Motivation and the Theory of the Firm

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ABSTRACT

This paper proposes to revisit the debate on the theory of the firm using motivation theory as the primary analytical tool. Through the lens of motivation theory, the governance-based perspective emphasizes the role of *extrinsic motivation* (primarily in the form of incentives and governance structures) in counteracting opportunism and contractual hazards. In turn, the competence-based approach (implicitly) builds on the role of identity-based *normative intrinsic motivation* seeing the firm as a social community in which members are willing to share knowledge in compliance to embedded norms and values. Based on our framework of different motivational mechanisms at work in an organizational context and a consideration of the interaction effects between them, one can reconcile much of the controversy between the two approaches. The application of motivation theory further enables us to expand the theory to aspects the current approaches do not yet cover. The consideration of enjoyment-based *hedonic intrinsic* motivation allows us to highlight the role of firms as devices through which individuals can satisfy fundamental learning and self-enhancement needs. Finally, motivation-theory offers complementary explanations for inquiries related to the sources of firm heterogeneity and the determinants of firm boundaries.

The question “What do firms do?” is fundamental to the definition and development of the field of management. Not surprisingly, significant efforts have been made over the last few decades to address it. Two approaches to the theory of the firm, broadly defined by Williamson (1999) as "governance-based" and “competence-based”, have emerged. The former incorporates contributions from transaction cost theory (Coase 1937; Williamson 1975; Williamson 1979; Williamson 1981; Riordan and Williamson 1985; Williamson 1989), agency theory (Jensen and Meckling 1976) and contract theory (Grossman and Hart 1986). In contrast, the competence-based approach evolved from the debate regarding the sources of sustainable competitive advantage that dominates the field of strategic management. A series of contributions, for instance by Kogut and Zander 1992), Conner & Prahalad (1996) and Grant (1996), culminated in Kogut and Zander’s (1996) definition of the firm as entities of “coordination, learning and identity.”

Ultimately, the objective of firms is to direct human behavior towards the accomplishment of collective goals. Coordination, learning and identity are without a doubt important components of “what firms do” and are crucial to the achievement of their goals. However, these elements cannot substantiate by themselves collective activity unless the corresponding *motivational drivers* of organizational action are in place. Hence motivating individuals appears to play a substantial role in what firms do. Surprisingly, however, we find little to no explicit consideration of motivational issues in the existing approaches to the theory of the firm. It may therefore be a fruitful endeavor to revisit the received theory of the firm to inquire on the role *motivation* plays in what firms do, including its role as an enabler of coordination, identification and learning processes.

From a motivation theory standpoint, a firm can be conceptualized as a *device to develop and direct individuals’ motivation to act towards the achievement of collective goals*. In this paper, we leverage the substantial body of work on motivation theory to (a) reconsider the received debate about the theory of the firm from a different angle, (b) show how the two existing approaches can be reconciled based on a taxonomy of different motivational mechanisms, and (c) expand the debate to novel answers to "what firms do" type of questions through the consideration of hitherto unexplored drivers of motivation.

The theory of the firm debate has been marked by a substantial degree of controversy, (see for example, Ghoshal and Moran 1996; Williamson 1996, 1999; Moran and Ghoshal 1996; Kogut and Zander 1996), and the perception that the two alternative approaches are incompatible in terms of their assumptions, reasoning and conclusions have limited the progress in this area. Recently it has been suggested that the integration of the two approaches into a general theory of the firm could offer additional insights (e.g. Foss 1999; Foss, Mahnke et al. 2000). In this paper, we argue that motivation theory does in fact offer an opportunity to link and potentially integrate the two approaches.

To this end, we argue that the governance-based approach is based on motivational mechanisms of one particular type. With its emphasis on questions of incentives and governance structures, this approach builds on reward-based *extrinsic motivation* to suppress opportunistic behavior. The competence-based approach relies on a very different type of motivation. Viewing the firm as a social community in which members are willing to share knowledge in compliance to embedded norms and values it (implicitly) focuses on the role of identity-based *normative intrinsic motivation* to make knowledge sharing and knowledge generation possible (Lindenberg 2001). Revisiting both theories based on a comprehensive model of motivational mechanisms in a firm reconciles many of the difference between the two approaches and shows that they are complementary not only with respect to their predictions, but also with respect to the fundamental behavioral mechanisms on which they are premised.

Finally, this paper attempts to broaden the discourse on "what firms do" by focusing on one additional motivational mechanism that is as such not considered in governance or competence-based arguments. Motivation theory points to the importance of a third type of motivation, *hedonic intrinsic motivation* (Lindenberg 2001), driven by the individual desire to be engaged in pleasant, self-determined and enriching activities. As firms determine several important aspects of individual job characteristics, they have a direct influence on hedonic intrinsic motivation.

What are the implications of this observation for the theory of the firm? It points to the fact that firms serve a dual purpose. They not only direct the individuals' motivation to act towards collective goals, but in doing so they can contribute to the individuals' personal development towards increasing levels of self-actualization. This argument can actually be extended to the other motivational processes. Individuals are motivated by their desire to obtain additional resources (extrinsic motivation), adhere to and comply with the norms of a social community (NIM) and engage in activities that are pleasant, self-determined and enriching (HIM). Firms are inherently endowed with a context that enables them to respond to individual's preferences of different types and thereby can trigger motivational processes, which in turn direct individual action towards collective goals.   This adds a potentially important dimension to the received conceptualization of the firm.

MOTIVATION AND THE DETERMINANTS OF HUMAN BEHAVIOR

The first step in the analysis is to provide a parsimonious model of the way different types of motivation influences individual behavior in an organizational context. This will be required background knowledge to then analyze the different approaches to the theory of the firm from a motivation theory standpoint.

A Taxonomy of Motivations and Motivators

The concept of "motivation" plays a central role in research concerned with understanding the determinants of individual behavior in organizations and its impact on organizational performance (Deci 1971; Deci 1975; Deci and Ryan 1985; Lepper and Greene 1975; Frey 1992; Frey 1993). The basic argument is fairly simple: motivation can be linked to a set of underlying goals, from whose accomplishment individuals derive a certain level of utility (Deci 1976). This then creates a motivation to engage in behavior that is perceived by individuals to be useful for meeting their goals. The motivation to behave in a certain way is determined by: (1) the "motivator", which determines the way, and the extent to which, the behavior contributes to the accomplishment of individual goals; and (2) individual preferences, i.e., the relevance of different goals, which determine the sensitivity of the individual to different motivators.

Whereas a number of classifications of motivational mechanisms with varying degrees of granularity have been proposed in the literature (e.g. Deci 1971; Deci 1975; Deci and Ryan 1985), our analysis is founded upon a three-category taxonomy. The taxonomy extends Deci's (1975) initial dichotomy of *extrinsic* and *intrinsic* motivation following a refinement proposed by Lindenberg 2001), which separates *intrinsic* motivation into a task-related component, the enjoyment-based "*hedonic intrinsic* motivation" and a social component, the obligation-based “normative *intrinsic motivation*” (see Table 1). This three-category taxonomy captures the fundamental differences between the mechanisms through which organizations can influence motivation. At the same time it remains parsimonious and hence better suited for application to organizational-level analysis, for which some of the more fine-grained taxonomies used in social psychology become quickly excessively complex.

Extrinsic motivation is driven by the goal of obtaining additional resources from the external environment (Brief and Aldag 1977; Lindenberg 2001). These resources can be tangible or intangible and can take the form of money, power, recognition etc. The impact of extrinsic motivation depends jointly on the extrinsic motivator, i.e. the resources that the individual obtains as a function of any given behavior, and on the importance of these resources to the individual.

Normative intrinsic motivation is driven by the goal of engaging in behavior that is compliant with norms and values. Individuals are thus normatively intrinsically motivated to engage in, or refrain from, a given behavior, depending on whether this behavior is congruent with the norms and values of the social community they identify with (Allen and Meyer 1990; Kreps 1997). The key point is that the motivator here is not related to any reaction of the outside community to their behavior but the satisfaction that they perceive from the sheer identification and integration with the community they feel they belong to. The intensity of normative intrinsic motivation further depends on the degree to which individuals care about norm-compliance.

Hedonic intrinsic motivation is driven by the goal of being engaged in behavior with desirable characteristics. What motivates individuals to execute a given task, then, are the desirable intrinsic characteristics of the task (Deci and Ryan 1985; Lindenberg 2001), namely (a) the inherent joy individuals might derive directly from the execution of the task, (b) the freedom of action eventually present in deciding ways and means related to its execution (self-determination), (c) the potential for personal development deriving from the execution of the task (competence-enhancing)[1]. Intrinsic hedonic motivation varies with the degree to which individuals perceive the characteristics of their task and the task context positively or negatively with respect to their own system of values or idiosyncratic tastes (Brief and Aldag 1975; Hackman, Oldham et al. 1975; Hackman and Oldham 1976; Hackman and Gersick 1990). The impact of hedonic intrinsic motivation depends also on the importance the individual attributes to being engaged in enjoyable, self-determined and competence-enhancing behavior (King, Hautaluoma et al. 1983).

