Agency Theory

Stefan Linder

Nicolai J. Foss

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Department of Strategic Management and Globalization
Copenhagen Business School
Kilen, Kilevej 14A
2000 Frederiksberg
Denmark
www.cbs.dk/smg

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Stefan Linder
ESSEC Business School
Avenue Bernard Hirsch, BP 50105
95021 Cergy-Pontoise (Paris) / France
linder@essec.fr
phone: +33-1-3443-3238; fax: +33-1-3443-2811

Nicolai J. Foss
Department of Strategic Management and Globalization
Copenhagen Business School
Kilevej 14A, 2nd fl.
2000 Frederiksberg / Denmark
njf.smg@cbs.dk
phone: +45 3815 2562
and
Department of Strategy and Management
Norwegian School of Economics and Business Administration
Helleveien 30, N-5045
Bergen; Norway

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Abstract

Agency theory studies the problems and solutions linked to delegation of tasks from principals to agents in the context of conflicting interests between the parties. Beginning from clear assumptions about rationality, contracting and informational conditions, the theory addresses problems of ex ante (“hidden characteristics”) as well as ex post information asymmetry (“hidden action”), and examines conditions under which various kinds of incentive instruments and monitoring arrangements can be deployed to minimize the welfare loss. Its clear predictions and broad applicability have allowed agency theory to enjoy considerable scientific impact on social science; however, it has also attracted considerable criticism. [99 words]

1. Foundations

1.1 Delegation and Conflict of Interest

A key tenet of economics is that specialization is productive. On the individual level, it is indeed often beneficial not to engage in a particular task oneself, but to delegate it to another person specializing in the task. Examples are counseling on legal matters, managing another person's funds, diagnosing and advising on illnesses, and precision-grinding a cylinder or machine tool. Delegating such tasks may be beneficial due to lack of time or knowledge of how to best perform the task (Laffont and Martimort, 2001). Yet, truly reaping the benefits of delegating a task to another person (an "agent") is not always easy in practice. In The Wealth of Nations, Adam Smith, while praising the benefits of the division of labor and specialization, also provides what may be the first written account of the problems of delegation that the division of labor gives rise to. Referring to the directors of stock companies who as agents of the owners specialize in the day-to-day handling of the business, he (Smith, 1776, p. 700) observes that

> "being the managers rather of other people's money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. … Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company".

Thus, Smith describes how different and even conflicting interests may lead to efficiency losses ("neglicence and profusion") in the context of a situation of delegation in which principals cannot costlessly enforce the actions they prefer their agents to take, that is, where "agency problems" exist. However, with few exceptions (particularly the debates of the 1930s on the economics of socialism and the separation of ownership and control in the modern corporation), awareness of agency problems in economics was virtually non-existent until the end of the 1960. At that time, fundamental advances in economic analysis (economics of uncertainty and information, mechanism design, property rights) paved the way for a rigorous and systematic approach to these problems. Agency theory (or, "principal-agent theory" or sometimes just "incentive theory") is an integral part of contemporary microeconomics.

The canonical set-up of the theory is this. Two self-interested individual recognize potential gains from a trade, in which one (i.e., the principal) delegates a physical or mental task to the second (i.e., the agent), whose choice of actions and/or effort level affect the payoffs of both parties (Grossman and Hart, 1983; Jensen and Meckling, 1976; Ross, 1973). The agent is paid by the principal, who assumes the role of residual claimant in the relationship, that is, he holds the claims to net cash flows that result from differences between inflows and promised payments to other claimholders (Jensen and Smith, 1985). The agent and the principal hold different interests. For example, top managers acting as agents' of the firms' shareholders may prefer "empire building", perks, leisure time, and so on instead of maximizing shareholders' returns ("conflict in outcome-type preferences") (Holmström, 1979; Jensen and Smith, 1985). Likewise, managers may prefer engaging in capital expenditures that maximize the survival chances of the firm that pays their salaries, while shareholders will likely prefer them to go for high-return, but also typically more risky investments as they can diversify risk ("conflict in risk preferences") (e.g., Grossman and Hart, 1983). Or, yet again, managers may not plan to stay on for a long time with the firm in question and thus differ in the time horizon they consider in decision-making from (assumingly long-term oriented) shareholders ("conflict in time horizon") (e.g., Baker, Gibbons and Murphy, 1994). Many other forms of conflicts of interests between the principal(s) and the agent(s) are obviously conceivable. All of these imply that the agent (or agents) may not act in the principal's best interest. Yet, these conflicting interests only become problematic when combined with information being asymmetrically distributed between the principal(s) and the agent(s).

