solution to this dilemma is to provide the monitor with a bundle rights that define *ownership* of the *classical* (capitalist, free enterprise) firm: 1) to be a residual claimant; 2) to observe input behavior; 3) to be the central party common to all contracts with inputs; 4) to alter the membership of the team; and 5) to sell these rights. Being the residual claimant, the owner-monitor will have incentives to monitor the employees because "he earns his residual through the reduction in shirking that he brings about, not only by the prices he agrees to pay the owners of the inputs, but also by observing and directing the actions or uses of these inputs" (Alchian and Demsetz 1972, p. 782). Following up on Alchian and Demsetz, Barzel (1987) showed that the agent that was most likely to end up as monitor-residual claimant (principal) was he whose contribution to the joint production was the most difficult to measure. While this approach of the firm is labeled "the nexus-of-contracts approach," it appears that the key element in Alchian-Demsetz's theory is the crucial role played by property rights in providing incentives to reduce shirking within the firm.

Unfortunately, as Holmstrom and Tirole (1988, p. 68) argue, the Alchian-Demsetz's story has some problems. First, from an empirical perspective, it seems those who do the monitoring in firms are rarely the residual claimants particularly in large corporate organizations. Second, horizontal mergers are difficult to understand from a monitoring perspective. Third, monitoring is not the distinguishing feature of the corporations. Finally, the main problem is probably that the owner-monitor story does not explain the boundaries of the firm. While these criticisms are certainly valid, they overlook the importance of the analysis provided by Alchian and Demsetz on the role of property rights in providing incentives. Moreover, some of these criticisms also overlook the role played other policing forces.

While Alchian and Demsetz have expressed doubts about the specifics of Coase's theory, the idea that firms emerge to economize on transaction costs was increasingly accepted. However, the nature of these costs beyond the costs of learning and negotiating was still unclear. Williamson (1985) offered the most developed analysis of these costs by focusing attention on one central concept: *asset specificity*. Williamson (1985, p. 30) argued that transaction costs have a particular importance in situations where parties engaged in a trade make "nontrivial investments in transaction-specific assets." These investments are to some extent specific to a particular set of individuals or assets. Williamson (1985, p. 95) distinguishes between four types of asset specificity:

> Four types of asset specificity are usefully distinguished: site specificity – e.g. successive stations that are located in a cheek-by-jowl relation to each other so as to economize on inventory and transportation expenses; physical asset specificity – e.g. specialized dies that are required to produce a component; human asset specificity that arises in learning-by-doing fashion; and dedicated assets, which represent a discrete investment in generalized (as contrasted with special purpose) production capacity that would not be made but for the prospect of selling a significant amount of product to a specific customer.

When such situations arise, once parties sink these irreversible investments they are to some extent locked into the relationship ex post because these investments have substantially higher value within the relationship than outside it. When parties are locked into the relationship ex post, they become "bilaterally dependent." As a consequence, because of a lack of ex post external market signals resulting from parties to transaction being locked up into the relationship, "they become vulnerable, in that buyers cannot easily turn to alternative sources of supply, while suppliers can redeploy the specialized assets to their next best use or user only at a loss of productive value" (Williamson 2002, p. 176). This problem is called the *hold-up problem*, that is, a situation in "which party to a contract is worried about being forced to accept disadvantageous terms, or worries that its investment may be devalued by the actions of others once it has sunk irreversible investments. The party that is forced to accept a worsening of the effective terms of the relationship once it has sunk an investment has been *held up*" (Milgrom and Roberts 1992, p. 136).

In an ideal world, this situation would pose no problem since parties could always write long-term contract in advance of the investment, spelling out each agent's obligations and the terms of the trade for every conceivable contingency. However, as we have seen, in the real world, contracts are incomplete and, consequently, it will not be possible for the parties to specify *ex ante* how the surplus should be divided between the two. As a result, the decisions regarding the division of the surplus will occur during ex post negotiations and will depend on ex post bargaining positions (Holmstrom and Milgrom 1988, p. 69). Williamson argues that this situation gives rise to two types of costs. First, there are costs that are associated with the ex post negotiation itself in the sense that parties may engage in collectively wasteful activities to try to increase their own share of the surplus. Second and more importantly, there may be little relation between a party's bargaining power and resulting share of the surplus and his ex ante investment, parties will have ex ante the wrong investment incentives. In particular, an agent, expecting that his contracting partners will expropriate part of his investment at the ex post period, will choose his investment inefficiently from his partners' point of view (Williamson 1985, pp. 30-32). Therefore, Williamson argues, integration, that is, bringing the transaction within a firm will offer safeguards against *postcontractual* opportunistic behavior and hold-up problems and improve investment incentives. While Williamson offers an important argument why integration should be preferred to outside procurement (independent contracting), he does not offer a precise description of the mechanism by which this reduction in opportunism occurs. As for Coase's analysis, Williamson does not really explain what disciplinary power a boss has that an independent contract does not (Grossman and Hart 1986, pp. 692-93). In the same way, Williamson (1985, p. 76) argues that a major benefit of integration is that "internal adaptations" or dispute resolutions can be "effected by fiat" (as opposed to litigation) while in the case of outside procurement, contract incompleteness and contractual expenses pose problems notably when adaptations or dispute resolutions are needed. However, he does not explain what guarantee there is that parties are going to follow a boss's edicts in situation of dispute resolution. Neither Williamson explains in what activities a boss will intervene and how this intervention will be enforced. When it comes to selective intervention what power a boss has that an independent contract does not (Hart 1989, p. 214 fn. 28).

Grossman and Hart (1986) and Hart and Moore (1990) have attempted to answer these questions and sharpen the argument by suggesting that the crucial difference between governance structures resides with their implied residual decision rights. Their approach that has been labeled the "modern property rights approach" actually owes much to the Alchian-Demsetz's analysis which has also been referred as the "old property rights approach."

Their analysis spells out "the costs and benefits of integration that does not rely on the presence of an impersonal market." Grossman et al. argue that a firm is identified with the physical – nonhuman assets – it possesses and ownership confers residual rights of control over the firm's assets, that 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).[15] Thus, in an incomplete contract

[15] Hart and Moore (1990, p. 1121) use a more restrictive meaning of the concept of residual control/decision rights:

framework where it is costly to write detailed long-term contracts that precisely specify current and future actions as a function of every possible eventuality, "decisions about asset ownership – and hence firm boundaries – are important because control over asset gives the owner bargaining power when unforeseen or uncovered contingencies force parties to negotiate how their relationship should be continued" (Holmstrom and Roberts 1998, p. 77). Moreover, asset owner by affecting ex post bargaining power also affect the division of ex post surplus in the relationship. As a consequence, Grossman and Hart (1986, p. 696) argue that:

> Through their influences on the distribution of the ex post surplus, ownership rights will affect ex ante investment decisions. That is … each ownership structure will lead to a (different) distortion in ex ante investments. The ex ante investments we are referring to are those that cannot be specified in the contract either because they are too complex to be described or because they stand for nonverifiable managerial effort decisions.

When two firms merge, the transfer of assets from the (owner)-manager of the acquired firm to the acquiring firm will increase the new owner-manager's freedom of action to use the asset as he sees fit and therefore increases the new owner-manager's share of ex post surplus and incentives to invest in the relationship. On the other hand, the loss of control over the assets will reduce acquired-firm manager's incentives to invest in the relationship. Therefore, Grossman and Hart (1986, pp. 716-17) conclude that integration will be desirable "when one firm's investment decision is particularly important relative to the other firm's, whereas nonintegration is desirable when both investment decisions are "somewhat" important."

Hart and Moore (1990) analyzing the boundaries of the firm have shown that assets that are complementary, that is, are worthless unless used together should be owned in common, which provide a minimum size for the firm. The central idea of their analysis is the key right provided by ownership is the right to exclude people from the use of assets. Therefore, this authority over

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> "We suppose that the sole right possessed by the owner of an asset is his ability to exclude others from the use of that asset. That is, the owner of a machine can decide who can and who cannot work on that machine, the owner of a building can decide who can and who cannot enter the building, the owner of an insurance company's client list can decide who has and who does not have access to the list, and so forth. We shall see that control over physical asset in this sense can lead indirectly to control over human asset."

We should also note that Grossman and Hart, and Hart and Moore's definition of ownership is also slightly more restrictive than Alchian and Demsetz's definition. For Alchian and Demsetz, ownership encompasses residual control rights as well as residual claimant rights. For Grossman, Hart, Moore, ownership does not necessarily implies that these rights go together even though they are in practice. The modern property rights approach takes the point of view that the possession of control rights is crucial for the integration decision.

assets translates into authority over people: an employee will tend to act in the interest of his boss (pp. 1149-50).

The modern appropriate rights approach to the firm also has some problems. First, as for Alchian and Demsetz's analysis, this approach does not take account of the separation of ownership and control that we observe in large, publicly held corporations (Hart 1989, p. 211). Moreover, in these models, there is no uncertainty in contrast to Williamson's framework. Frequency plays no role either. Finally, the level of asset specificity has no influence on the allocation of ownership (Holmstrom and Roberts 1998, p. 79).

While none of the different approaches we have discussed are exempt of criticisms from either a theoretical or a empirical perspective, there is no doubt that these different approaches have greatly contributed to a better understanding of the role of ownership and property rights in reducing moral hazard or opportunism within the organization.

3.3 Corporate Governance and the Separation of Ownership and Control

Another field of research that has influenced in a significant way the evolution of agency theory is the analysis of the separation of ownership and control and the role of market mechanisms to align shareholders and management's interests. The analyses centered on the separation-of-ownership-and-control issue can be traced back to Berle and Means' *The Modern Corporation and Private Property* (1932) in which the authors argue that modern corporation's ownership is widely dispersed and, as a consequence, the typical corporation is no longer controlled by their owners who have little if any influence but by their managers.[16]

This issue raises the question on what keeps managers from engaging in self-interested opportunistic behaviors at the expense of shareholders. It is regarding this important question that economists have inquired the existence of indirect policing forces to keep managers in check complementing the use of explicit incentive schemes such as those described by the principal-agent models. The contemporary literature has identified three essential indirect policing forces: the labor market discipline, the product market discipline, and the market for corporate control.