Table 1 offers a brief summary of the elements of this taxonomy of motivational antecedents to human behavior.

----(Table 1 about here)----

An important point to consider is that different social science traditions interested in explaining behavior, and the underlying characteristics of individual motivation, have focused on different components of the taxonomy presented above. For example, economics has historically focused on *extrinsic* motivation, studying the influence of incentive systems, monitoring and control mechanisms without explicitly considering the influence of intrinsic motivation and its possible antecedents in their models (Frey and Jegen 2001; Baker, Gibbons et al. 1994). Organizational behavior and social psychology, on the other hand, emphasize the role of intrinsic types of motivation and consider rewards and extrinsic motivation as either counterproductive (“over-justification effect”, Lepper and Greene 1978) or irrelevant (e.g. Deci 1976; Amabile and Hill 1994; Deci and Koestner 1999; Deci and Koestner 1999).

The debate between these different views has not been resolved, although recent work

[1] Note that personal development here is meant not only in terms of learning new skills, but also learning about novel contexts, about one’s own strengths and weaknesses, and eventually about enhancing the positive and reducing the negative aspects of one’s cognitive, emotional and moral self.

has aimed at a more comprehensive treatment of the topic, attempting to consider both intrinsic and extrinsic factors as well as their interaction effects (e.g. Frey and Oberholzer-Gee 1997; Frey and Jegen 2001; Amabile 1993). It is not the objective of this paper to contribute to this debate *per se*, but rather to leverage the existing knowledge about motivation as a complex and multifaceted construct to better understand the role it plays in different conceptions of the firm and then eventually even on the market as additional institutional context for the conduct of economic activity.

One aspect of particular importance to our argument that remains often implicit in the discussion of motivation is the crucial role of individual preferences as an important contingency of motivational mechanisms. People differ not only in their personal goals and values, but also: (a) in what type of resources (financial compensation, power, recognition, etc.) stimulate their behavior most effectively, i.e. how sensitive they are to additional availability of resources; (b) in sensitivity to the different characteristics of their task, for instance, the variety in its skill requirements, its relevance, the level of autonomy, the knowledge of its results, its personal growth potential (Hackman *et al*, 1975) and to the importance they attach to having a job tailored to their preferences and attitudes; and, (c) in the extent and ease to which they will internalize social norms and values, as well as the importance they place on feeling fully integrated into the social community in which they work. To illustrate the importance of this effect, we model motivation as determined by three distinct groups of motivators that influence the three dimensions of motivation in a strength and to a degree that depends on individual motivational preferences (Figure 1).

----(Figure 1 about here)----

Interaction Effects among Motivational Processes

The overall willingness to behave in a given way thus depends on the *joint* impact of extrinsic, normative intrinsic and hedonic intrinsic motivation. It is important to note that these three types of motivation are not orthogonal in their impact on interest alignment, but that important interaction effects exist between them. The nature of these interaction terms has been subject to substantial debate in social psychology (e.g. Deci 1975; Deci 1976; Deci and Koestner 1999; Lepper and Greene 1978; King, Hautaluoma et al. 1983; Amabile 1993) and economics alike (e.g. Baker, Gibbons et al. 1994; Frey and Oberholzer-Gee 1997; Frey and Jegen 2001; Holmstrom and Milgrom 1994; Gal-Or and Amit 1998).

For the purpose of this paper, we simply note that extrinsic, normative intrinsic and hedonic intrinsic motivation are interrelated mechanisms (Kerr and Jackofsky 1989) that need to be considered simultaneously, both in their independent and joint effects. At the same time it is important to observe that, depending on the specific task requirements, different types of motivation can serve as *complementary* or *alternative* ways of stimulating the desired behavior. One can imagine a situation in which the same behavior, e.g. working overtime, can be a result of either one of three motivational mechanisms: (a) extrinsic motivation to work overtime may stem from higher overtime pay; (b) hedonic intrinsic motivation to work overtime may be due to a direct utility from continued engagement in a pleasant activity; or, (c) normative intrinsic motivation to work overtime may be the consequence of social norms that consider occasional (unpaid) overtime an aspect of "good organizational citizenship". In this case, hedonic intrinsic, normative intrinsic and extrinsic motivation are alternative possibilities to stimulate the same behavior.

On the other hand, there may be types of behavior that can be stimulated by one of these factors but not the others. For example, the literature on reward systems has pointed to the fact that free-riding problems make it difficult to achieve cooperative behavior in a teamwork setting in which individual contributions to team performance remain unobserved through rewards alone (Gibbons 1998). However, in the presence of social norms and values that favor such cooperative behavior, normative intrinsic motivation can be a successful way of increasing team performance. In such a situation, different types of motivation can be complementary mechanisms to motivate desired behavior. Similarly, certain activities simply seem to require a certain type of motivation, as illustrated by Amabile's work (Amabile 1997), on creativity-based tasks that can only be effectively stimulated through *intrinsic* types of motivation.

Armed with this parsimonious, but sufficiently detailed, model of how motivation influences human behavior in organizations, we can now turn our attention to the core aspects of this work, the link between motivation and the theory of the firm.

MOTIVATION IN THE THEORY OF THE FIRM

In the following, we are going to take a look at both governance-based *and* competence-based approaches to the theory of the firm from a motivation-based perspective. The application of the previously developed model of motivation types enables us to (a) identify similarities in the underlying logic of both approaches, (b) illustrate differences in the motivational mechanisms that either approach (implicitly) focuses on and (c) reconcile some of the inconsistencies between the two theories as due to differences in the underlying assumptions regarding motivational preferences of individuals and motivational requirements of tasks.

Contrasting Governance-Based and Competence-Based Arguments

If we compare the governance-based and competence-based perspectives at a sufficiently high level of abstraction, we can see that both follow quite a similar logic: As alternative approaches to the question of why firms exist and how they differ from markets, both identify situations in which firms are “better at *doing something*” than markets. The governance-based perspective emphasizes the advantage of firms to organize transactions more efficiently (under specific circumstances) than markets (Williamson 1975; Williamson 1985; Williamson 1999}. The competence-based perspective concentrates on the role of firms to deal with (or generate) knowledge in a way that markets cannot, or at least cannot effectively do (Kogut & Zander, 1996). The seemingly trivial but important insight here is that we can consequently say that governance-based and competence-based perspectives both identify *specific types* of activities, which can be performed *under specific circumstances* more effectively within the firm than through markets.

The question then becomes: how are firms able to achieve this advantage? The governance-based perspective argues that the employment contract allocates property rights and provides the basis for incentives to motivate desired behavior in a way that is not possible through market transactions. The competence-based perspective, on the other hand, argues that firms are social communities with shared norms, values and terminology and provide identity to their members (Kogut and Zander 1996; Foss 1999), which makes knowledge generation and transfer possible (Zander and Kogut 1995; Kogut and Zander 1996). At a more abstract level, both perspectives highlight mechanisms through which firms can influence human behavior in a way that enables firms to perform their respective focal type of activity more effectively than markets. However, both perspectives differ fundamentally with respect to the *type of activity*, as well as the *mechanisms* they focus on. (see Table 2).

--------TABLE 2---------

A Motivation-Based Look at Existing Theories of the Firm

We can now utilize the previously developed model of determinants of motivation to restate the fundamental tenants of both governance-based and competence-based approaches in motivational terms: *Governance-based theories of the firm* emphasize the superiority of the firm to perform specific types of transactions based on its ability to incentivize, monitor and control human behavior. From a motivational theory perspective, this ability is related to the efficient use of *extrinsic* motivational mechanisms. Governance-based theories of the firm specify in fact the conditions[2] under which arms-length contracts fail to (extrinsically) motivate individuals to refrain from undesirable behavior characterized as adverse selection or moral hazard. Within the firm, another type of contractual arrangement (the hierarchical employment relationship) and additional possibilities to monitor and control individual behavior are available. Hence, in the firm individuals can be (extrinsically) motivated to efficiently perform such transactions.

Competence-based theories of the firm on the other hand highlight the superior ability of firms to generate and transfer knowledge. Proponents from this school of thought argue that incentive contracts, monitoring and control are not efficient means to stimulate knowledge transfer and generation. A shared identity and common norms and values are required to accomplish this (Kogut and Zander 1996). In motivation terms, this implies that the generation and transfer of knowledge has very specific motivational requirements. Both can only be effectively stimulated through motivational processes that draw on shared norms and values, in other words through *normative intrinsic* motivation. As these authors implicitly assume firms to provide a high level of shared values and identity they are better able to perform knowledge generation and transfer processes based on this type of motivation.