1.2 Asymmetric Information, hidden characteristics, and hidden action

The delegation of a task is often motivated by the principal lacking knowledge, abilities or skill to perform the task themselves, knowledge differences that explain why gains from trade exist in the first place. However, it also implies that the principal faces a disadvantage with respect to judging the agent‘s true knowledge and/or efforts in carrying out the delegated task. For example, patients typically cannot fully ascertain the physician’s knowledge, abilities, and skills. They may rely on the academic degrees the agents hold, their reputation or the like; however, only the agents know the true state of their knowledge, abilities, and skills. The situation is complicated by self-interested agents potentially deliberately hiding their true qualities (e.g., a lack of appropriate skills for conducting the task at hand) or even falsifying signals (e.g., faking their CV or the degrees they hold) in order to get a job and to earn the related rents. Therefore, when informational asymmetry is present already before the principal hires an agent this gives rise to the so-called “hidden characteristics” problem. It is one of the core problems in delegation under conflicting interests and information asymmetry between the parties studied by agency theory.

Even if the principal is perfectly informed about the characteristics of the agent(s), she may nevertheless face an information disadvantage with respect to the actions taken by the agent(s). More precisely, the disadvantage (i.e., informational asymmetry) concerns which action (or effort level) the agent actually took, whether it was the right one given the circumstances, and exactly which circumstances pertained (Grossman and Hart, 1983; Holmström, 1979). For example, the sales of a salesperson on a local market are influenced by stochastic influences, such as changes to local demand, that may be hard or simply too costly to ascertain by the principal (the firm who employs the salesperson). Of course, agents are likely to hold superior knowledge concerning the true actions or effort they exert in carrying out the task. Agents may exploit this information asymmetry by engaging in actions not valued by the principal or withholding effort or other forms of "hidden action". This is often captured by the notion that the agent experiences "disutility of labor," which is somewhat misleading as it implies that agents are lazy. They may be, but the more general interpretation is that agents prefer dedicating effort to activities they choose themselves.

The upshot of the above is that the principal may face informational disadvantages either ex ante (i.e., "adverse selection", "hidden information"), that is, in the contracting stage of the relationship, or ex post ("moral hazard," "hidden action") when the agent may carry out the delegated task in a manner or with an intensity diverging from what would maximize the principal's payoffs. Further complicating is the fact that both problems may appear within the same relationship. For example, when looking for legal advice from a lawyer, the client may neither know enough to fully judge alternative lawyers' abilities, knowledge, and skill nor may s/he be able to observe and properly judge the efforts made by the lawyer chosen. Under conflicting interests and when the principal is either not knowledgeable of the task she wishes to delegate and/or cannot observe the agent's characteristics and actions, the principal faces problems of hidden characteristics or hidden action (or both). Hence, both information asymmetry and conflict of interest are necessary ingredients for a "principal-agent problem" to exist.

2. Core Insights and Predictions of the Agency Model

2.1 The Linear Agency Model

The workhorse model of agency theory, the "linear model" (Holmström and Milgrom, 1991; see also Holmström, 1979, for a seminal contribution that is also echoed in the following) studies a two-party setting: one principal and one agent. Both are assumed to be self-interested, behave rationally, and maximize their utility. Due to information asymmetry ex post, the principal is unable to contract over the agent's actions (which the principal assumingly cannot observe), but only over the output z of the agent's actions. (In agency theory, all observable variables are contractible). For convenience, most agency theorists think of the agent's actions as his effort e, that is, alternative actions correspond to different effort levels (e.g., Holmström, 1979) and the terms effort and action are thus used interchangeable in much of the literature. The result z in turn is assumed to depend linearly on the sum of the agent's choice of effort e and some stochastic influence from the environment θ. For simplicity, the basic model assumes this external influence to be standard-normally distributed with an expectation of zero. Both, the distribution and the expectation are known by both parties, whereas the true effort e exerted by the agent and the actual state of the environment θ are only known to the agent; the principal can only observe the result z caused by both e and θ. The principal is thus assumed to be unable to ascertain whether a good result z is due to the agent's high effort level e or due to "luck" (θ); hence, she faces a problem of hidden action/moral hazard.