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[16] See also Galbraith (1967).

3.3.1 The Labor Market Discipline

Fama (1980) argued that one mechanism to mitigate management's opportunistic behaviors is the managerial labor market. He argues that manager's career and reputation concerns will alleviate negative incentives. Moreover, Fama argues that career concerns also stimulate competition between the managers inside but also outside the firm, which, in turn, induces a monitoring process between managers to emerge. As Fama argues, managers want to accede to higher-level positions or at least keep their current position. Managers want to climb to the top of the hierarchy and become "the boss of the bosses" (p. 293). However, their success depends on their performance. A manager who misbehaves will show a poor performance and consequently his human capital value will deteriorate. The labor will settle up ex post by paying the managers their perceived marginal product, which will reflect past performance. Furthermore, the manager's performance is dependent on the other managers' performance inside the firm, the ones above and below him. As consequence, the manager will both monitor his subordinates but his superiors as well. In Fama's (p. 293) words:

> Part of the talent of a manager is his ability to elicit and measure the productivity of lower managers, so there is a natural process of monitoring from higher to lower levels of management. Less well appreciated, however, is the monitoring that takes place from bottom to top. Lower managers perceive that they can gain by stepping over shirking or less competent managers above them. Moreover, in the team or nexus of contracts view of the firm, each manager is concerned with the performance of managers above and below him since his marginal product is likely to be a positive function of theirs. Finally, although higher managers are affected more than lower managers, all managers realize that the managerial labor market uses the performance of the firm to determine each manager's outside opportunity wage. In short, each manager has a stake in the performance of the managers above and below him and, as a consequence, undertakes some amount of monitoring in both directions.

In other words, career concerns and competition between the managers play an important role in disciplining the managers in the similar way to the reputation effects mechanism described above. Because the performance of the firm sends signals to the managerial labor market (and also other markets such as the capital markets), all managers from the top to the bottom of the hierarchy have an interest in the success of the firm and, as a consequence, have an interest in disciplining themselves through self and mutual monitoring.

Another important mechanism is the role played by the managerial labor market outside the firm. The *outside* managerial labor market puts pressure not only on the firm with regard its reward system but also on managers within the firm. If the firm's reward system is not responsive to the performance of its managers, the best ones will leave the firm. Moreover, the firm is always looking for new managers on the managerial labor market. Therefore, managers inside the firm are in competition with these managers outside on the managerial labor market. This competition between managers inside the firm with managers outside the firm induces managers inside the firm to "self-discipline" themselves. Once again the career concerns and the competition between managers act a mechanism to discipline the managers (Fama 1980, p. 292).

Holmstrom (1999) provides a model reassessing Fama's arguments and argues that Fama's conclusions hold only under some narrow assumptions. Holmstrom's main argument is that, contrary to Fama's assertion, career concerns and reputation mechanisms alone are not sufficient to remove moral hazard problems in the long run.[17] More particularly, he argues that risk aversion and discounting seriously limit the market's ability to police adequately and explicit incentive contracts have an important role to play as empirical studies suggest (Holmstrom 1999, p. 177). Holmstrom's model shows that the labor market can induce effort because of reputation or career concerns but there is no guarantee that the supply will be optimal.

Holmstrom (1999, pp. 178-181) provides another interesting result when he introduces risk-taking decisions like investment decisions in the model. He shows that in situations where managers are risk-averse, career concerns can give rise to an adverse-selection problem. Given that a manager is in charge of choosing investment projects for a risk-neutral firm, his talent is associated with the likelihood that investments are successful. If the manager is risk-neutral, he is indifferent between the projects and, consequently, he can be expected to propose the project which the firm prefers most with regard to the objective of maximizing its financial value. However, when the manager is risk-averse, conflicts of interest may arise between the manager and the firm (and its owners). Since what determines the manager's future opportunity wage is his talent (reputation) and some investment project's outcomes are likely to reveal accurately whether

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[17] It is interesting to note that, in general, the literature (Holmstrom 1999, p. 170; Holmstrom and Tirole 1988, p. 94) assumes that Fama argues that: "Market forces alone will frequently remove moral hazard problems, because managers will be concerned about their reputations in the labor market. Thus, there will be no need to resolve incentive problems using explicit contracts, since markets already provide efficient implicit contracts." This interpretation of Fama's critics is subject to caution. The present author doubts that Fama meant that there is *no* need of explicit incentive contracts or that market mechanisms alone *remove* moral hazard problem and he never found such assertion in Fama's article. The author's understanding of Fama's argument is that career concerns along with other market mechanisms and explicit incentive contracts *mitigate* moral hazard problems but do not *eliminate* them even in the long run.

the manager is talented or not, these investments make manager's reputation and income most risky. As a consequence, the manager will choose the investment projects that maximize his reputation even though these projects are not consistent with owner's investment preferences which are to choose investment projects that maximize financial value of the firm. Finally, Holmstrom (1999, pp. 180-181) shows that a more serious adverse-selection problem can arise even the case of a risk-neutral manager if "the manager cannot communicate investment risks in a verifiable way." As a consequence, manager's investment choices will be more conservative and, as Akerlof's "lemons" model, "the only equilibrium is the degenerate one where no investments are made."

Gibbons and Murphy (1992) have studied the optimal incentive contracts in presence of career concerns and showed that explicit incentives from the optimal compensation contract should be the strongest for workers close to retirement and for workers with no promotion opportunities (such as workers who are at the top of the hierarchy or workers in declining organizations) because incentives for career concerns are the weakest for these workers. They also provide empirical evidence consistent with their model by analyzing the relation between chief executive compensation and stock market performance. Their results show that explicit incentives under the form of pay for performance in chief executive's compensation are stronger in the years preceding retirement.

3.3.2 The Product Market Discipline

Another policing force analyzed in the contemporary literature is the role played by the product market competition. Machlup (1967, pp. 17-20) points out that in firms operating in a (perfectly) competitive output market there is no room for managerial discretion. Competition between firms associated with the discipline of profit and loss will induce firms to minimize their (agency) costs and limit managerial discretion. He also notes that managerial discretion has nothing to do with the firm size or the fact that ownership is diffused. Machlup (p. 18) considers that the two main conditions that may explain why managerial discretion arises within the firm is that "no new comers are likely to invade the field of existing firms, and that none of the existing firms tries to expand its sales at such a fast rate that it could succeed only by encroaching on the business of its competitors."[18] Jensen and Meckling (1976) take exception with this inefficiency argument. They argue that "the owners of a firm with monopoly power have the same incentives to limit divergences of the manager from value maximization … as do the owners of competitive firms." Moreover, Jensen and Meckling argue that the inefficiency argument misses an important complementary force: the competition in the market for managers. Competition in the market for managers will generally help the owners to avoid sharing rents with the managers. They argue that both owners of a monopoly and a competitive firm has the same wealth incentives to minimize managerial costs and, consequently, will engage in the appropriate level of monitoring to reduce managerial slack.

Holmstrom and Tirole (1988, p. 96) argue that Jensen and Meckling's argument ignores an important distinction between competitive and monopolistic industries. There is more information about the circumstances in which the manager operates in competitive than in monopolistic industries. And as we have seen such information can be important when using *relative performance evaluation* to write explicit incentive contracts to mitigate moral hazard.[19] Holmstrom (1982) shows that if the number of competitors in a market increases, and if the firm's costs are correlated, then the more competitive a market is, the more information is generated which can be used to mitigate moral hazard. However, as Schmidt (1997, p. 192) points out:

> While the owner's payoff increases if he can exploit this information, the effect on managerial effort is ambiguous. Depending on the underlying probability distribution, it may be that the costs of implementing a lower level of effort are reduced more than the costs of implementing a higher level of effort in which case the manager may be induced to work less.

Hart (1983) attempts to avoid these criticisms by developing a model in which incentives are provided via the market price mechanism and each manager's wage depends only on the profits of his own firm. In his model, competition unambiguously reduces managerial slack. Hart's conclusion depends on the utility function of the manager; he assumes that the manager is infinitely risk averse and the compensation scheme plays no role. Managers only care about reaching a subsistence level of consumption. Income above this level has no value; income below this level is catastrophic. The implication is that managers, who observe input costs before acting,

[18] See also Leibenstein (1966) for a similar argument and empirical evidence that shows that the welfare loss due to organizational slack is of an order of magnitude bigger than the welfare loss due to monopolistic price distortions on imperfectly competitive markets.
[19] On relative performance evaluation, see Section 2.2

will always choose a level of effort high enough to achieve a profit level that will allow them to receive the wage corresponding to the subsistence level of consumption they want to reach. Therefore, competition driving prices down, the manager is induced to provide a higher level of effort than in a less competitive market. The more competitive the market is, the less incentives to slack the manager has since slacking in a more competitive market will prevent the manager from reaching a sufficiently high level of profit and collecting the minimum wage he wants to receive. However, as Scharfstein (1988a) points out, Hart's conclusion depends critically of manager's very particular preference structure. He shows that when the manager's utility from income is strictly positive, Hart's result is reversed. When managers are more responsive to monetary incentives, competition actually increases slack.

More recently Schmidt (1997) also analyzed the effects of product market competition on managerial incentives. He shows that an increase in competition increases the probability that firms with managerial slack are forced into liquidation and, consequently, this thread of liquidation unambiguously reduces managerial slack and induces the managers to work harder in order to improve the internal efficiency of the firm. However, Schmidt shows that the thread of liquidation and more competition might not be enough to induce managers to work harder. Since managerial effort is determined endogenously through the optimal incentive scheme employed by the owners of the firm, if competition reduces the value of cost-reduction to the owner resulting from a reduction in firm's profits, owners might have less incentives to induce high effort on the part of the managers.

