Knowledge, Learning and Competitive Advantage: 
Some implications for the the Management Profession

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Abstract

The question of how to develop and effectively use firm-specific, idiosyncratic knowledge in an organization becomes a fundamental issue when it comes to sustainable competitive advantages. This process unavoidably touches upon learning and management (motivation, compensation, etc.). In particular, how do we adequately compensate employees who make a learning effort to develop knowledge which, to the extent that is firm-specific, is of no value outside that firm? We argue that economic compensation is not enough, precisely because firm-specific knowledge is highly intermingled with the firm’s own “essence” and consequently “interferes” with employees’ values in dimensions that are not reducible to purely economic terms. This reflection, in turn, raises important issues regarding the management profession.

Introduction. Knowledge and Competitive Advantage

Developing and effectively using firm-specific, idiosyncratic knowledge is considered more and more necessary in order to create sustainable competitive advantages in today’s world. Firms are increasingly departing from the “traditional” model, centered on tangible assets and the subsequent importance of scale, vertically integrated and with a high degree of control over their employees, where the separate role of management and employees gave rise to the so-called “agency problem” which was approached from the assumption that people (in particular firms’ owners, management and employees) are selfish maximizers of economic profits (homo economicus). Instead, today’s firms lean towards innovation because tangible assets tend to have less differentiation potential, with the result of an increase of the human capital significance (Conner & Prahalad 1996; Grant, 1996; Zingales 2000).

The idea is that when a firm is successful in the development of some relevant knowledge, any competitive advantage based on it is likely to be hard to imitate and so its sustainability tends to be high because it involves a learning process that requires effort and the deployment of organizational resources, which makes imitation difficult. In other words, the difficulty for imitating knowledge of this sort comes from the fact

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2 To the extent, in fact, of giving rise to the question of whether that point of view, which has become so popular in both professional and academic contexts, could actually have been one of the causes of such a selfish behavior, reinforcing in this way a “self fulfilling prophecy” loop (Ferraro, Pfeffer & Sutton 2005) in which for example considerations about honesty, trulyness or equity are only made to the extent that they contribute to that ultimate economic profits goal, even manipulating interpersonal relationships and forcing them to serve the powerful, as shareholder value has become prioritary. Eventually, this can even affect negatively to the shareholder herself (Gintis & Khurana, 2006). This paper suggests a different approach to this process.
that it depends heavily on how individuals and groups interact in the context of a definite organizational environment. In other words, imitating it implies reconsidering and probably having to change individual and social human behavior that often is the result of a shaping process which has unfolded over (many) years in a time- and path-dependent way.

Thus, consequently, the question of how to develop and effectively use this kind of knowledge in an organization becomes a fundamental issue when it comes to sustainable competitive advantages. From the standpoint that interests us here, there is one aspect of this process which eventually but unavoidably touches upon learning, motivation, compensation (that is, management), and ethics.

To the extent that this knowledge is idiosyncratic and firm-specific in the sense of well rooted in the firm culture and tradition and consistent with its core values, its potential for differentiation, performance and inimitability is higher (Barney, 1991; Dierickx & Cool, 1989; Huckman & Pisano, 2006). Given its nature, such knowledge exists only within the firm that developed it and it has in principle no value in the open market (Sturman, Walsh & Cheramie, 2008).

Knowledge Development and Management Responsibility for Learning

Developing knowledge implies learning, mainly individual learning\(^3\), which in turn implies individual effort\(^4\) of the organization members. Moreover, choosing to commit time and effort to learning requires a decision on the part of the individual, who makes it taking into account “what’s in it for her” according to her preference. As a consequence, all this hinges on fundamental aspects of management such as motivation and compensation, as we discuss below. Although this has been always true, it is today even more explicitly present in managers’ agendas because of the reasons outlined above.

From the homo economicus perspective, there are both arguments saying that employees can and should protect themselves against the threat of firm’s opportunistic behavior if they make firm-specific investments (Williamson 1975, 1985), and that firms can and should credibly reassure employees that they are not going to take advantage of such a situation (Castanias & Helfat, 1991; Grossman & Hart, 1986; Jensen & Meckling, 1976; Rajan & Zingales, 1998, Alchian & Demsetz, 1972). However, under certain circumstances employees are willing to make firm-specific investments, even recognizing the associated risk, which can, on the other hand, be also dealt with (Wang & Barney, 2006).

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\(^3\) There is, to be sure, a debate about the nature of what sometimes is called organizational learning, or even collective learning, which falls outside the scope of this paper. However, it is clear that individual learning is necessary for organizational or collective knowledge to unfold, and this is sufficient for our purposes here.