The Role of Individual Motivational Preferences

The first step toward the reconciliation of the two theoretical perspectives requires us to

[2] Asset specificity, uncertainty and potentially opportunistic actors.

consider their respective underlying assumptions regarding human nature. The governance-based perspective is based on the assumption of (at least potentially) *opportunistic* human actors. The competence-based perspective on the contrary focuses on the human desire to belong to and identify with a social community. Our model of motivation (Figure 1) points to the important moderating effect that individual preferences have on motivation processes. The relative force of extrinsic and intrinsic types of motivation depends on the sensitivity of individuals to various types of motivators. This component of our model is the key to a better understanding of the origins of many of the differences and inconsistencies between governance-based and competence-based arguments. The preoccupation of the two approaches with different motivational mechanisms follows, according to our model, directly from the different assumptions regarding human nature they make.

Opportunism can be understood as a case of a particularly high level of sensitivity to extrinsic motivation. In such a case, the individual cares so much about additional rewards that this desire has a dominant influence on behavior and other aspects, such as fairness, collaboration, compliance with norms and values and rules, are not taken into consideration. Hence, the individual is ready to act opportunistically to obtain additional resources. The fact that governance-based approaches assume individuals to be (potentially) opportunistic, thus explains the preoccupation of this approach with questions of *extrinsic* motivation.

The competence-based perspective, on the other hand, is not based on the assumption of opportunistic individuals. Instead it emphasizes the human desire to be part of a social community and to comply with organizational norms and values. This implies that individuals are more receptive to *normative intrinsic* motivation. It is thus not surprising that this perspective highlights the firm's advantage in processes related to the generation of transfer of knowledge which are facilitated by the presence of high levels of individual-organization identification and thus normative intrinsic motivation.

In this context, it is important to emphasize once again that in reality, individuals are both potentially opportunistic and striving to adhere to a social community, albeit at different degrees. Hence they vary with respect to their sensitivity to the various types of motivation. Furthermore, the multitude of activities to be performed in organizations varies in the degree to which the corresponding behavior can be efficiently stimulated through extrinsic and (normative) intrinsic motivation. Consequently, a combination of governance-based and competence-based arguments needs to be considered if we want to understand how firms are able to motivate large groups of individuals to perform complex activities that involve numerous heterogeneous sub-tasks. Governance- and competence-based perspectives need thus to be considered as complementary not only with respect to their predictions, but also with respect to the fundamental behavioral mechanisms on which they are premised.

Beyond this complementarity argument, however, it is also important to remind ourselves of the interrelated nature of different motivational mechanisms. As prior motivation research shows, there are important interaction effects between extrinsic and intrinsic types of motivation (e.g. Deci 1975; Deci 1976; Deci and Koestner 1999; Lepper and Greene 1978; King, Hautaluoma et al. 1983; Amabile 1993; Baker, Gibbons et al. 1994; Frey and Oberholzer-Gee 1997; Frey and Jegen 2001; Holmstrom and Milgrom 1994; Gal-Or and Amit 1998)). In particular, the use of extrinsic rewards has been found to reduce intrinsic levels of motivation in many situations. This points to the need to consider both governance-based and competence-based arguments jointly and simultaneously, as otherwise one would miss not only one part of the picture but also the interaction effect between the two elements.

The relevance of the interrelated nature of governance- and competence-based arguments can be seen in critique of governance-based approaches articulated by Ghoshal and Moran (Ghoshal and Moran 1996). Based on the notion that the level of opportunism is not exogenously given but can be seen as a variable, these authors argue that a heavy use of incentives and control contributes to the development of opportunistic attitudes and reduces the willingness of individuals to cooperate and share knowledge. Based on our model of motivation theory we are able to point to the motivational mechanism that underlies this argument. Incentive-based extrinsic motivation can crowd-out intrinsic motivation (Deci 1976; Deci and Ryan 1985; Lepper and Greene 1978) and thereby reduces the sensitivity of individuals to social norms and values. This in turn reduces their willingness to share critical knowledge resources (Kogut and Zander 1996). Hence it is crucial to combine the descriptive power of governance- and competence-based perspectives and even more so to incorporate the nature of their interdependencies in order to develop a comprehensive understanding of what firms do.

A MOTIVATION-BASED VIEW OF WHAT FIRMS DO

Looking at governance-based and competence-based theories of the firm through a motivational lens, we have been able to make a number of important observations. First, we have seen that both perspectives follow the same underlying logic, in that each of them identifies one particular mechanism based on which firms facilitate the efficient performance of a specific type of activities. Second, we have seen that the mechanism that each perspective specifies can be attributed to one distinct type of motivation. Third, it has become obvious that this focus on one type of motivation follows directly from the assumption the respective school of thought makes regarding the motivational preferences of individual actors (see Table 2).

Motivation theory, however, provides not only a new and insightful perspective on existing approaches to the theory of the firm. It also points us to novel ways to think about the nature of the firm**.** In this section we propose twotypes of additional applications of motivation theory to further our understanding of what firms do. First, we build on a currently overlooked type of motivation; hedonic intrinsic motivation, to suggest a third and complementary response to the question of what firms do. Second we propose to consider explicitly the interdependencies between individual preferences and organizational goals to propose an integrated perspective on the two sides of the motivational coin: what firms do for the individual and what individuals do for the firm.

Adding the Missing Piece: Hedonic Intrinsic Motivation

One immediate question arises from the observation that existing governance-based and competence-based theories of the firm focus on extrinsic and normative intrinsic motivation respectively, while the third motivational mechanism, hedonic intrinsic motivation, is thus far not addressed. Consequently one wonders whether the consideration of this type of motivation can add something to the analysis. In order to answer this question, we propose to proceed in the following way. First, we need to agree that hedonic intrinsic motivation is actually present in the organizational context and that it has relevant implications for the degree to which firms are able to reach their objectives. Second, we need to convince ourselves that this type of motivation can offer a novel way to think about what firms fundamentally are about.

Regarding the first step, recall that hedonic intrinsic motivation is tied to the individual's deriving a sense of purpose and enjoyment from being engaged in pleasant, autonomous and enriching activities (Deci and Ryan 1985; Lindenberg 2001). *Prima face*, it may not be intuitive that this type of motivation is present inside a business firm. In fact we are more used to seeing the achievement of joy and self-realization as a powerful motivator for non-work-related activities. However, there is an increasing amount of theoretical arguments, as well as empirical evidence, pointing to the existence and relevance of joy, self-determination and personal growth in the work environment. Amabile and Hill, for example, document the existence of intrinsic motivational orientation at work (Amabile and Hill 1994). Related work by Amabile and colleagues points to the relevance of (hedonic) intrinsic motivation for a large range of tasks involving creativity (Amabile 1997). Finally Huy (Huy 1999) shows that positive emotional dynamics are significant antecedents to the success of complex organizational change processes.

Further, it is important to consider that hedonic intrinsic motivation is not exogenously given. Firms have a number of possibilities to actively influence the degree to which individual tasks are perceived as pleasant, autonomous and enriching. In fact, job design does not only have an influence on the efficiency of business processes, but also on whether the corresponding tasks stimulate hedonic intrinsic motivation. For instance, the performance effect of job-enrichment initiatives (Hackman, Oldham et al. 1975; Hackman and Oldham 1976; Hackman and Gersick 1990) can to a large extent be attributed to increased hedonic intrinsic motivation. Firms that are able to provide a work environment that is perceived by employees as pleasant, autonomous and enriching, benefit from greater individual hedonic intrinsic motivation.

This, we suggest, may be the key to a novel way to think about the firm. According to this perspective, firms are *social institutions responsible for the personal development and self-actualization of the individuals working in them*. They in fact provide a work environment that (potentially) allows individuals to satisfy fundamental hedonic needs, such as the desire for self-determined action, and personal growth (Deci 1971; Deci 1975; Deci and Ryan 1985).

Closing the Loop: The Link Between Individual Needs and Organizational Goals

Looking at firms from a motivation-based perspective points to a possible extension of the prevailing conceptualization of what firms do. In fact, the notion of firms as *devices to develop and direct individuals' motivation to act towards the achievement of collective goals* one may only be one side of the coin. The other side consists of their role as vehicles through which individuals can satisfy their fundamental needs. This includes not only the satisfaction of material needs based on the extrinsic rewards individuals receive for their work, but also the satisfaction of social needs, as firms provide a social community for their members (Kogut and Zander 1992; Kogut and Zander 1996). Finally there is the possible satisfaction of hedonic needs, as firms provide the opportunity to tailor operating tasks in a way that meets the individual's need for personal growth and development.

This makes it possible to move away from the paradigm in which the interests of the firm and the individual are competing and conflicting. Instead, it may be possible in theory that they interact more like one hand washing the other: firms potentially provide individuals with what they fundamentally care for and individuals in exchange contribute through their behavior to the accomplishment of organizational goals. (see Figure 2)

---------- Figure 2 --------------

MOTIVATION-BASED EXTENSIONS TO THE THEORY OF THE FIRM

So far, we have focused our attention on the ability of motivation theory to enhance our understanding of what firms do – both by looking at the existing approaches from a motivation-based perspective and by adding additional elements to the picture. Now, we can shift our focus to other aspects of the theory of the firm and explore whether the explicit consideration of motivation theory also enables us to refine our understanding of the determinants of firm heterogeneity and boundaries.