While the specifics of how product market competition affects managers' incentives have not been clearly identified and results are not without controversy, it seems that product market competition does play a role in reducing managerial slack within the corporation. Moreover, we should not overlook the fact that product market competition does not work alone. Other policing forces also contribute in deterring mismanagement.

3.3.3 The Market for Corporate Control

In the literature on the separation of ownership and control, the market for corporate control and, particularly, the (hostile) takeover mechanism is probably the mechanism that has received the most attention from either a theoretical or empirical perspective particularly during the 1980s when corporate governance in the United States changed dramatically, ushered in a large wave of merger, hostile takeover, and restructuring activity.[20] Hostile takeovers are presumed to be the ultimate weapon to discipline the managers, particularly, when all the other internal control mechanisms such as the explicit incentive contracts, the board of directors, or proxy fights have failed. Hostile takeovers, as mechanisms for the market for corporate control, can be considered as the expression of competition that brings together management teams for the right to control, that is, to manage, corporate resources (Jensen 1984, p. 110).

As Manne (1965, p. 112) observed takeovers provide shareholders with power and protection against mismanagement. Takeovers represent a threat of displacement for the management that engages in discretionary behavior and when the threat is not powerful enough to deter managerial misconduct, the takeover mechanism sets in motion. The trigger effect of a takeover process is the perception by a raider or a management team from a competing firm of the possibility to realize a capital gain by managing a company whose value might increase if it was managed by a more efficient management team:

> [When the company] is poorly managed – in the sense of not making as great a return for the shareholders as could be accomplished under other feasible managements – the market price of the shares declines relative to the shares of other companies in the same industry or relative to the market as a whole … The lower the stock price, relative to what it could be with more efficient management, the more attractive the takeover becomes to those who believe they can manage the company more efficiently. And the potential return from the successful takeover and revitalization of a poorly run company can be enormous (Manne 1965, pp. 112-113).

Hostile takeovers play consequently an essential role to discipline the managers. Even when the threat alone of being taken over does not deter mismanagement, this mechanism always places strict limits on managers' ability to adopt opportunistic behaviors (Klein 1999, p. 30). As Shleifer and Vishny (1988, p. 11) observed, there is little doubt that hostile takeovers are the most effective way for shareholders to get rid of non-value-maximizing managers without bribing them. Takeover's role is even more important in the "modern corporation world", described by Berle and Means, where ownership is widely dispersed and shareholders only own a very small fraction of the shares of the company. When ownership is widely dispersed and shareholders have neither the ability nor the incentive to monitor the existing management team to ensure that

[20] See, for example, 1983 Symposium on the Market for Corporate Control in the *Journal of Financial Economics* 11, no. 1-4 and 1988 Symposium on Takeovers in *The Journal of Economic Perspectives* 2, no. 1: 3-82.

its decisions are in their best interests, these shareholders can always count on "an army of corporate raiders on the lookout for a mismanagement firm" whose performance could be enhanced under new management (Stiglitz 1993, p. 557).

Some authors have questioned the strength of takeovers as a disciplinary device at either the deterrence level or corrective level. Scherer (1980), for example, argues that, since takeovers are quite costly, managerial misconduct must be substantial before there is an incentive for somebody to intervene. Grossman and Hart (1980) and Scharfstein (1988b) have also argued that takeovers might be ineffective and their disciplinary value might be much exaggerated because of a free rider problem. If, when a competing management team or a raider makes a tender offer during a takeover process, small shareholders believe that their decisions are unlikely to affect the success of the bid expect an increase in firm value under a new management, they will not tender their shares, but hold them, because the shares are more valuable if the takeover succeeds. The raider can only expect to succeed his takeover if he makes an offer that incorporates all expected gains that result from improved management. Under such conditions, the raider does not make any profit offsetting his costs of planning the takeover, that is, the costs of identifying and acquiring information about the target. Therefore, he has no incentive either to take over or to invest any resources in identifying improvements and the takeover mechanism has no disciplinary effects.

The argument outlined above is obviously an extreme one. Casual empirical evidence shows that many tender offers succeed. Several reasons might explain why this argument is much exaggerated. First, one has to assume that shareholders know that firm value is low due to mismanagement. However, such assumption is unlikely. Not only do shareholders have different abilities to determine why firm value is low but also the costs of determining it differ among shareholders as well. Acquiring the necessary information to identify the causes of firm low value is costly in terms of time and money particularly for small shareholders who have small interests at stake as opposed to large shareholders whose stakes are larger.

Second, this argument assumes that shareholders have the same reaction regarding to the knowledge of tender offer. Shareholders will not tender their shares because they know that if the takeover succeeds, their shares will *automatically* become more valuable. Such assumption implies that shareholders have the same expectation regarding the success and the consequences on their share value of the takeover. Such argument does not take into account that they are many factors that can affect the success of a takeover such as, for example, the existence of state and Federal anti-takeover or anti-trust regulations. Another factor that might affect the success of a takeover is the possibility for the management in place to implement some defensive measures (such as litigation by target management, targeted block stock repurchases, or poison pills) that do not require shareholder approval. Because of these many different factors, it is likely that shareholders will have different expectations regarding the success of the takeover, which depend of their knowledge of these different factors. This argument also ignores that shareholders might hold rational expectations. They may actually tender the shares because they rationally expect that the other shareholders will not tender their shares because they expect that, by not tendering their shares, they will benefit from the takeover. So if these shareholders believe that the takeover will not succeed because the other shareholders will not tender their shares, they are more likely to tender their shares. Their decisions to tender or not their shares will not depend only on their expectations that the takeover will succeed but also on their expectations regarding the other shareholder's reactions to the knowledge of a tender offer.

Finally, we should address this part of the free-rider argument that asserts that shareholders will not tender their shares because if the takeover succeeds, their shares will *automatically* because more valuable. It is true that (casual) empirical observations show that share price tends to rise after a takeover. On the other hand, an important factor that determines share price is shareholder's expectations regarding the future of the firm and its performance. In other words, share price will increase after a takeover only if investors (shareholders or not) believe that the new management will improve firm's performance. They may judge correctly, for example, that this takeover is nothing more than a means for the new managers to expand their empire, aggrandize their power, and enhance their reputation and prestige rather than improve the firm's efficiency. They may also believe that new managers will not succeed in rectifying the corporation's results or that, because this takeover is the result of a diversification strategy, the new management has not the competence to succeed in making the profitable again.

While the argument outlined above seems extreme, we should not ignore it in that it can explain why many takeovers fail and their disciplinary role is not as strong as some authors claim. On the other hand, as we have briefly noted above, authors casting doubt on the effectiveness of takeovers do not take into account the regulatory environment in which takeovers take place. There are many state and Federal laws that regulate the takeover process and might be also one of sources of takeover's failures and their ineffectiveness in disciplining mismanagement. Moreover, managers can use many antitakeover (defensive) measures that do not necessarily require shareholder approval to thwart these takeovers (Jarrell, Brickley, and Netter 1988).

On the empirical side of the literature on the effectiveness of takeovers in disciplining mismanagement, the results are not without controversy. Jensen and Ruback (1983), Jarrell, Brickley, and Netter (1988), and Martin and McConnell (1991) provide many evidence supporting the argument that takeovers play a role in deterring and disciplining managers from adopting discretionary behaviors and in aligning their incentives with shareholders' interests. Moreover, Jarrell, Brickley, and Netter find that defensive measures that do not require shareholder approval are usually harmful to shareholder wealth and benefit managers of target firms. On the other hand, Scherer (1988) finds that on average targeted firms were underperformers relative to other firms in their home industry, but that takeovers did not significantly improve economic performance. Using Line of Business data collected by the Federal Trade Commission to examine nearly 6,000 acquisitions between 1950 and 1976, Scherer concludes that "the hypothesis that takeovers *improve* performance is not supported."

The preceding discussion has outlined how the contemporary literature on the separation of ownership and control analyzes the different indirect policing forces that keep managers in check complementing the use of explicit incentive schemes such as those described by the principal-agent models. The conclusions are not without controversy when it comes to assess the effectiveness of these mechanisms, due mainly to differences in the model's assumptions. From an empirical point of view, most of the studies conclude that these mechanisms have an impact on manager's behaviors but usually the debate arises with regard to the nature of the impact; whether the impact is positive or negative on managers' conduct.

3.4 Reputations Aided by Institutions and Corporate Culture[21]

While the growing interest in studying the role played by various types of institution in coordinating individual's actions and mitigating agency problems is relatively recent, agency theorists and economists have acknowledged their existence for quite a long time but without developing a real interest in analyzing them. These analyses show how private institutions

[21] This title is borrowed from Milgrom and Roberts (1992, p. 266).

"spontaneously" emerge to "enhance the effectiveness of a system of reputations" (Milgrom and Roberts 1992, p. 266).

Already Arrow (1963, p. 967), while arguing in the conclusion of his article, "Uncertainty and the Welfare Economics of Medical Care," that "the *laissez-faire* solution for medicine is intolerable," however, pointed out just after in the *Postscript* of his article that many social institutions emerged to help overcoming problems associated with uncertainty:

> I wish to repeat here what has been suggested above in several places: that the faire of the market to insure against uncertainties has created many social institutions in which the usual assumptions of the market are to some extent contradicted. … The economic importance of personal and especially family relationships, though declining, is by no means trivial in the most advanced economies; it is based on non-market relations that create guarantees of behavior which would otherwise be afflicted with excessive uncertainty. Many other examples can be given.

Akerlof (1970, pp. 499-500) also notes that "numerous institutions arise to counteract the effects of quality uncertainty." Institutions such as guarantees, brand-name good, chains, licensing practices, certifications are examples of such institutions that emerge to overcome adverse selection problems.

In the recent years, many economists have analyzed from a historical perspective analyzed the emergence of different private institutions.[22] These studies show how "private institutions have frequently been more important than legal ones for establishing standards of behavior, ensuring contract compliance, and resolving disputes" (Milgrom and Roberts 1992, p. 267).