The interaction between the principal and the agent starts with the principal contracting with the agent about a wage W, which is comprised of some proportion β of the result z generated by the agent (potentially plus some fixed salary component W_0). The share of the result z that the principal agrees to pay the agent (i.e. the β) is referred to as "incentive intensity". As the true effort e cannot be observed, the agent's wage W must be based on the result z obtained (which is influenced by the stochastic environment). Therefore, any β larger than zero implies that the agent is exposed to risk with respect to his/her remuneration. And here comes another assumption of the (basic) agency model into play: The risk aversion r_A of the agent. Whereas the principal is assumed to be risk neutral (she is able to diversify risk, e.g., by holding a market portfolio of relationships), the agent is assumed to be risk averse as his payoffs are linked to the particular relationship (e.g., Grossman and Hart, 1983). Risk-aversion implies that the agent will ask for a premium in order to accept a contract offered by the principal based on the risky result z.

This risk premium reduces the surplus, but does not give the agent extra utility. Thus, the larger the risk-premium, the smaller the total value created in the relation (i.e., the sum of the monetary equivalents of the utilities of the principal and the agent). The size of the risk-premium depends on both the degree of risk-aversion of the agent r_A and the riskiness of the wage (i.e., the variance in the wage due to the environment's impact ($Var\ (W) = \beta^2\ Var\ (\theta\,)$). Thus, β has to solve two tasks: providing incentives to the agent to work hard and insurance against risk (note: literature unfortunately also uses the term "uncertainty" to denote the stochastic nature of the agent's payoffs, which we do not follow here as it clutters the differences between randomness and true uncertainty in the sense of Frank Knight, that is, outcomes for which no distribution and expected value are known). It is, therefore, usually impossible under information asymmetry to handle both tasks optimally (Holmström, 1979). Therefore, any solution is inefficient ("second-best") as compared to a hypothetical first-best solution in which the principal would bear all the risk and the agent would be paid on his/her efforts only.

In addition to the (risky) payoffs associated with the relation, agents are expected to consider their costs (Grossman and Hart, 1983). Agents are assumed to have exponentially growing disutility of engaging in effort ($C(e)$). Principals in turn need to take this into account when solving their own optimization problem concerning the optimal β. As Holmström and Milgrom (1991) show, this can be done neatly by starting out from the certainty equivalents of both parties. A certainty equivalent is the certain value that makes an individual indifferent in terms of utility between obtaining the "risk-free" certain value and a risky "lottery" value. For the agent the certainty equivalent corresponds to the wage minus the risk premium minus the costs (i.e., $CE_A = W_0 + \beta \cdot e - ½ \cdot r_A \cdot \beta^2 \cdot Var(\theta) - C(e)$). Taking the first derivative of this term to e and then setting the expression to zero and solving for β yields the helpful term of $\beta = C'(e)$, that is, the agent's optimal choice of e is where marginal revenue equals marginal cost. The optimizing behavior of the agent implies that his efforts e are a function of β. Based on this insight only a few mathematical optimization steps are now necessary to solve the principal's problem, that is: to get from the task to maximize the total certainty equivalent for both parties (max $CE_{Total} = P(e(\beta)) - C(e(\beta)) - ½ \cdot r_A \cdot \beta^2 \cdot Var(\theta)$) to the optimal incentive intensity (denoted as β^*) (for the details of the a mathematical derivation see e.g., Milgrom & Roberts, 1992, pp. 222n; and for the original formulation, Holmström & Milgrom, 1991).

The resulting expression $\beta^* = P'(e) / [1 + r_A \cdot Var(\theta) \cdot C''(e)]$ suggest that the optimal β depends on four factors: (1) The more sensitive the payoff to the principal on changes in the agent's efforts or actions ($P'(e)$), the larger should be β^*; (2) the stronger the agent's risk aversion r_A, the lower the β^*; (3) the larger the riskiness of the results obtained by the agent due to environmental influences $Var(\theta)$, the lower the incentive intensity; and (4) the stronger the agent's discretion regarding the choice of activities ($\partial e/\partial \beta = 1/C''(e)$), that is, the lower his/her costs of acting in a manner functional for maximizing the principal's payoffs $C''(e)$, the larger the β^*.