Motivation as a Driver of Firm Heterogeneity

Explaining the reasons for firm heterogeneity, both in terms of why firms have different characteristics and why firms perform differently, is another element of the theory of the firm that appears in fresh light once seen from a motivation perspective. Here again, the fact that in general individuals differ substantially in their motivational preferences plays a crucial role. We therefore have to expect heterogeneity also in the aggregate motivational preferences of different firms. This then drives firm heterogeneity in other organizational attributes through the following mechanism.

The overall level of aggregate motivation in an organization depends on the level of correspondence between the different motivators the organization can offer and the aggregate motivational preferences of the workforce. To effectively motivate their employees, each firm will thus make specific choices in their organizational design. For example, a firm might try to maximize extrinsic motivation by tailoring reward systems to the specific preference of its workforce. Similarly, it might adjust the task design in response to what the employees perceive as pleasant and enriching. Finally it may use socialization initiatives (Van Maanen 1978; Van Maanen and Schein 1979; Kerr and Jackofsky 1989) to increase the salience of organizational norms and values through increased levels of employee-firm identification. Fig. 3 illustrates the different organizational mechanisms available to influence the three types of motivation considered in this paper, as well as the moderating role of individual preferences towards the motivational processes.

Firms facing different motivational preference in their respective workforce will make different choices in the design of their organizational motivators. This illustrates how heterogeneity in aggregated motivational preference drives heterogeneity in other important organizational attributes and can be interpreted as a motivation-based reason for heterogeneity in firm characteristics.

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Along the same lines, motivational mechanisms can also be a source of heterogeneity in performance across firms. In fact, firm performance is not only a question of a firm's endowment with assets, capabilities and market positions, but also depends on the willingness of employees to deploy these resources (Alchian and Demsetz 1972; Jensen and Meckling 1976; Fama and Jensen 1983; Wright and Snell 1991; Wright, McMahan et al. 1994 ; Makadok 2003). In other words, the degree to which a firm motivates its employees to work towards organizational goals is a key determinant of performance. The aggregate motivation of a firm's workforce is itself a function of the degree to which the chosen configuration of reward system, job design and socialization regime fits the aggregate motivational preferences.

This then lets us distinguish between two motivation-based sources of heterogeneity in firm performance. First, there may be situations in which firms are *similar* in their configuration of reward system, job design and socialization regime, but *different* in the motivational preferences of their workforce. In such a case some firms will have a better fit between their reward system, job design and socialization regime on the one hand and the aggregate motivational preferences of their workforce on the other, which translates *ceteris* *paribus* into greater performance.

Alternatively, one could imagine a case in which firms are (relatively) similar in terms of the motivational preferences of their workforce, but differ in the ability to tailor the configuration of reward system, job design and socialization regime to the motivational preferences of their workforce. Here again, heterogeneity in the level of correspondence between their reward system, job design and socialization regime on the one hand and the aggregate motivational preferences of their workforce on the other, drives performance differences and firms with a higher level of correspondence will *ceteris paribus* outperform their peers.

In reality, one would expect to find a combination of both of these mechanisms at play, even though their relative salience may differ depending on the specific context. For the purpose of this paper it is important to recognize that the consideration of motivational factors helped us identify novel and complementary explanations for heterogeneity in firm performance.

Motivation as a Determinant of Firm Boundaries

We have seen that motivation theory can serve as an insightful perspective on questions of firm existence and firm heterogeneity, but what does it have to say with respect to the determinants of firm boundaries? Existing approaches to the theory of the firm have analyzed the determinants of firm scale as well as of firm scope. As we will show in this section, motivation theory can be used to shed new light on both of these questions.

Motivation and Firm Scale. An important limitation to firm scale stems again from the fact that employees are heterogeneous with respect to their motivational preferences. To motivate a workforce with heterogeneous motivational preferences, the firm has to make differentiated use of rewards, job design choices and socialization. In theory it would be optimal to tailor these three organizational motivators to the individual preferences of each employee. Clearly this is unrealistic for two reasons. First, there are considerable costs related to the tailoring of motivators at such a level of granularity. Second, we have to consider the effect that individuals have a preference for homogeneous treatment within their organization. As research on social comparison theory points out, (perceived) inequity in terms of how people are rewarded, how individual jobs are designed etc. can lead to reduced effort and low morale (Adams 1963; Adams 1965; Homans 1961). It is commonly assumed (Zenger and Hesterly 1997) that firm boundaries circumscribe the domain of comparison for employees in this context.

Consequently there seems to be a choice between two evils: either firms can tailor organizational motivators to individual preferences, which causes unpopular heterogeneity in the organizational motivators and can be a de-motivator by itself, or they keep organizational motivators homogeneous, at the cost of sub-optimal motivation levels. No matter which position a firm chooses between full homogeneity or perfect tailoring, there will always be some level of inefficiency related to the heterogeneity in motivational preference of the workforce (see Table 3).

This inefficiency increases in firm size, as bringing in additional employees almost inevitably increase the absolute level of heterogeneity of motivational preferences in the workforce and it becomes increasingly difficult and costly to tailor organizational motivators to them (Milgrom and Roberts 1992). This mechanism constitutes a complementary explanation for the existence of diseconomies of scale. At the same time, it can be seen as another important reason for the choice of multi-unit structural arrangement, which may in fact be the result of a trade-off between questions of coordination (pushing for larger entities) and of motivation (pushing for smaller entities with less motivational heterogeneity).

Motivation and Firm Scope. A similar motivation-based reasoning also applies to questions of firm scope. In this context, it is important to recognize that tasks differ in their motivational requirements. In other words, the type of motivation that is best suited to stimulate employees to perform one task effectively may not be equally appropriate for another task. Remember the case of processes underlying the generation and transfer of knowledge. As Kogut and Zander (1996) explain, shared norms and values are necessary to perform such tasks, which corresponds to the requirement of normative intrinsic, rather than extrinsic forms of motivation. Similarly, tasks that involve high levels of creativity seem to be most effectively performed when hedonic intrinsic motivation is dominant (Amabile 1997). Finally, it is obvious that some tasks can hardly be effectively motivated through anything but reward-based extrinsic motivation. An often cited example is that of motivating employees at the conveyor belt for the extraction of inner organs of slaughtered animals in a food processing plant.

It seems therefore as if the necessary level of heterogeneity of organizational motivators within a given firm depends not only on the motivational preferences of its workforce, but also on the heterogeneity in motivational requirements of the tasks to be performed. If a firm was to perform a wide range of activities, different with respect to the type of motivation they require, it will find itself forced to use very different organizational motivators for different parts of its workforce. This then contributes to the phenomenon of unpopular heterogeneity in organizational motivators described above (Adams 1963; Adams 1965; Homans 1961), which might cause important inefficiencies (see Table 3).

One example for the practical relevance of this phenomenon would be the difficulties to combine commercial banking and investment banking activities under the same organizational roof. The heterogeneity of motivational requirements of the different sub-tasks to be performed will in general increase in firm scope. This mechanism thus joints other factors to explain diseconomies of scope.

--------- Table 3 ------------

Motivation Without the Firm

So far we explored various facets of how a motivation-perspective helps us understand the nature of the firm, as well as the sources of firm heterogeneity and the determinants of firm scale and scope. But what happens in motivational terms if there is no firm? What are the motivational mechanisms at work if individuals act as individual agents on the market as atomistic firms, i.e. on their own, owning the assets required for their activity and being the residual claimants to the rents from their activity?

In fact, even in this case, individuals are exposed to motivational mechanisms corresponding to the three dimensions of the previously introduces taxonomy. With respect to extrinsic motivation, one can note that if individuals participate in market-based exchange, there is no explicit reward system that pre-specifies the amount of resources an individual will obtain as a function of given behavior. Nevertheless, markets can provide powerful extrinsic motivators through the profit that market participants obtain for their activity. Importantly, however, profits and rents that result from a given behavior depend not on a reward system, but on market characteristics, such as the intensity of rivalry, market shares, market concentration etc.

In the case of *normative intrinsic* motivation, we find that market exchange can stimulate this type of motivation only if norms and values are present that influence market participants. One example for such a situation would be the set of behavioral norms that exists on the trading floors of large stock exchanges and influences the behavior of traders. In such cases, and to the extent that individuals identify themselves with the market, markets provide some form of normative intrinsic motivation as well.

Finally, *hedonic intrinsic* motivation is determined by the perceived characteristics of a given task and by the task context. The characteristics of a particular task can differ substantially depending on whether the task is performed within a firm or in the market. Firms have some flexibility in the design of individual jobs and the work environment and can thus actively influence hedonic intrinsic motivation (Hackman, Oldham et al. 1975; Hackman and Oldham 1976; Hackman and Gersick 1990). The very nature of the market, however, also determines some aspects of task characteristics. For example, market conditions can range from "tough" or "cut-throat", to more "comfortable" and "cooperative".