Greif (1989) analyzes how eleventh-century Mediterranean traders "overcame the contractual problems associated with agency relationships by organizing such relationships through nonanonymous organizational framework, the coalition." He shows how the coalition system emerged allowing its members to enjoy "internal information flows that facilitated the reputation mechanism". This internal information-transmission system provided information about the trustworthiness of traders and allowed uncovering cheating. It also enabled agents to signal that they were honest. Moreover, a reputation mechanism within the coalition was used to ensure proper conduct. As Greif (1989, pp. 160-162) explains, since information circulating within the coalition was crucial to business decision-making and cheaters were barred from accessing to the coalition's internal information flows, as a result, traders "resisted short-term gains attainable

[22] We also talk about analytical narrative perspective.

through deception, since the reduction in future utility resulting from dishonest behavior outweighed the associated increase in present utility."

Milgrom, North, and Weingast (1990) discuss how, in Europe during the early middle ages, at a time when there was no state enforcement of contracts or an established body of commercial laws, merchants developed a system of private laws – the *lex mercatoria* (the *Law Merchant*) – and employed private judges to resolve disputes. They argue that "it is not necessary for any pair of traders to interact frequently – that is, for traders to establish client relationships – in order for the boycott mechanism"(p. 251). If each individual trades frequently enough within the community of traders, then transferable reputations for honesty can serve as an adequate bond for honest behavior. However, for this system to work, information about the past behavior of the traders must be widely shared in the community in order for its members to know whom to boycott. As Milgrom et al. show, that was the role played by this system of private enforcement.

The system of private enforcement's role was not to substitute for the reputation mechanism but rather "to make the reputation mechanism more effective as a means of promoting honest trade" (p. 245). This system was designated for two purposes. First, it was designated to promote private resolution of disputes between traders. Second, the system of private enforcement allowed "coordinating the actions of people with limited knowledge and trust" (Benson 1989, p. 648). The system of private enforcement served to overcome the problem of costliness of generating and communicating the information necessary to the community traders to identify who have violated the community norms of honesty and, therefore, "enable the reputation mechanism to function effectively for enforcement" (Milgrom et al. 1990, p. 245). As Milgrom et al. argue neither the reputation mechanism not the system of private laws and judges can be effective by themselves. "They are complementary parts of a total system that works together to enforce honest behavior" (Milgrom et al. 1990, p. 262).

As Milgrom and Roberts (1992, pp. 267-268) explain, many private devices have been used to inform the public when a merchant is no longer in good standing:

> In colonial American, the stock and pillories were used to make a public display of merchants who violated the commercial law. In the eighteenth and nineteenth centuries, when whalers from different countries met at sea, they would have a party called a "gam," where the captains of the vessels would exchange information about many things, including disputes with other whalers that needed to be settled. … The whalers' system of community enforcement of norms based on repeated interactions was so effective in its

> early years that there are no recorded cases of property disputes among whalers going to court, even though the issues to whom owns a whale is quite subtle.[23]

In modern times, there is a wide variety of institutions that mitigate trust problems. Among them, there are today what Klein (1997, pp. 112-117) calls *knower organizations*. Organizations such as the Consumer Union, Underwriters Laboratories, the Better Business Bureau, and the Consumer Health Services are organizations that generate and convey quality information to consumers in order to mitigate adverse selection problems. For example, the Better Business Bureau will mediate complaints by customers against local businesses and report information about complaints against local merchants and craftsmen. Consumer agencies report survey information about various matters, such as consumer satisfaction. Similarly, credit bureaus report information about past loans and whether they were properly repaid. All these organizations contribute to buttress the reputation system by providing the necessary information to people who need it and strengthen incentives for reliable behavior (Milgrom and Roberts 1992, p. 268).

Another way to enhance the effectiveness of a system of reputations within a group is to construct or evolve a set of workable principles and routines that create shared expectations for group members. This set of workable principles and routines has been labeled in the literature as *corporate culture*. As Kreps (1986) argues, corporate culture serves two purposes. First, it conditions and synchronizes the employees' behavior in accordance with desirable reputational objectives. In other words, corporate culture helps coordinating action within the organization. Second, it sends a message to its transacting partners, which informs about expectations of the trading relationship. Therefore, "corporate culture acts as the language for telling 'how things are done and how they are meant to be done'" (Holmstrom and Tirole 1988, p. 76).

These analyses provide valuable lessons to show how people can find it valuable to establish arrangements, practices, and institutions to complement the reputation system. As Milgrom and Roberts argue (1992, p. 269), "they narrow their options or enable others to enforce contracts against them because those very arrangements make them more reliable and trustworthy business partner."

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[23] See also Ellickson (1989).

4 Austrian Economists as Precursors of Agency Theory

This section attempts to analyze to what extent Austrian economists and, in particular, Mises's analyses preceded agency theory's developments. As we have argued in the introduction, it is quite puzzling that we find only few references, if any, to Austrian economists' works particularly regarding the implicit incentive mechanisms analyzed in agency theory. While it is true that Austrian economists never identify *per se* the concepts of *moral hazard*, *adverse selection* or even of *opportunistic behavior* as used in the modern literature, we shall show that many of their analyses address the same type of problems as the ones analyzed in the contemporary agency literature.[24] We will successively discuss how Austrian economists analyzed the different mechanisms analyzed in today agency theory

4.1 Repeated Dealings, Reputation, and Good Will

The idea of repeated dealings and reputation as a self-enforcement mechanisms in the context of contractual transactions was already present in the literature long before game theory started analyzing these mechanisms within a more formal and rigorous framework. Adam Smith in his *Lecture on the Influence of Commerce on Manners* (1766) anticipates game theory literature in many respects:

> Of all the nations in Europe, the Dutch, the most commercial are the most faithful to their word. The English are more so than the Scotch, but much inferior to the Dutch, and in the remote parts of this country they <are> far less so than in the commercial parts of it. This is not at all to be imputed to national character, as some pretend. There is no natural reason why an Englishman or a Scotchman should not be as punctual in performing agreements as Dutchman. It is far more reduceable to self interest, that general principle which regulates the actions of every man, and which leads men to act in a certain manner from views of advantage, and is as deeply implanted in an Englishman as a Dutchman. A dealer is afraid of losing his character, and is scrupulous in observing every engagement. When a person makes perhaps 20 contracts in a day, he cannot gain so much by endeavouring to impose on his neighbours, as the very appearance of a cheat would make him lose. Where people seldom deal with one another, we find that they are predisposed to cheat, because they can gain more by a smart trick than they can lose by the injury which it does their character.

[24] Indeed instead of referring to such concepts as moral hazard, adverse selection or opportunistic behavior, Austrian economists such as Mises and Hayek referred to *bureaucratic behavior*, *conflict of interests* or *fraud*.

Adam Smith perceived that when people engage in repeated dealings, reputation concerns give incentives to dealers to honor their contract. Abusing trust for a short-term gain will prevent them from earning future gains because others will not deal with them in the future. On the other hand, when transactions do not recur much, individuals see opportunity to realize a short gain outweighing expected future gains and, as a consequence, they will abuse trust.

Hayek (1948) and Mises (1949) clearly perceived the important role played by reputation or good will with regard to problems associated with opportunistic behaviors as well. Hayek (1948, p. 97) and Mises (1949, p. 376) do not identify the adverse selection problem *per se* but they recognize that individuals have "an inadequate knowledge of the available commodities and services" and "the seller for the most part excels the buyer in technological and commercial insights." On the other hand, they identify the role of reputation or good will as an important mechanism for individuals to resolve their inadequate knowledge problems. As Hayek (1948, p. 97; emphasis added) observes:

> In actual life the fact that our inadequate knowledge of the available commodities or services is made up for by our experience with the persons or firms supplying them – that competition is in large measure competition for *reputation* or *good will* – is *one of the most important facts* which enables us to solve our daily problems. The function of competition is precisely to teach us *who* will serve us well: which grocer or travel, which department store or hotel, which doctor or solicitor, we can expect to provide the most satisfactory solution to whatever particular personal problem we may have to face.[25]

An important aspect in Mises and Hayek's short analysis of reputation is that they tie reputation and competition together. Competition is a rivalry process to acquire reputation because individuals often rely on sellers' reputation when they make their buying decisions. Not being omniscient, they often prefer to rely on the good experience that they themselves or "trustworthy friends" have had in the past (Mises 1949, p. 376). In Mises's words (1949, p. 376):

> Good will is the renown a business acquires on account of past achievements. It implies the expectation that the bearer of the good will in the future will live up to his earlier standards.

Mises also anticipates Kreps's (1986, pp. 239-240) analysis regarding transfer of reputation from one agent-owner to another one. He (p. 377, emphasis added) regards good will as a factor of production that has a monetary value and can be sold to a successor:

[25] See also Hayek (1978, pp. 179ff.)

> From the point of view of the seller good will is, as it were, a *necessary* factor of production. It is appraised accordingly. It does not matter that as a rule the money equivalent of the good will does not appear in book entries and balance sheets. If a business is sold, *a price is paid for the good will provided it is possible to transfer it to the acquirer*.

Finally, Mises (p. 377) anticipates many contemporary discussions regarding government-enforced standards of quality and safety by emphasizing that, the fact that individuals err because they cannot "acquire expertness in all fields that are relevant for [their] choices," it does not mean that the government should substitute the market because "rulers and bureaucrats" are not endowed with "omniscience and perfect impartiality." As a consequence, implementing such mandatory standards "would merely substitute the defects of government appointees for those of individual citizens."[26]

While game theory has bring rigor to the analysis of reputation effects as a self-enforcement mechanism to minimize agency problems arising between self-interested individuals, we can observe that not only Adam Smith but also Mises and Hayek were very well aware of such a mechanism.

4.2 Mises's Understanding of the Role of Ownership and Property Rights

As we previously saw, it is within the theory of the firm and its internal organization that the role of ownership and property rights has been analyzed as implicit incentive mechanisms to minimize agency problems. We find the same understanding of the crucial role played by ownership and property rights in Mises's works.