\(^4\) The implication is that the right level of analysis for the phenomenon that interests us here is the individual level and that of interactions among individuals, taking into account the relevant motivational aspects – i.e., the organization (Foss 2007), understood as the formal and informal allocation of decision (or property) rights and the mechanisms that enforce such rights (Jones 1983). To do so is impossible if the analysis is set (as is often done to study management action) to the “market transactions” level, because these are anonymous by nature.
In any case, since management is eventually responsible for choosing the competitive positioning of the firm and also for “making it work” in the implementation sense both internally (organizationally) and externally “in the market”, it also has the responsibility of making sure that employees develop whatever knowledge is needed, in particular firm-specific knowledge. The fact that by definition “a market” for such knowledge does not exist puts on the table a series of questions worth considering.

For example, there is the issue of fit between firm objectives and employee values and rights, even from an ethical perspective (Pastoriza, Ariño and Ricart, 2007), which is not independent from the professional development of the later, at all levels (see, for example, Leavitt 2007), including the associated learning, as we discuss next.

**Learning efforts and Compensation: Some Problems**

Why would an employee be willing to learn in an organizational context? An argument sometimes used is that of “external employability” or marketability of the employee, which doesn’t quite work with firm-specific knowledge. The usual reasoning goes more or less like this: “making an effort to learn will put the employee in a better position to be eligible for employment in another firm, were things worsen here”\(^5\). In addition to being a somewhat contradictory argument (isn’t the firm going to devote time and resources to the learning effort too? –just to let the employee go as easily?), it simply doesn’t apply when the knowledge involved is idiosyncratic. In this case, precisely the opposite would be true by definition, as such knowledge is useless outside the firm where it develops.

There is a fundamental management question behind this. If the knowledge to be developed and learnt is important because it is supposed to be at the root of a firm’s competitive advantage and performance over the years, it is crucial that the involved employees remain in the firm (Ton & Huckman 2008) in order to ensure the advantage sustainability –which hinges on compensation issues. How could the firm adequately compensate the employee to motivate her to learn and to stay, in order to develop and exploit the resulting advantage?

Economic compensation alone (which should take into account the uncertainty of future results stemming from firm-specific knowledge) has a series of problems (Wang & Barney 2006). To begin with, consistently with research in organizational economics, the amount of firm-specific investments an employee will choose to make is normally assumed to depend on the amount of rents she expects to appropriate in return (Castanias & Helfat, 1991, 2001; Grossman & Hart, 1986; Hart & Moore, 1990; Rajan & Zingales, 1998, 2001). Here rents should be understood in a wide sense, as we discuss below.

In addition, the incentives for an employee to make firm-specific knowledge investments are negatively affected by the risk of the per unit payoff from her investment. In other words, compensating employees for this kind of risk taking is said (Wang & Barney 2006) to

\(^5\) This has been also used as an argument to justify the assumption that the employee’s payoff per unit of “human capital investment” is constant, and thus risk-free (Wang & Barney 2006).
(i) be hard to implement because of difficulties in quantifying the relevant risk (an argument that assumes writing specific and detailed contracts, which is at least partially at odds with one of the basic reasons for a firm to “bring employees on board” as members of the organization —rather than, say, go to the market and get their service and knowledge through standard, market contracts, which is by nature impossible with firm-specific knowledge); and

(ii) impose additional costs on the firm (Miller & Chen, 2003), increasing with the associated risk, to the point that it may not pay for the firm to motivate employees through economic compensation beyond a certain threshold, and consequently strike an “optimal compensation schedule” that could not fully counterweigh the risk from the employees standpoint (Shavell, 1978).

Wang and Barney (2006) suggest solving such problems through “exploring the applicability of core resources in other product markets and diversifying accordingly”. This is obviously not free of problems either, as they explicitly recognize:

“Note that these arguments are built on the implicit assumption that management is able to implement a resource-based diversification strategy in such a way that the risks of existing firm business are not altered, [in which case] they should be discounted accordingly”.

One problem here is that firm-specific knowledge leading to competitive advantage is probably difficult to apply to other activities so un(cor)related as to compensate for the risk associated with the former —which in this case wouldn’t had been as firm-specific after all (and thus the problem wouldn’t be as significant to begin with).

Apart from these stumbling blocks, pure economic compensation presents other, maybe more fundamental, difficulties. A key one has to do with the fact that all the preceding arguments and proposed solutions implicitly assume that all compensation can be reduced to economic terms, which is problematic particularly when specific individuals’ (employees’) values are confronted with the firm “essence” as reflected in whatever knowledge is considered to be firm-specific.