In summary, one can observe that all the three types of motivation considered in this analysis are at work in the special case of market exchanges among atomistic organizations, just as they are in firms (see Table 4). Consequently the presence of firms is no necessary condition for either of the three types of motivation. The question of whether firms or market interactions among atomistic organizations provide the better motivators cannot be answered in general. Instead, the answer will depend on (a) the motivational preferences of the individual, (b) the motivational requirements of the task and (c) the motivational context of a given firm or a specific market.

Each of the approaches to the theory of the firm discussed in this paper focuses on one specific set of conditions in which there is an advantage of firms vis-à-vis markets in motivational terms. The governance-based perspective highlights the advantage of firms is stimulating extrinsic motivation thanks to the employment contract even if actors are opportunistic. The competence-based perspective points to the advantage of firms in providing a shared identity to which individuals can adhere and which triggers the normative intrinsic motivation necessary for knowledge generation and sharing processes. Finally, the novel perspective based on hedonic intrinsic motivation also points to one reason why firms can have a motivational advantage over markets, as individual preferences may be such that the characteristics of individual tasks are perceived as more enjoyable, self-determined or competence-enhancing, so that hedonic intrinsic motivation is greater in the firm.

---------Table 4---------

CONCLUSIONS

It is an established fact that motivation plays an important role as a determinant of individual behavior. Yet the dominant approaches to the theory of the firm do not explicitly acknowledge the role motivation plays also in this context. It has been the objective of this paper to take a close look at the motivational processes at play in an organizational setting and to apply motivation theory to a variety of questions related to our understanding of what firms do, why they differ and what determines their boundaries.

Then, what have we learned during this journey through the complexities of motivational processes and the role they play in theories of the firm? The fundamental point is that, if our analysis is correct, motivation theory shows a considerable potential to integrate, refine and expand the way we think about the firm. A first contribution of this paper lies in the reconceptualization of governance- and competence-based approaches as alternative explanations for firm existence that rely on distinct motivational processes. The governance-based view, with its emphasis on incentives, monitoring and control builds on reward-based *extrinsic motivation* to suppress potential opportunistic behavior, while the competence-based approach focuses on the role of identity-based *normative intrinsic motivation* to make knowledge sharing and generation possible.

Furthermore, the application of motivation theory could help to overcome many of the incompatibilities of the two approaches and to show that they are complementary not only with respect to their predictions, but also with respect to the fundamental behavioral mechanisms on which they are premised. Once the underlying motivational mechanisms and the behavioral assumptions of the alternative approaches are made explicit, the debate between opponents of the two perspectives appears in a different light. For example, much of the controversy between Ghoshal and Moran (1996) on the one side and Williamson (1996) and Foss (1996) on the other can be explained as related to the negative effect of extrinsic motivation on intrinsic forms of motivation that is extensively discussed both in social psychology (e.g. Deci 1975; Deci 1976; Deci and Koestner 1999; Lepper and Greene 1978; King, Hautaluoma et al. 1983; Amabile 1993) and economics (Baker, Gibbons et al. 1994; Frey and Oberholzer-Gee 1997; Frey and Jegen 2001; Holmstrom and Milgrom 1994; Gal-Or and Amit 1998).

The explicit consideration of the different motivational mechanisms on which governance-based and competence-based approaches are grounded may constitute some natural common ground of the two explanations, indicating a theoretical link that might serve to appreciate each specific contribution together with their joint effects. Hopefully this might go some way towards a response to the repeated calls for efforts to integrate the two bodies of theoretical work (Foss, 1999; Foss et al., 2000; Makadok, 2003).

The second element of novelty in the theoretical perspective advanced lies in the application of the model of determinants of motivational processes in an organizational context to gain further insights into additional questions related to the theory of the firm. Driven by the belief that motivation theory may eventually serve as the basis for a comprehensive general theory of the firm that encompasses governance- *and* competence-based approaches, we take a closer look at possible alternative conceptualizations of what firms do, as well as the determinants of firm heterogeneity and boundaries.

We first focus on the hedonic component of motivation and propose a view of firms as social institutions responsible for the personal development and self-actualization of the individuals working within their domain, allowing them to satisfy fundamental hedonic needs, such as the desire for self-determined action, and personal growth. This novel way to think of the role of firms in society complements existing governance- and competence-based approaches in that it focuses on the third, currently overlooked, type of motivation. It further suggests that individual choice between working in a firm or acting as an individual participant in market-based exchanges may be in part driven by individual preferences for the characteristics of tasks performed in either form of institutional arrangement. One could even claim that firms receive their license to operate by public authorities not only because of their contribution to the economic wealth of communities in which they are involved, but also for the impact of their activities on the personal development of their employees.

In a second step we recognized the potentially reciprocal relationship between organizations and their members. On the one hand firms can be seen as devices to direct individuals' motivation towards collective goals based on the organizational motivators in place. On the other hand the very existence of these motivators potentially enables individuals to satisfy their fundamental needs, be it material needs for extrinsic rewards, social needs to adhere to a social community or hedonic needs for personal growth and development. These two sides of the coin are inherently linked, as it is the possibility agents have to satisfy individual needs that generate the motivation to act towards collective goals. This implies a potentially mutually beneficial relationship between the individual and the organization. Admittedly this picture has utopian tones, but there may be real-world cases in which companies demonstrate that the described reciprocal relationship can in fact exist. Examples might include companies like Ben & Jerry's and Patagonia in the US, or Mondragon in Spain. These firms are characterized by high levels of personal commitment on the part of individuals to the objectives of the firm, reciprocated with priority attention given by managers to the satisfaction of personal growth objectives, and to social responsibility issues in general.

Next we applied the motivational lens to take a fresh look at the drivers of firm heterogeneity and argued that heterogeneity in the motivational preferences of the workforce does not only drive firm heterogeneity in the organizational motivators. It can also explain performance differences across firm, as performance depends on the correspondence between what motivators the firm provides and which motivators employees are receptive to.

The subsequent analysis of the determinants of firm boundaries also generated potentially important insights. We argued in fact that motivation theory contributes to our understanding of the factors that determine firm size, both in terms of the scale and of the scope of its activities. The driving force behind these effects is the preference of individuals for equality in organizational motivators on the one hand and the push for heterogeneity in organizational motivators coming from (a) an increased heterogeneity in motivational preferences of an increasingly large workforce and (b) the increased heterogeneity in motivational requirements of a broader range of activities on the other. This leads to diseconomies of scope and scale and thereby constitutes a determinant of firm boundaries.

In the final part of our discussion we looked at the motivational mechanism at work in the absence of firms. Here the key point is that the same types of motivation are at play also in market-based exchanges between individuals in atomistic organizations. The comparison of the level of motivation that can be achieved within or outside the firm is difficult to make in general terms. The answer will always depend on (a) the motivational preferences of the individual, (b) the motivational requirements of the task and (c) the motivational context of a given firm or of a specific market. In fact, the governance-based, competence-based and the motivation-based perspectives each illustrate a distinct set of conditions under which firms are at an advantage.

The analysis provided in this paper may, and one may hope it will, raise more questions than it answers. This first attempt to apply motivation theory to questions of the theory of the firm has exhibited a significant amount of theoretical mileage that this exercise can generate through the integration of existing governance-based and competence-based arguments, as well as through the insights it provided to other aspects of the theory of the firm. Consequently, one may argue that whatever insights have been generated in this exercise, they can constitute only the proverbial tip of the iceberg and that future research building on (and critiquing) these arguments will be able to produce far more.

For example, given the similarity in the underlying logic and the complementarities in the focus of the three perspectives, a natural question arising is whether it is not possible to develop a comprehensive motivation-based theory of the firm that integrates governance-based and competence-based theories, as well as the new preference-based arguments based on hedonic intrinsic motivation. Potentially, our model of different motivational mechanisms may serve as a starting point in the process. A comprehensive motivation-based theory of the firm should capture the logic that underlies existing governance-based and the competence-based theories of the firm in that it identifies specific conditions under which firms perform economic activities more efficiently than markets. The origin for the firm's advantages can be one, or a combination of several, of the motivational mechanisms specified in our model: extrinsic motivation, normative intrinsic motivation and hedonic intrinsic motivation, to influence individual behavior. More, much more, needs to be done to build a comprehensive model, though.

The following contingencies that have been identified in the present analysis, for example, and will need to be tackled comprehensively and in their interaction effects by future scholarship: (a) the motivational requirements of the different sub-tasks necessary to perform the activity, (b) the motivational preferences of the individuals involved in the task(s), (c) the motivational characteristics of the alternative institutional arrangements available to perform the activity and (d) the variability in the first three contingencies over time. Finally, the theory should encompass and fully reconcile existing governance-based and competence-based arguments and make it possible to understand the relative importance of either perspective in different situations. Consequently, the governance-based approach, the competence-based approach and the preference-based approach could each become special cases of this more general motivation-based theory of the firm (Table 5).