Mises's emphasis on the role of private ownership and property rights (in the means of production) first appears in the socialist calculation debate (1920/1935, 1936, and 1949). His analysis of the role of private ownership and property rights is used to address two problems: economic calculation and incentives. While it largely recognized that, in his criticism of socialism, Mises's emphasis on the importance of private ownership (in the means of production) matters primarily for the purpose of performing economic calculation and comparing the benefits and costs of production to decide what to produce, in what quantities, and what factors of production should be bought and used for the production of these goods and services, Mises also recognized the importance of private ownership and property rights when it comes to incentive

[26] See also Hayek (1948, pp. 98-99).

problems within the organization which are the main focus of modern economics literature on the boundaries of the firm and, more generally, organizational design.[27] As Mises (1920/1935, p. 33) notes, these are two problems that are closely connected.

In his criticism of the socialist economy, Mises debunks the argument that it is possible to overcome "the danger of bureaucratization" threatening any socialist organization as emphasized by Lange (1937, p 127) by attempting to provide similar incentives to those existing in a capitalist economy. Mises insisted that it is a "fatal error" on the part of socialist economists to think that it is possible in a pure socialist system to stimulate competition between the managers of public enterprises by paying them better or granting them a share in the profits (Mises 1920/1935, p. 36). First, under a *pure* socialist system, the absence of economic calculation prohibits any possibility to measure the profit or loss achieved by the public enterprise and, consequently, renders impossible to establish an incentive system based on profit sharing. Moreover, Mises (1936, p. 191; emphasis added) argues, even if such methods appear practical under an "impure" socialist system characterized by the coexistence of private and public enterprises and in which the possibility of economic calculation permits to ascertain the result achieved by the public enterprises, the argument overlooks an important fact: managers are property-less and, therefore, they do not have to endure the consequences of his conduct of business. As consequence, such "methods" cannot but create perverse incentives:

> It is just useless to attempt to solve the problem by new methods of remuneration. It is thought that if the managers of public enterprises were better paid, competition for these posts would arise and make it possible to select the best men. Many go even further and believe that the difficulties will be overcome by granting managers a share in the profits. (…) But the problem is not nearly so much the question of the manager's share in the profit, as of his share in the losses which arise through his conduct of business. Except in a purely moral sense the property-less manager of a public undertaking can be made answerable only for a comparatively small part of the losses. *To make a man materially interested in profits and hardly concerned in losses simply encourages a lack of seriousness.*

As Mises emphasizes, regardless of the nature of the enterprises, private or public, profit-sharing is not an efficient mechanism to resolve the problem of bureaucratization within the firm

[27] On the fact that Mises's challenge to socialism was not primarily about agency or managerial incentives but about the absence of economic calculation under a system of collective/public ownership of means of production, see Rothbard (1991) and Klein (1996).

because it provides the managers with the wrong incentives.[28] The main difference between private and public enterprises, Mises argues, is that the managers in private enterprises "are either already owners of a not inconsiderable fraction of the share capital, or hope to become so in due course" (Mises 1920/1935, p. 36). Therefore, managers in these private companies are bound up with the interests of the business they administer because, as property owners, they themselves "must feel the loss arising from unwisely conducted business" (p. 40). It is in this sole fact that there is a characteristic difference between private and public organization and we can find the explanation of why the problem of bureaucratization cannot be resolved within socialist organizations.

It is because managers are also shareholders, that is, residual claimants that they have interest in avoiding bureaucratic behaviors within the firm. It is in their interest to make profits and avoid losses because, as any shareholders, they are the ones who will bear the consequences, positive or negative, of their decisions.

However, the rights on residual income streams are not the only property rights which are important in Mises's analysis of the problem of incentives within the organization; residual control rights are crucial as well and cannot be separated from the rights on residual income streams. To be sure, Mises does not identify the concept of residual control rights as labeled in the modern theory of property rights but the idea is constantly present in his discussion of the respective role played by shareholders and managers.

As Mises (1949, p. 303) recognized, it is true salaried managers hold a considerable autonomy on the day-to-day operations of the firm. However, ultimately the corporation is never controlled by hired managers. The ones who exercise this ultimate control are the shareholders, who decide to whom they will entrust *their own* capital (Mises 1936, p. 121). Shareholders are the ones who "give to the managers power to produce by the means of the company's (i.e. the shareholders') stock" and, by doing so, they are risking "their own property or a part of their own property" (Mises 1936, p. 120). And, it is because they put themselves in position to feel the loss if their property is mismanaged that shareholders are also the ones who keep this exclusive right to take back this power from the managers.[29]

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[28] Nonetheless, Mises (1949, p.304) does recognize that rewarding successful managers with a share in the enterprise's gross profits is a common practice.
[29] See also Rothbard (1962, p. 538) who comes closer to the modern appellation of *residual control rights* by using the term *decision-making function* or the *ownership function*:

As we can see Mises understood the composite nature of the (private) property rights and correctly perceived the importance of these rights for the problem of incentives within the socialist organization or any organization in general. To this respect, Mises's analysis precedes the old and new property rights approaches of the firm discussed above. To be sure, he did not go into the detail of the analysis and never specifically addressed the make-or-buy (or integration) problem. However, it is interesting to note that, for example, his analysis avoids the problems that Alchian-Demsetz's story of the owner-monitor has. In Alchian and Demsetz's story, the owner/residual claimant is also the monitor (traditionally, the board of directors) of the firm. In Mises's story, this is not necessarily the case. Owners are not necessarily monitors of the firm but, often, salaried monitors (the board directors) are also owners of the firm and, consequently, "share" the risk with the other owners if the firm is mismanaged. The difference is subtle but important. In Mises's analysis, we "make" the ones who are going to monitor the managers of the firm owners of the firm to align their interests with those of the other shareholders and discourage them from colluding with the management. Stock ownership, therefore, plays in a similar role to the incentive component that we find in standard principal-agent models where the principal designs a contract composed of a fixed wage plus an incentive component.

While, as Klein *et al*. (1996, 1999) notes, Mises focuses his criticism of the socialist economy on the problem of economic calculation, he certainly did not ignore the problem of bureaucratization emphasized by Lange. Actually, Mises contended that the problem of economic calculation and incentives within the organization, the latter being the main focus of the contemporary literature on agency problems but also on organizational design, are not separate problems and find both their origin in the existence or inexistence of private ownership and property rights in the means of production. It is with regard to his analysis of the role played by private ownership in the means of production in providing incentives within the organization that we can find many of the current propositions of the modern literature on agency problems in general.

Hired managers may successfully direct production or choose production processes. But the ultimate responsibility and control of production rests inevitably with the *owner*, with the businessman whose property the product is until it is sold. It is the owners who make the decision concerning how much capital to invest and in what particular processes. And particularly, it is the *owners* who must choose the managers. The ultimate decisions concerning the use of their property and the choice of the men to manage it must therefore be made by the owners and by no one else.

4.3 Mises: Profit Management vs. Bureaucratic Management

As we have seen, the literature attempting to analyze the working of different market mechanisms to reduce the problems associated with the separation of ownership and control is prolific and many debates have ensued. However, Mises anticipates this literature particularly in his analysis of the mechanisms limiting *bureaucratic* behavior within the corporation. It is more particularly in his discussion of the differences between *profit* management and *bureaucratic* management that Mises (1936, 1944, and 1949) clearly anticipates the contemporary literature.

4.3.1 Mises on the Managerial Competition

Mises anticipates Fama's (1980) insights on the role of labor market discipline and, in particular, how career concerns, which result in a competition between managers within the firm, play an important role in disciplining managers. As Mises (1949, p. 302; emphasis added) emphasizes, career concerns effects permeate the firm at every level of the hierarchy:

> Every manager and submanager is responsible for the working of his section or subsection. It is to *his* credit if the accounts show a profit, and it is to *his* disadvantage if they show a loss. His *own interests* impel him toward the utmost care and exertion in the conduct of his section's affairs. If he incurs losses, he will be replaced by a man whom the entrepreneur expects to be more successful, or the whole section will be discontinued. At any rate, the manager will lose his job. If he succeeds in making profits, his income will be increased, or at least he will not be in danger of losing it.

Furthermore, career concerns induce higher-level managers to monitor their immediate subordinates since the latter's performance is often a way to measure their own performance. As Mises (1944, p. 41) observes:

> It often happens that a superior errs in judging a subordinate. One of the qualifications required for any higher position is precisely the ability to judge people correctly. He who fails in this regard jeopardizes his chances of success. He hurts his own interests no less than those of the men whose efficiency he has underrated.

It is therefore in the interest of every member of the hierarchy to make sure that their subordinates act in the interest of the "corporation." Ultimately, at the top of the hierarchy, the shareholders' elected mandataries, the directors who appoint and discharge the managers, will have to answer to the shareholders if they hire incompetent personal friends or relatives or discharge competent collaborators or subordinates (Mises 1944, p. 39). Moreover, Mises also understood that the labor market discipline within the firm works from top to bottom but from bottom to the top as well (Mises 1936, p. 302). Managers compete to access to higher positions in the hierarchy and, therefore, it is in the interest of subordinates to monitor their superiors because if the latter fail, it gives them an opportunity to take their position.

4.3.2 Mises on Product Market Competition and Consumer Sovereignty

Complementing the labor market discipline, Mises makes a point in emphasizing the crucial role played by the product market discipline and, more particularly, the profit-and-loss discipline and the concept of *consumer sovereignty* (1949, pp. 270ff.)[30] As Mises (1944, pp. 39-40):

> The sovereignty of the consumers and the democratic operation of the market do not stop at the doors of a big business concern. They permeate all its departments and branches. Responsibility to the consumer is the lifeblood of business and enterprise in an unhampered market society. The profit motive through the instrumentality of which the entrepreneurs are driven to serve the consumers to the best of their ability is at the same time the first principle of any commercial and industrial aggregate's internal organization. It joins together utmost centralization of the whole concern with almost complete autonomy of the parts; it brings into agreement full responsibility of the central management with a high degree of interest and incentive of the subordinate managers of sections, departments, and auxiliaries.