2.2 Core Insights

The set of insights what determines β^* has become known in literature under the label of the "incentive intensity principle". It is one of the core contributions of agency theory to the understanding of how principals can set incentives and design monitoring schemes in order to minimize the welfare loss ("agency costs") resulting from conflict of interest and information asymmetry ex post. In short, β^* is determined by incentive elasticity of profits (e.g., there may be tasks where strengthening incentives does not lead to more effort being supplied); the risk tolerance of the agents (e.g., agents that are high in risk aversion will demand a high risk premium); the effort elasticity of incentives (e.g., some agents may have work/leisure tradeoffs such that they are not easily incentivized); and the measurability of outputs (if outputs are very costly to measure, it may be counterproductive to tie pay to outputs).

A key application of the linear model concerns when to use additional information *y* in the incentive design, such as for example the sales performance of other sales reps when incentivizing a particular sales person or the performance of similar firms in the industry when judging top-management's efforts and so on. The extended model demonstrates that if the additional information gathered is not "informative" about the focal agent's true effort, that is: if the additional information *y* used has a covariance of zero with the state of the environment θ, then including the additional information in the wage contract with the agent is unreasonable. Including it under such conditions only adds noise, which makes drawing conclusions about the agent's true effort level or actions even harder (Milgrom & Roberts, 1992). Therefore, the "informativeness principle" calls for including additional available information only if it allows reducing noise.

The "equal compensation principle" stems from yet another extension of the basic model. This extension renders the model more realistic by allowing the focal agent being responsible not only for a single or single-dimensional task, but for multiple tasks or multi-dimensional tasks, with performance on some tasks or dimensions easily measureable and others only difficult or prohibitively expensive to assess. Holmström and Milgrom (1991) show that under such conditions, agents will shift their effort to those tasks/dimensions that are measured (and rewarded) by the principal(s) at the detriment of other tasks (or other dimensions of the task) that are too expensive to assess. For example, the agent may focus on her/his results looking good in terms of the financial performance achieved, but neglect other non-financial and maybe only qualitative aspects, such as performance with respect to customer-satisfaction, environmental or social dimensions of a task and so on. The extended model thus suggests two consequences: (1) grouping easy-to-measure tasks together instead of spreading them over multiple individuals, and to provide a low β to those individuals engaging in the tasks with the hard or impossible to measure dimensions/tasks, and (2) choosing only a low β if the task dimensions cannot be separated organizationally on multiple individuals and agents thus have to carry out multi-dimensional tasks with some dimensions costly to measure but essential to the principal.

Finally, the "monitoring-intensity principle" highlights the complementarities of incentive provision and monitoring in addressing hidden action problems. Whereas the basic model treats the variance with which efforts are measured as outside the principal's control, it is in many cases more realistic to assume the principal to be able to improve measurement by spending resources on, for example, more detailed data collection, a lower span of control of supervisors allowing them to closer monitor individual employees, and so on. While all of these actions are costly to the principal, they improve the principal's information about how the agent performs. By including the costs for measurement in the optimization problem, the extended model suggests that more resources should be spent on measurement when the incentive intensity is higher. Hence, high incentive intensity and careful performance measurement are complementary (Milgrom and Roberts, 1992).

Besides these exemplary extensions, agency theorists have developed a great number of other refinements of the model that relax certain assumptions and render the model more realistic. For example, scholars have refined the model to allow for multi-period settings, risk-averse principals, risk-neutral agents, non-linear production functions, subjective versus objective performance measures, or to expand the model to comprise more than two parties – that is, multiple principals and/or agents (e.g., Baker, Gibbons and Murphy, 1994; Milgrom and Roberts, 1992).

The basic agency model (and many of its extensions) provides insights for handling both ex post as well as ex ante information asymmetry. For example, it suggests that principals offering agents a contract with a $\beta > 0$ are likely not only to reduce problems of hidden action, but can also already ex ante trigger that agents with lower abilities and skills prefer not to accept such a performance-contingent contract and to, for example, look for other employment opportunities where they are given a fixed salary. Thus, firms switching from paying their employees a flat wage can be expected to benefit from two effects: First, an increase in the effort level exerted by the employees already employed by the firm ("incentive effect") and second, a beneficial change in the pool of new applicants for positions with the firm (i.e., the "sorting effect" of variable incentive schemes).