--------------- Table 5 -------------

An additional area for future explanations based on the motivation-based theory of the firm outlined above lies in more comprehensively tackling related questions concerning the boundaries of the firm. Future scholars might want to pursue this line of thought by identifying the conditions for the optimal choices on the firm-market continuum on the basis of characteristics of both motivational processes and operating activities.

Yet another line of inquiry emerging from this line of work has to do with the theoretical linkages between motivational processes and economic rent generation. There are costs attached to the enhancement of motivation, particularly if the interventions are tailored at the functional, and even more at the individual, level. What are the conditions under which these costs become superior to the advantages derived from higher motivation? Even more interesting is the opening of the analysis to competitive interactions among firms: to what extent does an increasing level of attention to motivation processes translate into sustained advantage vis-à-vis competitors? Gottschalg & Zollo (forthcoming) have recently started to tackle some of these questions, but much more needs to be done. For example, differences among the various types of motivational levers with respect to their potential for sustained advantages have not been studied yet: given these differences, it would be important to understand under what conditions can the prioritization of each type of motivational lever produce competitive advantage.

As these reflections upon possible avenues for future research show, this paper represents but the first step towards the development of a management theory that takes into serious consideration the influence of motivation. Given the importance of the questions discussed above, and even more of those left undiscussed, we call for a joint effort from scholars in the different areas of management science to invest in understanding the potential implications that an explicit treatment of motivation might have in their respective areas of expertise. It seems to us that the development of a comprehensive motivation-based theory of the firm that integrates and extends existing approaches can only be the result of a serious integration of insights from social psychology, economics, organizational behavior and strategy alike. We are convinced, however, that a collective endeavor of this kind to further develop the ideas offered above will be well rewarded.

Table 1: Determinants of Motivation

Form of Motivation	What drives motivation?	Motivator	Individual Motivational Preferences
Extrinsic Motivation	The desire to obtain additional resources	Resources received as a reward for specific behavior	The importance of additional resources to the individual
Normative Intrinsic Motivation	The desire to comply with norms and values	Norm congruence of the behavior	The importance of norm-compliance to the individual
Hedonic Intrinsic Motivation	The desire to engage in enjoyable, self-determined and competency-enhancing activity	(Perceived) characteristics of the task and the task context	The importance of being engaged in an enjoyable, self-determined and competency-enhancing activity to the individual.

Motivation can be linked to a set of underlying goals, from whose accomplishment individuals derive a certain level of utility. This then creates a motivation to engage in behavior that is perceived by individuals to be useful for meeting their goals. The motivation to behave in a certain way is determined by: (1) the motivator, which determines the way, and the extent to which, the behavior contributes to the accomplishment of individual goals; and (2) individual motivational preferences, i.e., the relevance of different goals, which determine the sensitivity of the individual to different motivators.

Table 2: Contrasting Governance-Based and Competence-Based Approaches

	Governance-Based Approach	**Competence-Based Approach**
Focal Activity	Cost Efficiency in Transactions	Transfer, Sharing and Generating Knowledge
Focal Mechanism	Employment Contract	Shared Identity
Focal Type of Motivation at Work	Extrinsic	Normative Intrinsic
Key Assumption on Human Nature	Potential Opportunism	Desire to Belong

A sufficiently high level of abstraction, governance-based and competence-based approaches to the theory of the firm both follow quite a similar logic: Each of them identifies one particular mechanism based on which firms facilitate the efficient performance of one specific set of activities. The mechanism that each perspective specifies can be attributed to one distinct type of motivation. This focus on one type of motivation follows directly from the assumption the respective school of thought makes regarding the motivational preferences of individual actors.

Table 3: The Effect of Heterogeneous Organizational Motivators

	Effect of the Preference of Employees for Uniform Organizational Motivators	Effect of Increasingly Heterogeneous Motivational Preference of the Workforce	Effect of Increasingly Heterogeneous Motivational Requirements of the Set of Tasks to be Performed
Uniform Organizational Motivators	***No loss of motivation***	***Loss of motivation*** (employees with heterogeneous motivational preference cannot be effectively motivated through uniform organizational motivators)	***Loss of motivation*** (tasks with heterogeneous motivational requirements cannot be effectively supported through uniform organizational motivators)
Tailored Organizational Motivators	***Loss of motivation*** (employees dislike heterogeneity in organizational motivators)	***No loss of motivation*** (employees can be effectively motivated through tailored organizational motivators)	***No loss of motivation*** (tasks can be effectively supported through tailored organizational motivators)

Provided that employees prefer to have uniform organizational motivators (Reward System, Socialization Regime and Job Design) across their firm, heterogeneity in (a) the motivational preference of the workforce and/or (b) the motivational requirements of the set of tasks to be performed in the firm forces the firm to make a choice between two evils: either firms can tailor organizational motivators to meet individual preferences and motivational requirements, which causes unpopular heterogeneity in the organizational motivators and can be a de-motivator by itself, or they keep organizational motivators homogeneous, at the cost of sub-optimal motivation levels. No matter which position a firm chooses between full homogeneity or perfect tailoring, there will always be some level of inefficiency related to the heterogeneity in motivational preferences and requirements.

Table 4: Determinants of the Motivational Context in Firms and Market

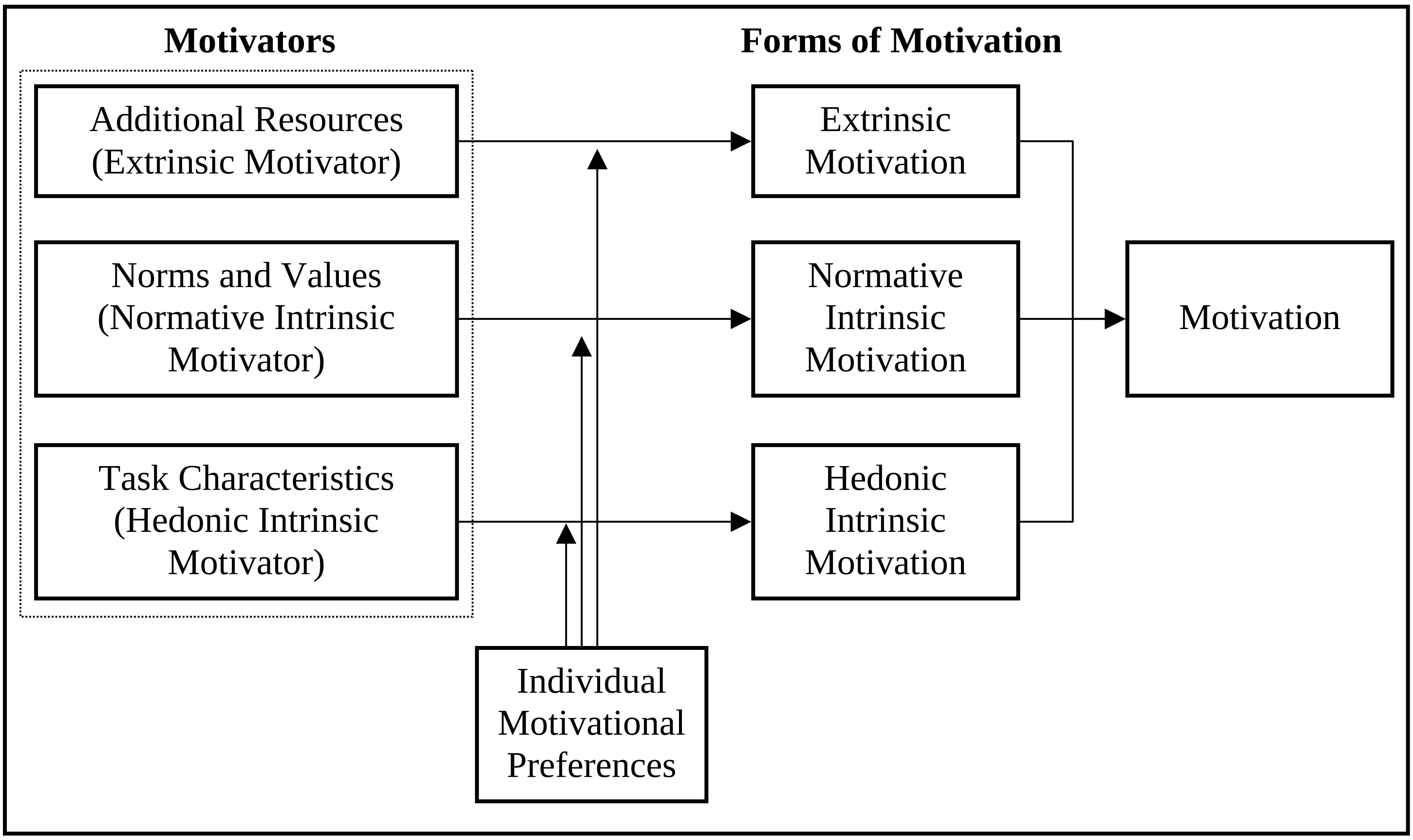
Form of Motivation	Motivator in the Firm	Motivator in the Market
Extrinsic Motivation	Reward System (e.g. financial rewards, promotion rules, non-financial rewards)	Market Conditions (e.g. the amount of profit or rents to be obtained through market participation)
Normative Intrinsic Motivation	Organizational Norms and Values	Norms and Values of the Market Community
Hedonic Intrinsic Motivation	Job Design (e.g. degree of specialization, empowerment)	Characteristics of market activity (e.g. degree of rivalry)

Firms can actively design their organizational motivators (Reward System, Socialization Regime and Job Design) to enhance different types motivation. Individuals outside firms who participate in market-based exchange can be subject to the same three types of motivation. However in this case motivators are not the result of active design choices but depend on market characteristics.