The consumer dictates to the entrepreneurs and their managers what they should produce. The objective of any corporation or firm is to make as much profit as possible and, as a consequence, it must obey to the consumer's desires, "whims and fancies" if it wants to succeed. The profit-and-loss system is the mechanism by which the corporation can assess whether consumers are satisfied. If consumers are not satisfied, the corporation or one of its branches or departments will suffer losses and "sooner or later," it will be discontinued or go bankrupt and the managers will lose their jobs (Mises 1944, p. 39). Consumer's judgments are "merciless," and it does not matter that, technically, the shareholders are on the first line when it comes to bear the costs of inefficient managerial decisions. Ultimately, everybody in the corporation, from the top to the bottom of the hierarchy, will suffer the costs of inefficient decisions.

Even in the case of monopolies, Mises insists that these monopolies are still under competitive pressure and their market power is still restricted by the fact that new enterprises can always enter the market. As Mises (1936, p. 349) observed:

[30] As we shall see below Mises, in some way, also anticipates through his concept of consumer sovereignty and the profit-and-loss mechanism the role played by corporate culture in minimizing agency problems.

> Apart from the enjoyment of artificial support – the grant of special legal privileges, for example – we shall find that a monopoly can, as a rule, maintain itself only by the exclusive power to dispose of certain natural factors of production. Similar power over reproducible means of production does not as a rule allow permanent monopolization. New enterprises may always spring up. As already pointed out, the progressive division of labor tends towards a condition in which, at the highest specialization of production, everyone will be the sole producer of one or several articles. But this would by no means necessarily involve a monopolized market for all these articles. The attempts of manufacturers to extract monopoly prices would, apart from other circumstances, be checked by the appearance of new competitors.

In markets where there is no artificial barrier to entry resulting from "governmental interventionist policy," profit opportunities attract new competitors in the market that always place a strict limit on the formation of monopolies (Mises 1936, p. 349). Therefore, even in situations where monopolies arise, the possibility that new competitors enter in the market place a strict limit on the behaviors of these monopolies.

4.3.3 Mises on the Role of the Market for Corporate Control

Not only does Mises (1949, p. 303) anticipate Manne's (1965) discussion of the market for corporate control as a mechanism to discipline the managers but he also, at the same time, indirectly addresses the Berle and Means's arguments regarding the separation of ownership and control:

> It is asserted that the corporation is operated by the salaried managers, while the shareholders are merely passive spectators. All the powers are concentrated in the hands of hired employees. The shareholders are idle and useless; they harvest what the managers have sown.
>
> This doctrine disregards entirely the role that the capital and money market, the stock and bond exchange, which a pertinent idiom simply calls the "market" plays in the direction of corporate business. … In fact, the changes in the prices of common and preferred stock and of corporate bonds are the means applied by the capitalists for the supreme control of the flow of capital. The price structure as determined by the speculations on the capital and money markets and on the big commodities exchanges not only decides how much capital is available for the conduct of each corporation's business; it creates a state of affairs to which the managers must adjust their operations in detail.[31]

[31] See also Mises (1936, pp. 121-122).

As Klein (1996, p. 19) emphasizes, while Mises did not identify the market for corporate control *per se*, there is little doubt that he considered such a mechanism as the ultimate force to discipline the manager.

Mises (1944, pp. 70ff.; 1949, p. 304) also anticipates many of the contemporary discussions on the origins of the separation of ownership from control and, in particular, the causes of the rise of omnipotent management within the modern corporations, which manifests through the expropriation of shareholders (Roe, 1990 and 1994).[32] As Mises (1949, p. 304) observed:

> The emergence of an omnipotent managerial class is not a phenomenon of the unhampered market economy. It was, on the contrary, an outgrowth of the interventionist policies consciously aiming at an elimination of the influence of the shareholders and at their virtual expropriation.

Mises, in *Bureaucracy* (1944), attacks the claim that a bureaucratic management aroused naturally with the increase in firm's size and the emergence of the modern corporation. As Mises (pp. 13-14) argues in the introduction of his book:

> This book will try to demonstrate that no profit-seeking enterprise, no matter how large, is liable to become bureaucratic provided the hands of its management are not tied by government interference. The trend toward bureaucratic rigidity is not inherent in the evolution of business. It is an outcome of government meddling with business. It is a result of the policies designed to eliminate the profit motive from its role in the framework of society's economic organization.

Mises (pp. 71-80) gives examples of such government regulations that limit the effectiveness of the different mechanisms inducing managers not to engage in opportunistic behaviors. First, taxes and price regulations interfere with corporate profits and, as a consequence, deprive the shareholders and the entrepreneur from an important signal regarding managerial performance. Another type of interferences is the laws that interfere with the choice of personnel and the composition of the board of directors. To comply with some government regulations such as accounting and financial reporting requirements, corporations find themselves compelled to hire public relations staff and legal and accounting personnel. All these regulations and laws divert entrepreneurs and managers from their main objective which is to make profits and instead they find themselves compelled "to resort to diplomacy and bribery" (p. 79).

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[32] See also Klein (1999, pp. 35-36).

As we have seen, in many respects, Mises already in his discussion of the distinction between profit management and bureaucratic management treated many of the issues that we find in the contemporary literature on the firm and the separation of ownership.

4.4 Institutions and Corporate Culture: the Pioneering Analyses of the Austrians

As we have seen above, while institutions have been acknowledged for a long time in the agency literature, it is not until recently that agency theorists have started to analyze them and study how they complement and strengthen the reputation system. On the other hand, the crucial role played by institutions has received a lot of attention on the part of Austrian economists since Menger (1871 and 1883).

Menger (1871 and 1883) provides us with an insightful analysis of the emergence of the institutions such as the ones analyzed by agency theorists almost a century later.[33] Not only does his analysis provide us with a rationale for the emergence of these institutions but it also sheds a new light on the nature of these institutions.

First, Menger (1883, pp. 122-123) introduces an important distinction between "pragmatic" and "organic" institutions.[34] Pragmatic institutions are "products of the agreement of members of society, or of a positive legislation, results of the purposeful common activity of society thought of as a separate active subject." These pragmatic institutions are the works of "human intention and calculation". On the other hand, organic institutions "are not the result of agreement of members of society or of legislation" and yet "serve the welfare of the society." Therefore, for Menger (p. 124), this paradox or puzzle is "a noteworthy, perhaps the most noteworthy, problem of the social science:"

> *How can it be that institutions which serve the common welfare and are extremely significant for its development come into being without a* common will *directed toward establishing them?*

For Menger (p. 138), the answer to this question is to be found in the isolated self-interested human action. These social institutions (such as the money or the law) "are not the result of *socially* teleological factors, but are the unintended result of *individually* teleological factors." As

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[33] It is necessary to emphasize that Menger's original emphasis in his *Investigations into the Method of the Social Sciences* (1883) was on the methodology to analyze and understand the emergence of social phenomena such as institutions.
[34] Later Hayek (1973) will distinguish between "planned" and "spontaneous orders."

Adam Smith (1776) previously started through the parabola of the "invisible hand," Menger (p. 137) finds that the origin of these organic institutions must be traced back to the actions of individuals pursuing their own interests:

> In the same way it might be pointed out that other social institutions, language, law, morals, but especially numerous institutions of economy, have come into being without any express agreement, without legislative compulsion, even without any consideration of public interest, merely through the impulse of *individual* interests and as a result of the activation of these interests. The organization of the traffic in goods in markets which recur periodically and are held in definite localities, the organization of the society by separation of professions and the division of labor, trade, customs, etc., are nothing but institutions which most eminently serve the interests of the common good (…) They are, however, not the result of agreement, contract, law, or special consideration of the public interest by individuals, but the result of efforts serving individual interests.

Institutions emerge through a rational individual process. It is because individuals recognize it is in their own individual interests that they adopt such institutions-in-being. Money, law, and other institutions have emerged because they recognize the necessity of such institutions to serve their interests:

> The economic interest of the economic individuals, therefore, with increased knowledge of their *individual interests*, without any agreement, without legislative compulsion, *even without any consideration of public interest*, leads them to turn over their wares for more marketable ones, even if they do not need the latter for their immediate consumers needs. (Menger 1883, p. 134)

> The conviction of the necessity of such limits to despotism was not, therefore, originally realized in the nation thought of as an organized unit. Still much less was it realized as the result of the reflection of an individual, or even of a national council aimed at the welfare of all. It arose, rather, *in the minds of individual members of the population* with the increasing awareness of *their interest, the individuals' interest.* What benefits all, or at least the far greater majority, gradually is realized by all.
> The form in which the population becomes aware of convictions of the above type is, according to the nature of the matter, that of *rules for action*. (Menger 1883, p. 213)

In Menger's analysis, institutions emerged to facilitate exchange between individuals and resolve trust problems associated with the pervading existence of uncertainty and information asymmetries. For example, not only did the institution of money arise to resolve the problem of double coincidence of wants existing in the barter economy but also it aroused to resolve problems of trust.

Mises (1936, 1949) has also provided an analysis of social institutions grounded in the concept of rational action. His analysis is no more different from Menger. Social institutions are the unintended products of *individual* teleological factors. As Menger did, Mises (1936, pp. 32-33) rejects the rational constructivist explanation of the emergence of law developed by the doctrine of natural law:

> The doctrine of natural law has erred in regarding this great change, which lifts man from the state of brutes into human society, as a conscious process; as an action, that is, in which man is completely aware of his motives, of his aims and how to pursue them. Thus was supposed to have been concluded the social contract by which the State and the community, the legal order, came into existence. …
> No great insight, indeed, is needed to show that Law and the State cannot be traced back to contracts.