Principals may also rely on increased information gathering already ex ante about potential agents in the contracting stage to reduce information asymmetry. Job interviews are one example of such information gathering or screening activities ex ante that aim at reducing the hidden characteristics problem. Agents themselves may take the initiative by signaling their true ("good") characteristics to the principal(s), that is, reducing information asymmetry between them and the principal(s) through such instruments like, for example, providing warrantees for used cars that they wish to sell in the example of car dealers, or investing into acquiring academic degrees in case of agents seeking a job.

3. Exemplary Applications and Contributions

Conflict of interest and asymmetric information are widespread phenomena in cooperative activities among individuals (Holmström, 1979; Jensen and Meckling, 1976; Ross, 1973). Thus, it is not surprising to see agency theory being applied to the study of a wide range of relationships within labor market (i.e., labor market economics) and business contexts (i.e., personnel economics), as well as in sociology or political science research.

Discussing the many applications of agency theory is beyond the scope of this chapter; in fact, merely scratching the surface of this huge body of literature is a daunting challenge.

By looking at relationships between two or more cooperating individuals in terms of a "nexus" of explicit or implicit contracts (e.g., Alchian and Demsetz, 1972; Jensen and Meckling, 1976), agency theorists were among the first scholars who opened up the "black box" of firms and organizations, and contributed the explaining rationales and workings of other kinds of economic organization (i.e., various kinds of non-firm contracting arrangements). An early influential stream (Alchian and Demsetz, 1972) conceptualized firms as an efficient responses to agency problems caused by "team production" in which individual productivity is costly to observe, but the team's output is not. In this situation it makes sense to appoint a monitor who holds residual income rights to the team's output, because this means that he will undertake an efficient level of monitoring. Thus, the monitor is also the owner of the firm and holds right to discipline team members—a rudimentary theory of why there are firms in a market economy (see Holmström, 1982, for important refinements and extensions).

These contributions represent marked scientific progress over the previously dominant perspective of firms as production functions with their own preferences and decision making presumably corresponding to a single individual. It has profoundly changed how economics and business research think about firms and organizations in general in fields such as corporate governance, human resource management (in particular: remuneration), strategy implementation, performance measurement, organizational control, accounting as well as phenomena affecting intersections of multiple of these fields.

Agency theory (and derivations thereof) sees application to a growing number of research fields within political science and sociology (see Kiser, 1999, for a detailed review). Scholars in political science have applied (often more or less adapted versions) of agency theory to a wide array of topics, with particular emphasis on studying legislatures and policy implementation. In an early application, Rose-Ackerman (1975), for example, uses agency theory to study corrupt dealings in the government contracting process. Others have focused on how “red tape” can serve a monitoring function to achieve that policy decisions by unelected bureaucratic officials are responsive to the preferences of citizens. Adams (1996) in turn provides an example of the theory’s use within sociology to study the relationship between patrimonial states and colonial trading companies in the Netherlands and England.

4. Criticisms and Limitations

Agency theory has attracted considerable criticism from various authors and scholarly fields. In particular, numerous authors have criticized the assumptions underlying the standard agency model as too restrictive, that is: as not being generalizable to the overwhelming part of humans, but as rather being particular to just a subset of individuals.

Given and state independent utility/risk functions.

Empirical and experimental research suggests that the von Neumann and Morgenstern utility functions underlying agency theory are likely not to be as generally applicable, as was originally hoped. For example, Prospect Theory advanced by Daniel Kahneman and Amos Tversky in response to empirical evidence questioning the von Neumann and Morgenstern utility theory suggests that individuals will consider their current wealth when evaluating how to act, implying that the same individual may sometimes be risk averse, risk neutral or even risk seeking depending on the state of his/her personal wealth. So far, these insights have not yet been incorporated into agency theory.