Table 5: Towards a Motivation-Based Theory of the Firm

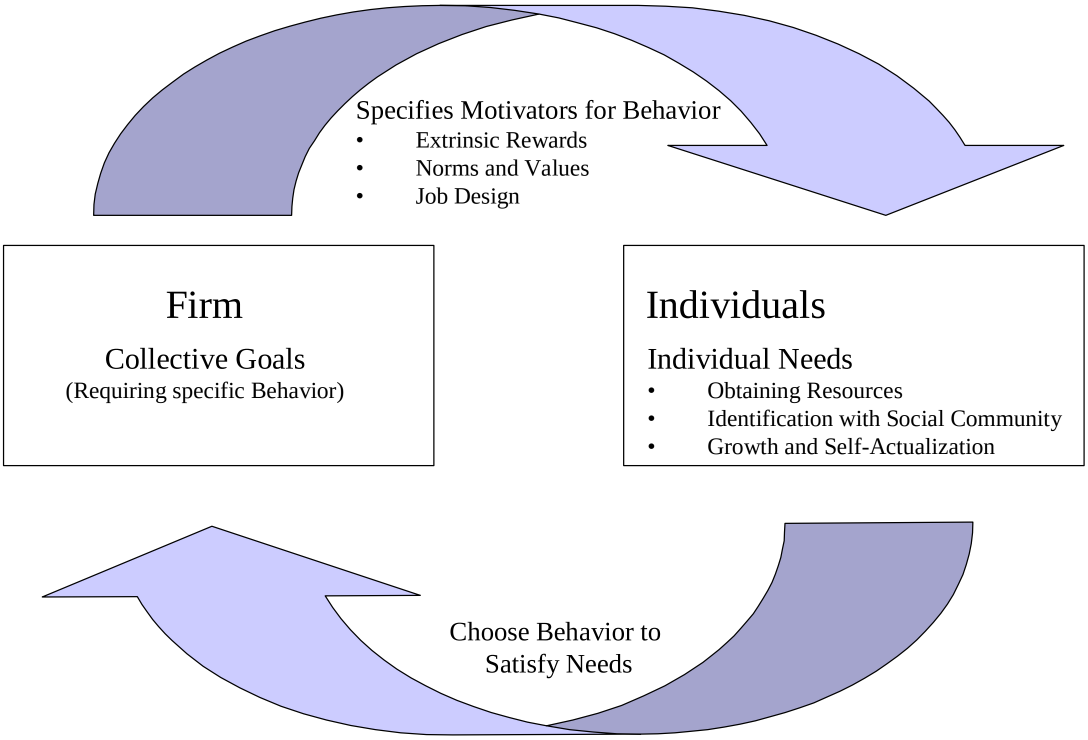
	Motivation-Based Theory of the Firm	Competence-Based Approach: Special Case 1	Governance-Based Approach: Special Case 2
Firm's advantage vs. market	Ability to intentionally and flexibly tailor the organizational motivators to the motivational requirements of different sub-tasks and the motivational preferences of the individuals who execute them.	Transfer, Sharing and Generating Knowledge	Cost Efficiency in Transactions
Basis for this advantage	Organizational Motivators (Reward System, Job Design, Socialization Regime)	Shared Identity (function of Socialization Regime)	Employment Contract (part of the Reward System)
Type of Motivation at Work	Extrinsic, Hedonic Intrinsic and Normative Intrinsic	Normative Intrinsic	Extrinsic
Assumption on Human Nature	Opportunism, Desire to Belong, AND Desire for Joy, learning and self-determination of varying degree	Desire to Belong	Opportunism

FIGURE 1
Antecedents of Motivation



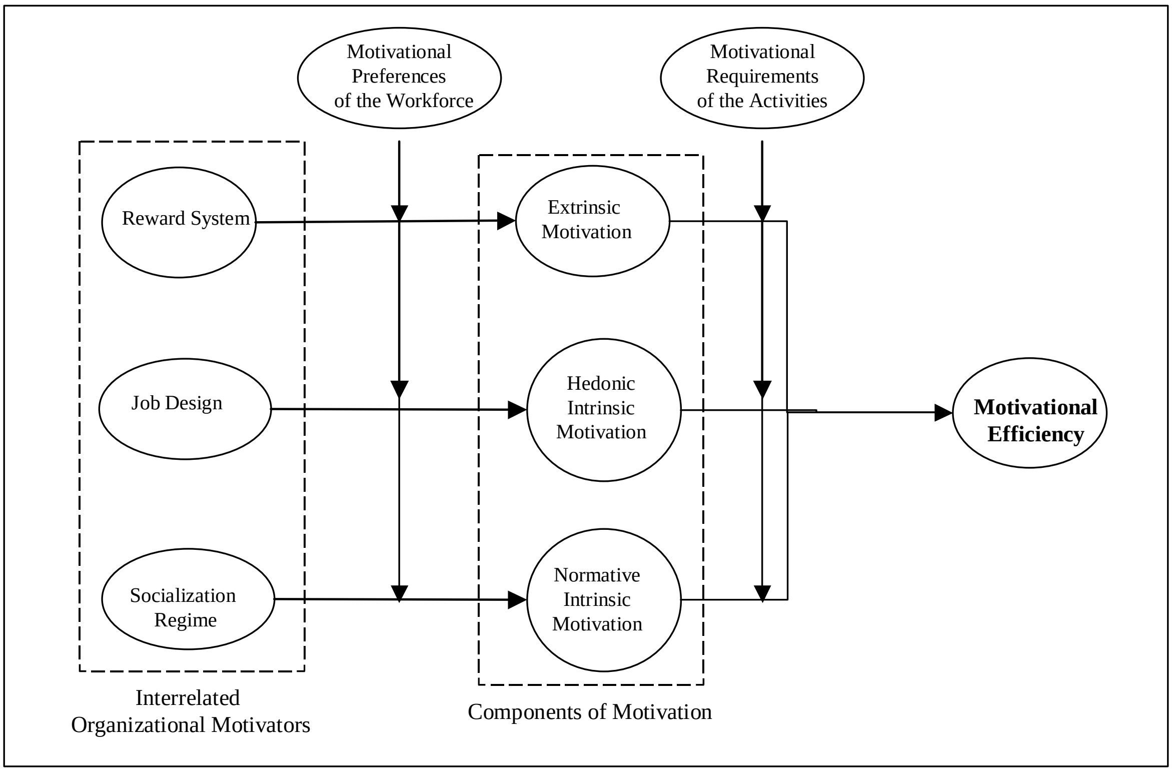
Motivation is stimulated through three types of motivators: additional extrinsic resources, organizational norms and values and task characteristics. The three motivators interact in their effect on extrinsic, normative intrinsic and hedonic intrinsic motivation. The joint impact of these motivational mechanisms on overall motivation is contingent upon individual motivational preferences regarding the different determinants of motivation.

FIGURE 2
The Reciprocal Relationship between Individuals and the Firm



Firms are can be seen as devices to develop and direct individuals' motivation to act towards the achievement of collective goals. At the same time they offer an organizational context in which individuals are able to satisfy fundamental extrinsic and intrinsic needs. These two aspects are inherently linked. Firms potentially provide individuals with what they fundamentally care for and individuals in exchange contribute through their behavior to the accomplishment of organizational goals.

FIGURE 3
Antecedents of Motivation in the Firm



Organizations can influence aggregate motivation through adjustments of three organizational motivators: Reward System, Socialization Regime and changes in the Job Design. The three factors interact in their effect on extrinsic, hedonic intrinsic and normative intrinsic motivation. The overall level of motivational efficiency depends on the level of correspondence between the organizational motivators and (a) the aggregate motivational preferences of the workforce and (b) the motivational requirements of the activities to be performed.

References

Adams, J. S. (1963). "Toward an Understanding of Inequity." Journal of Abnormal and Social Psychology **67**: 423-436.