While Mises did reject the rationalist constructivist explanation of the emergence of social institutions, his explanation is still grounded in the rational purposeful human action as the one offered by Menger. For Mises (1949, p. 146), the human society as well as the social institutions, customs, and rules of conduct are the products of "human action, i.e., the human urge to remove uneasiness as far as possible." Social institutions emerge as a result of an increasing awareness that these institutions served individual interests:

> Every step by which an individual substitutes concerted action for isolated action results an immediate and recognizable improvement in his conditions. The advantages derived from peaceful cooperation and division of labor are universal. They immediately benefit every generation, and not only later descendants. For what the individual must sacrifice for the sake of the society he is amply compensated by greater advantages. His sacrifice is only apparent and temporary; he foregoes a smaller gain in order to reap a greater one later. … In striving after his own – rightly understood – interests the individual works toward an intensification of social cooperation and peaceful intercourse. … Law and legality, the moral code and social institutions are no longer revered as unfathomable decrees of Heaven. They are of human origin, and the only yardstick that must be applied to them is that of expediency with regard to human welfare. (Mises 1949, pp. 146-147)

Mises's analysis of the social institutions is in harmony with the "essential teachings of the rationalist and utilitarian social philosophy" that goes back to Adam Smith's "invisible hand" and Bastiat. Social institutions are human processes because they best serve "the aims of the individuals concerned and the individuals themselves have the ability to realize the advantages they derive from their adjustment to life in social cooperation" (Mises 1949, p. 147 fn 3).

The *raison d'être* of these social institutions, conventions, legal and moral codes, and customs is to "render possible human cooperation under the division of labor" (Salerno 1990, p. 35). The division of labor, which is accompanied by the division of knowledge "turns the independent individual into a dependent social being" (Mises 1936, p. 270). Social institutions emerge to strengthen the social bond existing between individuals under the division of labor. These social institutions exist "for social purposes" and individuals *rationally* adhere to these institutions because their "own aims can be served only in and with society" (Mises 1936, p. 66).

While Menger and Mises have provided very enlightening analyses of the role of institutions, it is probably Hayek's work on institutions that have received the most attention on the part of economists.[35] As Menger and Mises before argued, Hayek rejects the rationalist constructivist explanation of the emergence of institutions. Social institutions are what Hayek calls "spontaneous orders" as opposed to "created" or "planned orders," which are organizations (Hayek 1973, p. 43).[36] Spontaneous orders or institutions are not the deliberate products of human actions. They are the "results of human action but not of human design" (Hayek 1967). However, as Hayek (1967, p. 100 fn 12) points out in a footnote referring to Menger and Karl Popper, the fact that these institutions are the "unintended or undesigned results of many men" does not mean that these institutions are not the products of *rational* actions.

Hayek's analysis of the role and nature of social institutions and spontaneous orders is closely related to his work in economics on the "coordination of the actions of many individuals in concrete circumstances which are known only partially to each individual and become known to him only as they arise" (Hayek 1967, p. 91). The role of these social institutions is to coordinate the actions of many individuals under the circumstances of dispersed knowledge:

> They understood that only the recognition of certain principles of law, chiefly the institution of several property and the enforcement of contracts, would secure such a mutual adjustment of the plans of action of the separate individuals that all might have a

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[35] However, some lack of clarity due to language constraints has led to many misinterpretations of Hayek's work. As an example resulting from a confused reading of Hayek's work, it is a common charge against Hayek to call him an "anti-rationalist" and argue that Hayek's approach of institutions therefore widely differs from Menger and Mises. It seems to the present author that this criticism is unjustified. As Hayek (1967, pp. 84ff.) explains he is very critical of the *rationalist constructivism* that we find in Bacon, Hobbes, and Descartes notably because "it is from this kind of social rationalism or constructivism that all modern socialism, planning and totalitarianism derive." On the other hand, he is a rationalist in the tradition of Mandeville, Hume, and Menger and, as we have seen, it is to this tradition that Mises also belonged.

[36] Hayek also referred to the Greek terminology of *taxis* ("created order") and *kosmos* ("order resulting from practice").

> good chance of carrying out the plans of action which they have formed. It was, as later economic theory brought out more clearly, this mutual adjustment of individual plans which enabled people to serve each other while using their different knowledge and skills in the service of their own ends.
>
> The function of the rules of conduct was thus not to organize the individual efforts for particular agreed purposes, but to secure an overall order of actions within which each should be able to benefit as much as possible from the efforts of others in the pursuit of his own ends.
>
> The great advantage of such a self-organizing order …. was also that it made possible the utilization of the widely dispersed knowledge of particular circumstances of time and place which exists only as the knowledge of those different individuals, and could in no possible way be possessed by some single directing authority. (Hayek 1978, p. 136)

Moreover, his analysis of the development of institutions in embedded in the Mengerian tradition:

> The point in this which was long not fully understood until at last Carl Menger explained it clearly, was that the problem of origin or formation and that of the manner of functioning of social institutions was essentially the same: the institutions did develop in a particular way because the co-ordination of the actions of the parts which they secured proved more effective than the alternative institutions with which they had competed and which they have displaced.

Austrian economists since Menger have largely anticipated many of the analyses of the role played by institutions in coordinating individuals' actions under circumstances of dispersed knowledge. Rejecting the rationalist constructivism, Austrian economists have provided an enlightening analysis of the emergence and nature of these institutions embedded in the actions of individuals continually striving to substitute a state of affairs for a better one.

As we have seen previously, agency theorists have developed a growing interest in analyzing the role of corporate culture in strengthening the reputation system. Actually, while Mises never identified the concept of corporate culture *per se*, we can find in his writings on consumer sovereignty and the profit-and-loss system the same elements that we find in the analysis of corporate culture in the agency literature.

As Mises (1949, p. 288) repeatedly emphasized, the profit-and-loss mechanism is the only mechanism by which an entrepreneur can know if he has succeeded in satisfying the consumers. His success in making profits (and avoiding losses) depends exclusively of consumers' satisfaction:

> The specific entrepreneurial function consists in determining the employment of the factors of production. The entrepreneur is the man who dedicates them to special purposes. In doing so he is driven solely by the selfish interest in making profits and in acquiring wealth. But he cannot evade the law of the market. He can succeed only by best serving the consumers. His profit depends on the approval of his conduct by the consumers.

In other words, the only rule that the entrepreneur must follow to achieve his gold of making profits is to satisfy the consumers. Profit-seeking and consumer satisfaction are two interrelated concepts in Mises's analysis. Profit-seeking and consumer satisfaction are the two faces of the same coin. It is when we understand this fundamental aspect in Mises's analysis of the profit-and-loss system and the concept of consumer sovereignty that we can perceive to what extent he understood the role played by corporate culture in coordinating action within the organization. It is again in his discussion of the distinction between profit and bureaucratic managements that Mises (1949, p. 306) indirectly expresses the idea of corporate culture:

> In profit-seeking business, the discretion of managers and sub-managers is restricted by considerations of profit and loss. The profit motive is the only directive needed to make them subservient to the wishes of the consumers. There is no need to restrict their discretion by minute instructions and rules. If they are efficient, such meddling with details would a best be superfluous, if not pernicious in tying their hands. If they are inefficient, it would not render their activities more successful. It would provide them with a lame excuse that the failure was caused by inappropriate rules. The only instruction required is self-understood and does not need to be especially mentioned: Seek profit.

There is no need to write detailed contracts in which employees are explained how they should act in the face of a particular contingency. For Mises, corporate culture is the culture of profit. Profit culture consists essentially of one "simple" rule that every employee can understand and should follow: seek profit, that is, satisfy the consumers. In Mises's theory, profit making or consumer satisfaction is the rule used for judging right behavior and resolving inevitable disputes.

4.5 The Missing Element in Modern Agency Theory: The Entrepreneur

As we have previously seen, modern agency theory has made significant improvements since its first developments. Many of the analyses that we find in the Austrian literature have been incorporated in this literature even though Austrian analyses are rarely mentioned. However, it appears that no reference is made to the entrepreneur in agency literature as if he has no role to play in reducing agency problems.[37] On the other hand, in the Austrian literature, the entrepreneur plays a crucial role in the market process and the equilibrating process. Therefore, we here argue that agency theory still has something to learn from Austrian economists.[38]

As a preliminary note, it is necessary to emphasize that when Austrian economists refer to the entrepreneurs, they do not refer to a special group or a class of men but to a definite function. As Mises argues, being an entrepreneur means being "an acting man exclusively seen from the aspect of the uncertainty inherent in every action" (Mises 1949, p. 254). The entrepreneur is always a speculator because in acting he is always confronted with the uncertainty of the future (Mises 1949, p. 288). Therefore, to this regard, any acting individual can be an entrepreneur whether he is a capitalist, a landowner, a worker or even a manager.

However, the entrepreneurial function must be distinguished from any of these other functions. More particularly, the entrepreneurial function must be separated from the managerial function. The specific function of the entrepreneur is to allocate the factors of production in the lines of production of goods and services which are the most demanded by the consumers (Mises 1949, p. 288). On the other hand, the manager is the "junior partner of the entrepreneur" (p 301). He "relieves the entrepreneur of a part of his minor duties" by carrying on the part of the production process he has been assigned to and adjusting it to the state of the market. To be sure, the entrepreneurial and managerial functions can be carried by the same person but, as Mises reemphasized, these functions are different and the managerial function is "always subservient to the entrepreneurial function" (p. 302).

As we have previously stated, in the Austrian literature, the entrepreneur plays a fundamental role in driving the market process:

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[37] Actually, this is not an isolated phenomenon. This absence of the entrepreneur in agency literature is symptomatic of a more general phenomenon in the modern economic literature. Many economists (Baumol, 1968) and Austrian economists (Kirzner, 1973; Foss, 1994; Klein, 1996, 1999) have already emphasized this absence of the role of the entrepreneur in modern economics. One explanation for this absence of the entrepreneur in economic theory is that standard economic models focus their analyses on equilibrium situations where "there is no room for the entrepreneur" (Mises 1949, p. 253; Kirzner 1973, p. 26). However, this absence seems paradoxical in the context of agency literature in the sense that agency models typically analyze disequilibrium situations where contracting parties are imperfectly and incompletely informed.