In other words, given that “investing in firm-specific knowledge” implies learning something which by definition is going to be useful only in a given organizational context, are we ready to accept that to keep increasing one person’s motivation for this kind of learning simply increasing economic compensation will suffice? There are strong reasons to believe that we can’t answer yes to this question in general, as the involved learning is too intermingled with what configures the firm’s essence for an arms-length type of contract to be appropriate⁶. Somehow this problem is explicitly acknowledged when we talk about “compensation packages”, which strive to “recompense for talent” in ways that recognize the need to include dimensions which cannot be “made equivalent” to a single economic amount⁷.

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⁶ This, in fact, is a fundamental reason for the existence of firms, as they “assume” whatever aspects inefficient to tackle through contracts.

⁷ We refer here to “compensation package dimensions” interrelated through the structure of a person’s “motivational system”; not to dimensions that simply result from the pooling of purchasing power or individual risks, or from tax advantages that stem from arbitrary tax policies.
Thus, in the case of idiosyncratic knowledge development, a bonus amount to compensate an employee for the corresponding learning effort doesn’t seem to suffice in general. Precisely because what has to be learnt is something not unbiased or neutral but strongly aligned with the essentials of the firm, the employee’s principles and beliefs become relevant. This is so in part because “one way to choose to be a certain sort of person is to choose to be in a certain sort of community” (Hartman, 2006), implying that people join communities (a firm, for example) because they wish to grow certain personal values. And they are willing to incur in personal opportunity costs in order to do so (“Honesty entails opportunity costs” says Hartman, 2006). The implication is clear—an employee may decide to incur in such personal “costs” or not, not only because there is a bonus waiting for her in the form of economic compensation. Alternatively she could strive for a minimum degree of learning consistent with her values regardless of the involved bonus.

In other words, when it comes to firm-specific knowledge, by nature so intermingled with the essence of the firm, inducing employee learning is going to take more than simply a more or less sophisticated economic incentives scheme. Organizational culture and values (the firm’s “essence”) will have to be considered explicitly, as organizational forces contribute to drive employee decisions along with his personal values (see Hartman, 2006 for a discussion). This, of course, is no more—and no less—than another of the genuine management profession responsibilities (unfortunately often forgotten.)

Below we argue that it is possible to think in terms of incentives in such a way that firm’s and employee’s values can be confronted in a “natural way” with potential for setting off a virtuous circle in which trust and commitment can increase, and as a consequence the chances of developing firm-specific knowledge also increase, with the likely result of more firm competitive potential and better long term performance. This allows foreseeing a reconciliation of the conventional vision that confronts employees’ interests to those of the organization. And it also brings closer the traditional economist conception of the firm to a more humanistic alternative, consistent with the work of Juan Antonio Pérez López (Pérez López 1991, 1993, 1998; Rosanas 2008; Argandoña, 2008).

**In search of solutions: Some preliminary ideas.**

If we accept that pure economic incentives are not going to work, what do we need, then? What follows is just an intuitive approximation to an answer.

A first and obvious idea consists in trying to attract and recruit employees whose values are consistent with the firm’s ones (and vice-versa, as it will tend to occur). This has clear implications for hiring, but also for professional careers’ design and development (for example through appropriate “learning trajectories” that try to harmonize the knowledge and learning “portfolio” of employees, including firm-specific and general purpose knowledge; Andreu & Sieber 2006). Doing so would naturally work in the direction of employees being more willing to incur in the kind of personal learning opportunity costs discussed above.

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8 Assuming, of course, that she doesn’t have a “peremptory” need for the bonus; that is, that she is is not “a slave” of the firm.
Going beyond the somewhat “passive” approach just outlined, an incentives-based alternative is possible, with emphasis on the interplay between the firm “essentials” and the employees’ principles and “motivational system”. Recognizing that economic incentives alone are not going to suffice because personal principles are involved and individuals desire to strike a minimum fit in this area, the idea is to place the incentives question in a context where the interplay between firm and employees’ values can happen “naturally”.

From a similar perspective, Barney and Hansen (1994), Osterloh and Frey (2000) and Gottschalg and Zollo (2007) identify the same problem and although they also propose incentives-based solutions, these tend to fall short because are still based on purely economic rewards and / or on a “not enough demanding” conceptualization of firm-specific knowledge in terms of the learning effort and commitment that it implies as discussed above. Other proposals, which are in fact based on the idea of “manipulating” employees (see for example Johnson 2006, Sirota, Mischkind and Meltzer 2006, or Saiz 2007) have for this reason still less potential, although unfortunately they often find their way into popular management publications.