Adams, J. S. (1965). "Inequity in Social Exchange." Advances in Experimental Social Psychology **2**: 267-296.

Alchian, A. A. and H. Demsetz (1972). "Production, information costs, and economic organization." American Economic Review **62**: 777-795.

Allen, N. J. and J. P. Meyer (1990). "The Measurement and Antecedents of Affective, Continuance and Normative Commitment to the Organization." Journal of Occupational Psychology **63**: 1-18.

Amabile, T. M. (1993). "Motivational Synergy: Toward New Conceptualizations of Intrinsic and Extrinsic Motivation in the Workplace." Human Resource Management Review **3**(3): 185.

Amabile, T. M. (1997). "Motivating creativity in organizations: On doing what you love and loving what you do." California Management Review **40**(1): 39.

Amabile, T. M. and K. G. Hill (1994). "The Work Preference Inventory: Assessing intrinsic and extrinsic motivational orientations." Journal of Personality & Social Psychology **66**(5): 950.

Baker, G., et al. (1994). "Subjective performance measures in optimal incentive contracts." Quarterly Journal of Economics **109**(4): 1125.

Brief, A. P. and R. J. Aldag (1975). "Employee Reactions to Job Characteristics: A Constructive Replication." Journal of Applied Psychology **60**(2): 182.

Brief, A. P. and R. J. Aldag (1977). "The Intrinsic-Extrinsic Dichotomy: Toward Conceptual Clarity." Academy of Management Review **2**(3): 496.

Coase, R. H. (1937). "The nature of the firm." Economica **4**: 386-405.

Conner, K. R. and C. K. Prahalad (1996). "A resource-based theory of the firm: Knowledge versus opportunism." Organization Science **7**(5): 477 - 501.

Deci, E. L. (1971). "Effects of externally-mediated rewards on intrinsic motivation." Journal of Personality and Social Psychology **18**: 105-115.

Deci, E. L. (1975). Intrinsic motivation. New York and London, Plenum Press.

Deci, E. L. (1976). "The Hidden Costs of Rewards." Organizational Dynamics **4**(3): 61.

Deci, E. L. and R. Koestner (1999). "A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic." Psychological Bulletin **125**(6): 627.

Deci, E. L. and R. Koestner (1999). "The undermining effect is a reality after all--extrinsic rewards, task interest, and." Psychological Bulletin **125**(6): 692.

Deci, E. L. and R. M. Ryan (1985). Intrinsic motivation and self-determination in human behavior. New York, Plenum Press.

Fama, E. F. and M. C. Jensen (1983). "Separation of Ownership and Control." Journal of Law & Economics **26**(2): 301.

Foss, N. J. (1999). "Research in the strategic theory of the firm: 'Isolationism' and 'integrationism'." Journal of Management Studies **36**(6): 725-755.

Foss, N. J., et al. (2000). Competence, Governance and Entrepreneurship, Oxford University Press.

Frey, B. S. (1992). "Tertium datur: Pricing, regulating and intrinsic motivation." Kyklos **45**(2): 161.
Frey, B. S. (1993). "Motivation as a limit to pricing." Journal of Economic Psychology **14**(4): 635.
Frey, B. S. and R. Jegen (2001). "Motivation Crowding Theory." Journal of Economic Surveys **15**(5): 589.
Frey, B. S. and F. Oberholzer-Gee (1997). "The cost of price incentives: An empirical analysis of Motivation Crowding-Out." American Economic Review **87**(4): 746.
Gal-Or, E. and R. Amit (1998). "Does empowerment lead to higher quality and profitability?" Journal of Economic Behavior & Organization **36**(4): 411.
Ghoshal, S. and P. Moran (1996). "Bad for practice: A critique of the transaction cost theory." Academy of Management Review **21**(1): 13-47.
Gibbons, R. (1998). "Incentives in Organizations." Journal of Economic Perspectives **12**(4): 115.
Gottschalg, O. and M. Zollo (forthcoming). "Interest Alignment and Competitive Advantage". Academy of Management Review
Grossman, S. and O. Hart (1986). "The Cost and Benefits of Ownership: A Theory of Vertical and Lateral Integration." Political Econ **94**: 691-719.
Hackman, J. R., et al. (1975). "A New Strategy for Job Enrichment." California Management Review **17**.
Hackman, J. R. and G. R. Oldham (1976). "Motivation through the design of work." Organizational Behavior and Human Performance **16**: 250-279.
Hackman, R. and C. J. Gersick (1990). "Habitual Routines in Task Performing Groups." Organizational Behavior and Human Decision Processes **47**: 65-97.
Holmstrom, B. and P. Milgrom (1994). "The Firm as an Incentive System." American Economic Review **84**(4): 972-991.
Homans (1961). Social Behavior, Harcourt Brace.
Huy, Q. N. (1999). "Emotional capability, emotional intelligence, and radical change." Academy of Management Review **24**(2): 325-345.
Jensen, M. C. and W. H. Meckling (1976). "Theory of the firm: Managerial behaviour, agency costs and ownership structure." Journal of Financial Economics **3**(305-360).
Kerr, J. L. and E. F. Jackofsky (1989). "Aligning Managers with Strategies: Management Development Versus Selection." Strategic Management Journal **10**(Summer): 157-170.
King, W., et al. (1983). "Intrinsic motivation, the meaning of pay, and work quality and quantity." Journal of Social Psychology **116**(1): 147-148.
Kogut, B. and U. Zander (1992). "Knowledge of the firm, combinative capabilities and the replication of technology." Organization Science **3**(3): 383-397.
Kogut, B. and U. Zander (1993). "Knowledge of the firm and the evolutionary theory of the multinational corporation." Journal of International Business Studies **24**(4): 625-645.
Kogut, B. and U. Zander (1996). "What firms do? Coordination, identity and learning." Organization Science **7**(5): 502-518.
Kreps, D. M. (1997). "Intrinsic motivation and extrinsic incentives." American Economic Review **87**(2): 359-364.
Lepper, M. R. and D. Greene (1975). "Turning play into work: Effects of adult Surveillance and Extrinsic Rewards on Children's Intrinsic Motivation." Journal of Personality and Social Psychology **31**: 479-486.
Lepper, M. R. and D. Greene (1978). The hidden costs of reward. Hillsdale, NJ, Erlbaum.
Lindenberg, S. (2001). "Intrinsic Motivation in a New Light." Kyklos **54**(2/3).
Makadok, R. (2003). "Doing the right thing and knowing the right thing to do:Why the Whole is Greater than the Sum of the Parts." Strategic Management Journal.

Milgrom, P. R. and J. Roberts (1992). Economics, Organization, and Management. Englewood Cliffs, NJ, Prentice-Hall.
Moran, P. and S. Ghoshal (1996). "Theories of economic organisation: The case for realism and balance." Academy of Management Review **21**(1): 58-72.
Riordan, M. and O. E. Williamson (1985). "Asset Specificity and Economic Organization." International Journal of Industrial Organization **3**(4): 365-378.
Van Maanen, J. (1978). "People Processing: Strategies of Organizational Socialization." Organizational Dynamics **7**(1): 18.
Van Maanen, J. and E. H. Schein (1979). "Toward a theory of organizational socialization." Research in Organizational Behavior **1**: 209-264.
Williamson, O. E. (1975). Markets and Hierarchies: Analysis and Antitrust Implications. New York, Free Press.
Williamson, O. E. (1979). "Transaction-cost economics: The governance of contractual relations." Journal of Law and Economics **22**: 233-261.
Williamson, O. E. (1981). "The Economics of Organization: A Transaction Cost Approach." American Journal of Sociology **87**: 548-577.
Williamson, O. E. (1985). The Economic Institutions of Capitalism. New York, NY, Free Press.
Williamson, O. E. (1989). Transaction cost economics. Handbook of Industrial Organisation. R. Schmalensee and R. D. Willig. Amsterdam, Elsevier.
Williamson, O. E. (1995). The Mechanisms of Governance. Oxford, Oxford University Press.
Williamson, O. E. (1996). "Economic organization: The case for candor." Academy of Management Review **21**(1): 48-57.
Williamson, O. E. (1999). "Strategy research: Governance and competence perspective." Strategic Management Journal **20**(12): 1087-1108.
Wright, P. M., et al. (1994). "Human Resources and Sustained Competitive Advantage: A Resource-Based Perspective." International Journal of Human Resource Management **5**(2 May): 301 - 326.
Wright, P. M. and S. A. Snell (1991). "Toward an Integrative View of Strategic Human Resource Management." Human Resource Management Review **1**(3): 203.
Zander, U. and B. Kogut (1995). "Knowledge of the firm and the speed of the transfer and imitation of organizational capabilities: An empirical test." Organization Science **6**(1): 76-92.
Zenger , T.R and W.S. Hesterly (1997). “The Disaggregation of Corporations: Selective Intervention, High-powered Incentives and Molecular Units.” Organization Science **8**(3): 209.