[38] Because much work has been done by Austrian economists emphasizing the absence of entrepreneurship in the theory of the firm and attempting to develop an Austrian entrepreneurial of the firm, we will not focus our discussion on entrepreneurship on this particular aspect in agency theory but rather at a more general level. For extensive discussions and analyses of the connection between entrepreneurship and the theory of firm, see, for example, Foss (1994), Klein (1996, 1999), and Sautet (2000). While it is arguably an interesting issue, we will also avoid addressing the internal debate between Austrian economists on whether or not the entrepreneur can be property-less. On this last issue, see for example, Hébert (1985) and Rothbard (1985).

> The driving of the market process is provided neither by the consumers not by the owners of the means of production – land, capital goods, and labor – but by the promoting and speculating entrepreneurs. … Profit-seeking speculation is the driving force of the market as it is the driving of production (Mises 1949, pp. 325-326).

The world of the entrepreneur is the disequilibrium world constantly filled by discrepancies in the price structure. In such world, individuals are not completely and perfectly informed and, therefore, they make errors in their decisions, whether they are buying or selling decisions. These errors traditionally translate in discrepancies in the price system.[39] These discrepancies in the price system give rise to profit opportunities. Entrepreneurs are "those who are especially eager to seize these profits opportunities by adjusting production to the expected changes in conditions, those who have more initiative, more venturesomeness, and a quicker eye than the crowd, the pushing and promoting pioneers of economic improvement" (Mises 1949, p. 255).

The nature of the entrepreneur lies in "his ability to anticipate better than other people the future demand of the consumers" (Mises 1949, p. 288).[40] As Mises (1951, p.103-104) explains:

> What makes profit emerge is the fact that the entrepreneur who judges the future prices of the products more correctly than other people do buys some or all of the factors of production at prices which, seen from the point of view of the future state of the market, are too low. Thus the total costs of production – including interest on the capital invested – lag behind the prices which the entrepreneur receives for the product. This difference is entrepreneurial profit.

In grasping these profit opportunities, the entrepreneur contributed to correct these discrepancies and initiate a process that would bring the economy to the equilibrium "if no further changes were to occur" (Mises 1949, p. 335). For the Austrian economists, the analysis of the role of the entrepreneur provides the key to the understanding of the market process and the equilibration process:

> He shows how the activities of enterprising men, the promoters and speculators eager to profit from discrepancies in the price structure, tend toward eradicating such discrepancies

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[39] However, we should note that traditionally, in the Austrian theory, these errors are producers' errors. These errors are generated by producers or entrepreneurs' failure to adjust "the course of production activities to the most urgent demand of the consumers" (Mises 1951, p. 104).

[40] It is important to emphasize that the nature of the entrepreneur does not lie in the *success* of the entrepreneur's judgment or speculation but in the fact that the entrepreneur *in general* anticipates better than other people the future demand of the consumers. Entrepreneurial losses result from the fact that the entrepreneur who *in general* anticipates better than others has committed a mistake by misjudging the future demand of the consumers (Kirzner 1992, pp. 19ff. and Kirzner 2000, p. 31)

> and thereby also toward blotting out the sources of entrepreneurial profit and loss. He shows how this process would finally result in the establishment of the evenly rotating economy (Mises 1949, pp. 352-353).

Following Mises, Kirzner (1973, 1992, and 2000) has considerably elaborated and enlarged the Misesian theory of entrepreneurship notably by giving it some Hayekian insights regarding the nature of the equilibrium and the equilibrium process. Hayek's insights come particularly from his emphasis on the role of knowledge and its enhancement in the course of the market process. Hayek (1948, p. 42) redefined the concept of equilibrium and equilibrium process in terms of knowledge and foresight:

> It appears that the concept of equilibrium merely means that the foresight of the different members of the society is in a special sense correct. It must be correct in the sense that every person's plan is based on the expectation of just those actions of other people which those other people intend to perform and that all these plans are based on the expectation of the same set of external facts, so that under certain conditions nobody will have any reason to change his plans. Correct foresight is then not, as it has sometimes been understood, a precondition which must exist in order that equilibrium may be arrived at. It is rather the defining characteristic of a state of equilibrium.

In Hayek's perspective, the process of equilibration is a process during which market participants acquire better mutual information concerning the plans being made by fellow market participants (Kirzner 2000, p. 13). Therefore, as Kirzner (2000, p. 13) argues, this process of equilibration is driven by the *alert* entrepreneurs "who see opportunities for pure profit in the conditions of disequilibrium." These entrepreneurs in grasping these profit opportunities drive the market process on the equilibration path by diffusing to the market participants information concerning the other market participants' plans. These entrepreneurs by exploiting these profit opportunities eliminate these "pockets of ignorance" or informational asymmetries that give rise to entrepreneurial profit opportunities. They "*bring into mutual adjustment* those discordant elements" which resulted from informational asymmetries existing between the market participants (Kirzner 1973, p. 73).

When taken into account in the analytical framework, the Austrian theory of the entrepreneur becomes enlightening in two respects. First, this theory allows us to have a new appreciation of the very nature of the private institutions (such as knower organizations) analyzed by the agency literature. Second, it provides us with an insightful explanation of the emergence of these institutions.

As we have previously seen, agency problems and, particularly, adverse-selection problems result essentially from the fact that individuals are differently (asymmetrically) informed. The typical lemon problem described by Akerlof is an illustration of this pervasive fact of life that individuals are differently informed. However, a simple look "through the window" shows us that we do not observe the market breakdowns that Akerlof's model predicted. Actually, individuals enjoy a large variety of goods and services of different qualities. This discrepancy between the model and the reality is partly explained by the fact that there are many private institutions such as knower organizations that provide information to the consumers about the quality of the goods and services provided and, therefore, mitigate these adverse-selection problems.

From the Austrian theory of entrepreneurship perspective, these knower organizations are of an *entrepreneurial* nature. They perform the entrepreneurial function of coordinating the buyers and sellers' plans by "*making the consumer aware* of the available opportunities" (Kirzner 1973, p. 151). Not only do these organizations "*alert* the consumer of the availability of the product" but sometimes they "even alert the consumer to the *desirability* of an already known product." Their entrepreneurial role does not consist merely in "producing knowledge" for the consumer concerning prospective or existing opportunities but, more importantly, "it consists in *relieving the consumer of the necessity to be his own entrepreneur*" (Kirzner 1973, p. 136). The entrepreneurial function of these knower organizations can consist also in relieving the producer of the necessity to be his own entrepreneur.[41] In other words, these entrepreneurs perform the role of reducing the informational asymmetries existing between individuals. They generate *common knowledge*, which is important for individuals to coordinate their actions; whether these actions are buying, selling, hiring, or punishing through boycotting or blacklisting (Chwe, 2001).

Another important contribution of the Austrian theory of entrepreneurship is that it provides us with an enlightening explanation of the emergence of these private institutions such as the knower organizations. These knower organizations arise because of the presence of entrepreneurs in the market process. As we have seen above, entrepreneurs are these individuals who are better able to anticipate the future demand of the consumers. We have also seen that these knower organizations reduce informational asymmetries between market participants by providing them

[41] For example, the Underwriters Laboratories provide voluntary certification for goods such as electrical appliances, automotive products, medical appliances, alarm systems, and chemicals. They test thousands of products and provide certifications for satisfactory products (Klein 1997, pp. 114-115). In the same way, head hunter companies play an entrepreneurial role in relieving employers from the necessity to be their own entrepreneurs by screening candidates.

with quality information and relieving them from the necessity of being their own entrepreneur. To this extent, quality information becomes a service or a good for which these entrepreneurs have perceived a demand for.

Similarly, as we have seen, there are other types of institutions such a trading communities, private laws or coalitions which are not the product of collective will but rather arise in the minds of individual members increasingly being aware that these not-yet institutions serve their own interests. However, as Menger (1871, p. 261) observed discussing the emergence money, this knowledge is not achieved by all the people of the community at the same time:

> On the contrary, only a small number of economizing individuals will at first recognize the advantage accruing to them from the acceptance of other, more saleable, commodities in exchange of their commodities in exchange for their own whenever a direct exchange of their commodities for the goods they wish to consume is impossible or highly uncertain.[42]

While Menger never refers to the entrepreneurs when he talks about the emergence of institutions, his description of the emergence and the individuals at the origin of the emergence process is consistent with the Austrian theory of entrepreneurship.[43] These individuals who perceive the advantage of accepting and using more saleable commodities are nothing else than entrepreneurs. They are "the most discerning and most capable individuals". The economic success of these individuals "who employs the correct means of achieving their ends" generates a process of imitation that results from the observation by the other community members of these pioneering successful individuals (Menger 1871, p. 261).

There is little doubt that, by integrating in the analytical framework the role played by alert entrepreneurs, agency theory would gain in relevance to the extent that it will explain the emergence and evolution of these *knower organizations* and social institutions, which allow individuals to mitigate agency problems. It is because of the presence of alert entrepreneurs that new organizations and social institutions continuously emerge. They allow individuals to coordinate their actions despite the fact that they have different and conflicting interests and they are always confronted to the pervading existence of information problems. It is in this regard that

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[42] See also Menger (1883, pp. 134-135).
[43] We should note however that Kirzner (1992, pp. 163ff.) considers that the emergence process of institutions described by Menger is not of the same nature of the entrepreneurial process as we observed it in the market context.

the Austrian theory of entrepreneurship gives us insights on the nature and the role of these various institutions analyzed in the agency literature.

5 Conclusion

This paper analyzes to what extent the Austrian economists and, particular, Mises anticipates many of the developments that agency theory has known since its early developments in the 1970s. We focus our attention more particularly on the analysis of implicit incentive mechanisms. Moreover, we argue that, while agency literature has incorporated many of the Austrian insights in its analyses, it still has to incorporated the crucial role played by the entrepreneur in reducing agency problems in its analytical framework. Integrating into the analytical framework of agency theory the role played by the Austrian entrepreneur would provide agency theory new insights particularly on how implicit incentive mechanisms are entrepreneurially driven.

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