Ghoshal, Moran & Bartlett (2001) characterize the problem in terms very close to the ones we used above but, they propose a solution still based on the paradigm of economic incentives and in the conceptual introduction of a “subtype” of firm-specific knowledge which at the end doesn’t seem to “square” the situation completely9. Rajan and Zingales’ proposal (1998a), which puts more emphasis on the use of power in interorganizational interactions seems to present similar difficulties.

In summary, the question appears to be still very much unresolved, as Pfeffer (2005) points out from a slightly different standpoint although consistent with the problem as stated above.

One way to approach the problem via incentives recognizing at the same time a richer motivational scheme, consists in linking them to the firm’s results derived from exploiting idiosyncratic knowledge before they are translated into economic consequences10. In this way any employee could have access to organizational results “at the origin”, check their consistency with his own principles and, taking into account the “quality” of the learning involved, reinforce (or not, as the case might be) his willingness to stay in the community / organization, thus continuing to learn because “they see themselves progressing towards the ‘sort of person’ they chose to be”; see

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9 As per a conversation of the author with P Moran in May 2007.

10 There is a fundamental issue behind this statement. It has become widely accepted to link incentives to economic results (which, symptomatically, are very often called just “results”), as if they were the quintessential ones. By making the distinction we are implicitly proposing that a firm may (should?) have objectives other than the strict bottom line, in particular to the short term bottom line. In fact, the argument is that by pursuing objectives stated for example in terms of firm-specific knowledge development on which to base future competitive advantages, economic results will emerge eventually, in the long run –otherwise, the very concept of strategy design wouldn’t make any sense. This discussion is not independent of the distinction between “process performance” and “outcome performance” (Ariño & Doz, 2000; Ariño, 2003).
above\textsuperscript{11}. Operationally, this can be implemented in a variety of ways, with the common feature that could be called “increasing the employees’ quality of ‘organizational life’ ”.

For example: Imagine an initiative to improve supplier relations in a firm, with the goal of making them idiosyncratic and thus with some potential for future competitive advantage. It could be implemented by letting some employees develop them from a personal standpoint (“empowering” them if you will, but not as much because this could make the relations more efficient in the short run, but in order to develop quality relations in the long run in the context of the firm’s organizational context and culture). Or, say, employees are asked to make an effort to learn to use an innovative technology that could give rise to idiosyncratic, new, less time consuming and more effective ways of doing things: These employees could be let to freely use part of the saved time “as it emerges” (“at the origin”, as we said), giving thus them the opportunity to improve “the quality of their organizational life” as they prefer.

A proposal of this kind has the added characteristic that in order for the employees to actually benefit from the incentive they must remain in the organization, which contributes to close the following cycle: employees join an organization anticipating a good fit for their values, contribute to actions which result in the reinforcement of both those values and the competitive potential of the firm, thus they discover that a way to progress in this direction is to stay and keep working in the same way, continuing with the development of firm-specific knowledge that enhances the firm competitive potential. This obviously facilitates both

(i) the exploitation of any associated idiosyncratic knowledge, and

(ii) the attractiveness of the firm for the employees,

thus reinforcing the whole cycle.

In summary, starting from a basic competitive need of today’s firms (the effective development and deployment of firm-specific knowledge), the discussion above has naturally brought the problem to the arena of the interplay between firm and employee values, and as a consequence to some fundamental aspects of the management profession and in a sense to an stringent requirement to re-humanize it. The following section presents some implications and concludes.

\textbf{Implications and conclusions}

At least two implications emerge from the preceding discussion. One is well known but is never stressed enough: A genuine management responsibility is to look after employees’ learning, and to do so in a broad sense that includes taking into account the interplay between employees’ values and firms’ essentials.

The second one is even more fundamental: Unless the knowledge resulting from these learning efforts (more so in the case of firm-specific knowledge) is coherent with the employees’ basic values, it will be in occasions impossible for them to even consider

\textsuperscript{11} Another fundamental issue conceals here. It has to do with how human beings develop moral virtues (see Pérez López, 1998; Hartman, 2006, for example), which includes discovering how good or bad an action is after experimenting its consequences, in the sense of progressing towards being a “better person”.
the prospect of making the required investment. In contrast, if such coherence is there, one can expect that they will be willing to actually make the investment, which in turn would very likely produce better results for the firm than trying to “force” the employees to make the investment by other means, be them exercising power, coercion, deception, or whatever.