Complete contracting

Agency theory assumes complete rationality of the parties involved, implying that the contracts between the principal(s) and the agent(s) will contain all available information and that the terms stipulated in the contract will consider all possible future situations (so called "complete contracts"). Hence, while principal(s) and agent(s) are assumed to differ in terms of the information about the characteristics of the agent(s) or their actions, the theory assumes that each of the parties makes full use of the information available to it in designing the contract and in deciding on how to act, respectively. Agency theory thus—as opposed to transaction cost economics—abstracts from potential costs for incorporating information into the contracts as well as from the possibility that contracts may be incomplete simply due to insufficient knowledge about all potential future situations or actions possible. Whereas Ross (1973: 135) submits that under the assumption of complete contracts "the problem is considerably simplified but much of the interest does remain", agency theory's underlying assumption thus nevertheless hampers its usefulness for the study of a number of highly important real-world phenomena. Entrepreneurship, for example, while undoubtedly a core economic phenomenon, is hard to study when allowing only for risk – that is, probabilistically known future states that hence can be included in a complete contract, but not uncertainty in the sense of Frank Knight, which defies standard probabilistic accounts, but which is part of the very nature of entrepreneurial activities. Hence, such fundamental questions of what the principal should want the agent to do and how the principal actually became the principal in the first place have been rather sidelined in agency theory.

Self-interest / Opportunism

Some authors have pointed out that agency theory may paint a too dark picture of human nature by assuming that individuals behave opportunistically. Perrow (1986) even went as far as claiming that agency theory is "not only wrong but dangerous" (p. 11)—a theme echoed by a host of writers after the onset of the current financial crisis claiming that agency theory reflects a misguided libertarian ideology and would prompt the adoption of an overly cynical view of human nature. They warn that when this view is generalized, for example, through the teachings of economists in universities and business schools, there is a risk that important pro-social behaviors are crowded out or that a self-fulfilling prophecy might result from assuming individuals to be opportunistic. Moreover, some scholars have pointed out that the theory does not devote sufficient attention to the potential consequences of the principal's opportunism, in the sense that he may try to cheat on the agent in the performance evaluation or reward. However, given that the theory assumes complete contracting, i.e. that the agent might appeal to a third party – e.g., a court – for enforcement of the contract, this criticism seems rather misguided.

Intrinsic motivation

The phenomenon of a "crowding-out" of task-autonomous motivation (often called "intrinsic motivation") largely associated with the pioneering works by Edward L. Deci and Richard M. Ryan has attracted massive interest among scholars in psychology, education research, and lately also in economics and management research. Whereas it seems rather well established within education research that administrating incentives that are perceived as controlling undermines the pre-existing task-related autonomous motivation of the agent to engage in the task—for example, due to enjoyment of carrying-out the task or due to fully internalized norms and values of the agent—the jury is still out when it comes to the phenomenon's existence and magnitude in common business settings. Several studies in economics (e.g., Lazear, 2000) reported increases in employee's engagement in routine or mundane activities – such as for example, the installation of auto glass – when providing performance-contingent incentives for these activities. However, the existing evidence on motivation crowding suggests that it is likely that the phenomenon pertains to non-mundane tasks in business situations. Existing agency models thus are likely to require adaptation to take the interaction of incentives (and monitoring) with task-autonomous motivation of the agent(s) for non-mundane tasks explicitly into account. This might lead to more nuanced versions of the incentive and monitoring intensity principles.

Dominance of linear models with small number of players in agency models

The common linear models used in much of agency theory provide great tractability. Yet, linear contracts may not be optimal contracts and the generality of the findings may thus be limited. Similarly, limiting the models to only a small number of principals and/or agents is necessary to keep model complexity to a manageable level. However, real-world social behavior, in particular in groups of “agents”, is likely to be much more complex than suggested by models focusing only on a small number of players.