It is clear, in addition, that to the extent that the learning efforts are freely made by employees (which we have assumed they are, because the driving force behind them has to do with value fit) and since the involved knowledge is firm-specific, we not are talking about operative learning (i.e., about improving employees’ abilities to perform basic activities more efficiently), but about the kind of learning that results in commitment and trust. On the other hand, if the employees were not willing to make the learning effort and investment, they would probably end up leaving the firm and searching for alternatives with better potential fit. In Pérez-López’s conceptual framework this parallels what he called “developing the organization’s unity”, and underlines another genuine management responsibility: that of fostering not only employee operative learning, but also fostering commitment, trust, and personal advancement and growth, so as to make the whole system advance in the same direction12.

Thus, in conclusion: Consider again the initial reason for developing firm-specific, idiosyncratic knowledge, i.e., setting a good foundation for sustainable competitive advantage. As discussed above, there is a fundamental issue of employee personal development through the required learning and developing of that kind of knowledge. When firm-specific knowledge and learning are consistent with employee values they end up reinforcing employee personal advancement and growth, and vice-versa, in a virtuous cycle that eventually makes the firm more competitive and thus bound to better performance in the long run. As suggested, it is possible to initiate and maintain such a cycle through a set of incentives that link the immediate consequences of firm-specific knowledge development and exploitation to the employees’ “organizational life quality”, thus reconciling employee and firm values “at the origin” in a natural way. However, we do not mean to say that this incentives-at-the-origin approach is the only possible alternative to foster that self-reinforcing cycle; independently of how we do it, the underlying message is that there are good reasons for managers to explicitly care about initiating and maintaining the virtuous cycle while exerting their profession, recursively in order to improve their firms’ long run performance outlook.

Although this argument is not new, we have underlined that it can be conceptualized stemming from the competitive pressures that push today’s firms to differentiate their positioning based on (firm-specific) knowledge. In this sense, we are not saying that exerting the management profession taking seriously into account employees’ (and in fact other stakeholders’) values, development and personal growth, should be understood as an “additional burden” that at the end will constraint the firm’s economic results. In fact, we highlight just the contrary: managing in this way is tantamount to good management from an all-encompassing perspective, basically because management is fundamentally a human and social activity. In other words, managing in this way is “the only natural way” to manage, as it were. If well done, economic results

12 Still another fundamental issue lies behind this paragraph, related to what could be called the “quality” of the involved values. As advanced above, it has to do with what one understands by “being a better person”, which hinges on ethical and moral considerations beyond the scope of this paper.
will also naturally emerge in the long run\textsuperscript{13}. We find this more compelling than other lines of reasoning traditionally used to make essentially the same point, for example the classical McGregor arguments (1960), which recently MIT’s Rebecca Henderson put in the following terms:

“Why do you sometimes think that people that work for you are lazy… and they don’t think so much of you either”

In addition, there are also implications for those who have the vocation and responsibility of training and educating future managers, in particular business schools. Several authors have put this issue on the table recently. For example, Leavitt (2007) says:

Currently, our business schools encourage students –implicitly and sometimes quite explicitly– to envision the treasury troves of wealth, status, and “success” that await them out beyond their degrees. But shouldn’t we teachers and trainers also be forewarning them of the enervating, often disillusioning psychological traps that lie out there? Shouldn’t we pointing out, too, the perhaps irreconcilable conflict between those organizations’ values and the ones our parents taught us? Our universities purport, after all, to be truth-seeking institutions, not pre-recruiters for corporations. Sooner or later, our students will surely encounter a host of organizational situations that will try their souls and test the depth of their decency –unless our systemizing educational efforts will already have erased their rectitude. They will encounter cruel and incompetent bosses, arbitrary and unjustified punishments, overly competitive peers, hurtful family/organization stresses, and wrenching decisions that seriously affect the lives of their “subordinates”. (Emphasis added).

Also Ginis & Khurana (2006):

“By abjuring professional standards for managers in favor of a culture of greed, it is likely that business schools that have promoted the neoclassical model of stockholder-manager relations have so undercut the culture of professional honor among managerial personnel that the mechanism of informal third-party punishment and reward has sunk to dramatically low levels, thus contributing to a deficit in moral behavior on the part of contemporary managerial personnel.”

Thus, it seems that the subject is relevant and timely. I hope that this article can contribute to the discussion.

\textsuperscript{13} It is interesting to observe here that the “long run” condition is also only natural, because the learning processes needed to develop knowledge on which to establish competitive advantage are far from capable of producing immediate results. Of course this is a reason to try to speed up learning, but human nature is such that we will only be able of doing so to a certain extent. Maybe we should also for this reason reconsider management, and conceive it as a much more long term-based activity than we currently do?
REFERENCES