Practical usefulness of agency insights

A number of scholars have questioned the practical applicability of (some of) the insights obtained from agency models. First, in practice managers and HR professionals often lack the information assumed available in principal-agent models, such as, for example, the marginal effect on the principal’s payoffs of an increase in the agent’s effort level by one unit, risk tolerance, or the agent’s responsiveness to incentives. Measurement of these variables in practice is still a thorny issue, reducing many of the highly interesting theoretical insights generated by agency theory to mere rough guidelines from a practitioner’s perspective. Second, contrary to what agency theory typically assumes, employment contracts and many other contracts are subject to external restrictions beyond the principal’s control, such as labor laws, generating outcomes different from those analyzed in the theory. Third, contracting may in practice not necessarily correspond to the situation assumed in agency theory with the principal proposing contracts on a take-it-or-leave-it basis. Rather, some bargaining between the principal(s) and the agent(s) will take place. Thus, it may not be wise for principals in practice to propose to their agent(s) the optimal contract right-away, but rather to propose one that will—considering the bargaining to take place—lead to the optimal contract (or one that is close enough). As agency theory does not provide guidance here, insights from bargaining theory may be necessary and valuable complements to practitioners.

In defense of agency theory

Whereas agency theory's assumptions have attracted considerable criticism from many sides, they do possess a particular strength: their explicit nature. This allows systematically relaxing them, that is, adapting them to assumptions deemed more "realistic". Thus, while the assumptions underlying the basic agency model are likely not representative of humans in general, the theory provides for a framework that allows modeling a large number of more or less diverging assumptions—and testing the need for, benefits of and shortcomings of alternative governance modes as well as incentive and monitoring schemes under these assumptions. The explicit nature of agency theory's assumptions thus is an asset facilitating cumulative knowledge growth and continuous refinement of the recommendations developed by scholars.

The use of the theory itself outside economics and business administration has triggered criticism, sometimes sparked outcries of "economics imperialism". Yet, it is important to note that agency theory while first gaining popularity in economics, is conceptually closely linked in many ways to earlier work in sociology, such as Max Weber's works. Moreover, agency theory has not only strongly influenced research in political science and sociology, but has seen itself being adapted and transformed to better fit their different disciplinary contexts (Kiser, 1999). This holds particularly true for the variant of agency theory typically employed in sociology, which can be seen as an amalgam of Weber'ian sociological insights and the economic agency model, which implies a much broader conception of both the micro and the macro-levels (see Kiser, 1999, for an excellent discussion of this topic).

Agency theory's popularity among scholars and, in particular, its seemingly simple "lesson" that agency problems can be largely cured by relying more on performance-contingent incentives instead of fixed salaries, have contributed significantly to the marked trend towards merit-based payment and promotion schemes in recent years. The "lesson" that one needs to "pay for performance" in order to obtain superior results made it into MBA curricula, consultants' recommendations, and ultimately into management practice at most larger firms in North America and Europe. Hence, agency theory can be seen to have had a tremendous practical impact—which, as mentioned, has spawned criticism of the theory. However, a closer look at the scientific debate about agency problems and the ways to address them suggests that the incentive practices used are at best a bad copy of what agency theory recommends doing. Thus, already the basic linear model shows that strong variable incentives (a high β) are by no means recommendable under all circumstances. And the extensions of the basic model introduced into the literature over the course of the past 30 years further strengthen the conditionality under which "high-powered" incentives are optimal – and when they promise to fail (e.g., Baker, Gibbons and Murphy, 1994; Holmström and Milgrom, 1991). Surprisingly, however, these insights seem to have had little impact on compensation practices in banking and the public debate about them. Overall, thus agency theory while having inspired practice, has unfortunately not seen a more wide-spread application of one of its most important insights: the conditions necessary for using high-powered incentives.

5. Conclusion and Outlook

Agency theory studies the problems and solutions linked to delegation of tasks under information asymmetry and conflicting interests between two or more parties. It assumes rationality and opportunism of the parties involved and deals with both, problems of ex ante ("hidden characteristics") as well as ex post information asymmetry ("hidden action"). Agency models provide a number of very important recommendations for designing contracts, such as the incentive intensity and the monitoring intensity principles. The theory's broad applicability (Holmström, 1979; Jensen & Meckling, 1976; Ross, 1973) allows agency theory to enjoy tremendous scientific impact, both within economics and management research as well as beyond. At the same time it also has attracted considerable criticism. Most of this criticism focuses on the assumptions underlying agency theory, and in particular those underlying simple models. These assumptions are often very restrictive to foster tractability of the problems in mathematical terms. Some of the polemical criticisms of it are however misguided. Recent years have witnessed considerable effort in economics and management research addressing some of the theory's major limitations and some of the criticisms do not apply to the "derivatives" of economic agency theory found in sociology and political science (Kiser, 1999).

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