Knowledge management systems and organizational change: a study of global management consulting firms

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Abstract
Consulting firms have been facing many changes since the late 80’s, due to the increasing complexity of their client’s demands, industry competition and IT advances. Those changes have led them to change their product, process and client strategies.

IT tools helped many consulting firms to build Knowledge Management (KM) systems and it has been said that these systems could change competitive capability in consulting industry, by increasing market expectations and giving advantage to big firms. This research aims to better understand the use of KM systems by consulting firms, and verify if its use are pushing these firms to modify their strategies and structures.

Using a qualitative research approach, we studied 5 consulting firms, and we found that, due to the use of KM systems, at least two modifications are taking place: some firms are increasing the power of existing support structures, and other firms are changing towards global structures, strongly oriented by client’s industry. These two changes could lead local units to very different roles and positions in the firm network.

Key words: Consulting firms, knowledge management, knowledge.

Introduction
Consultancy business is both a fast growing and a diversified industry, composed by single consultants, small and medium size local offices and large multinational firms, with hundreds of offices. Global revenues reached 62 billion dollars in 1997, and growth has been prodigious: in Europe the average rate from 1990 to 1995 was 15% (AMCF, 1998) and to the leading US companies, as much as 20 to 30% (THE ECONOMIST, 1997). Forecasts point to global revenues of 100 billion dollars by 2000 (KENNEDY, 1998). Also, most of the large consulting firms are expanding their business globally, reaching not only the developed countries, but also Asia, Latin America and East Europe.

Consultancy is hard to define. Definitions range from narrow concepts, which include only the strategic houses, to broad concepts, including all the outsourcing providers (THE ECONOMIST, 1997). We’ll accept a broad definition: a “…consultant is any professional who provides assistance to others, usually for a fee.” (BISWAS and TWITCHELL, 1999). Thus consultants can be hired to identify, diagnose and solve business issues, but they also can be hired to perform other activities, like: give expert advice or confirm findings and conclusions, act as third party, mediators or facilitators in internal conflicts, teach and train client’s staff and even carry out tasks that their clients are not able to or don’t want to do anymore.

To be successful, a consulting firm has to manage knowledge, both at the individual and at the organizational level. “Knowledge is the core asset of consultancies” (HANSEN et al. 1999). The ability to manage personal knowledge and to extend it to the organizational level has been recognized by these
firms as a key capability to their success (e.g. MARTINY, 1998). Therefore, consultancies are among the first businesses to develop strategies and to make heavy investments in knowledge management (HANSEN et al., 1999).

IT provided tools to consulting firms develop knowledge management (KM) systems, which have been used to capture and disseminate information among consultants. KM systems, due to their fit to consulting firms’ needs, have been pointed as an important factor their competitive capability (SARVARY, 1999). The use of these systems would for instance, change and increase market spectations, forcing most of the large consulting firms to adopt them, to prove their “state of the art” status. Also the use of these systems would give competitive advantage to larger firms, due to the bigger volume of engagements and thus, more information to feed their databases.

Besides these changes, since one of KM systems’ main goals is disseminating knowledge among consultants, it seems that it could also modify integration and coordination among offices and even firms’ organizational structures. To study the possible modifications, we conducted a qualitative research in large management consulting firms, studying the adoption of KM systems among them.

Consulting firms

Since the end of the 80’s, large consulting firms have faced market changes due to the growing sophistication of their clients’ demands and global market changes. Those changes have posed two strategic challenges to consulting firms: internationalization of their operations and diversification of services (DÉTRIE, 1989, DOOREWARD and MEIHUIZEN, 1998, ROSE and HININGS, 1999). To cope with these challenges, many of them changed their product strategies, broadening their services portfolio (usually starting from their “base products”). They also tried to offer more integrated services and made a shift toward strategic issues in their consulting practice (GADREY, 1989).

While increasing the complexity of their services, they also have pursued changes in their process strategies, trying to increase quality and standardization of products and methods (BOUNFOUR, 1989, MULLIN, 1996). Also changes in professional relationships, with increasing mobility of consultants, led these firms to develop strategies to be less dependent on consultant’s personal knowledge (DOOREWARD and MEIHUIZEN, 1998).

Also their management processes changed. Large consulting firms are networks of units scattered around the world. Many of them, until the end of the 80’s, were usually structured as professional partnerships, with minimal hierarchy, high personal autonomy, short term planning, single career path, and a business strategy based on building client’s loyalty, by offering convenience and quality (GREENWOOD et al., 1990). They have started to modify their management practices, towards a more hierarchical structure, stronger managed control, long term planning, new career paths, higher professional specialization and internal differentiation, both in services portfolio and local offices capabilities (ROSE, 1998).

Other changes can be listed: an increasing focus on global servicing (ROSE and HININGS, 1999), due to the globalization of their clients. Also, the growing importance of the “experts” in those firms (GREENWOOD et al., 1996), as a result of service diversification, and the increasing interdependency with their competitors and other service firms, especially those that provide engineering, law and technology services. As a result, the need for new coordination and control systems has grown (COOPER et al., 1994), and for increasing knowledge sharing. In her study of the Big Six accounting firms (called the global business advisory firms), ROSE (1998) found that knowledge sharing is “increasing central to the accounting firms’ viability” (p.108).

Global business and increased importance of knowledge flow among units are two trends that have been distinguished in international business studies. There is a broad convergence of views among multinational company analysts, who emphasize: (a) the geographical dispersion of strategic assets and leadership roles, (b) the upgrading role of subsidiaries, (c) horizontal communication across borders, (d) utilization of knowledge from several sources, (e) need of multiple coordination mechanisms and new roles for the global managers (HEDLUND, 1994). To BARTLETT and GHOSHAL (1989) a transnational company has a dispersed, interdependent and specialized organizational configuration,
where knowledge is developed by many units and shared worldwide. In this changing context, “a significant role of the multinational company is one of knowledge creation and transfer” (HEDLUND, 1994). Since knowledge is the cornerstone to consulting firms’ competitive capability, this role is even more important to them.

Most of the conclusions above were drawn for manufacturing companies. But three important aspects make consulting firms different from manufacturing firms: (1) structure of ownership governance In consulting firms there is a blur among ownership, management and operation, partners are owners, managers and executors (GREENWOOD et al., 1990). (2) The nature of the task. Clients participate in tasks, which are performed almost entirely by professionals and are dispersed geographically, making close control difficult, and thus, quality is based on partner and consultants’ personal responsibility. (GREENWOOD et al., 1990). And (3) the way network is formed (BONFOUR, 1989). Some consulting firms are, as manufacturing firms, multinational companies, where partnership is global, and profits are calculated in a global basis. But many consulting firms are “franchises”: local offices use the global “brand name”, but partners share only the local office profits. Thus further changes due to the use of knowledge management systems among consulting firms are likely to occur.

Knowledge management and consulting firms

Knowledge has been discussed in business and management literature under several labels: invisible assets, absorptive capacity, core competencies, strategic assets, intangible resources, organizational memory (ROOS and ROOS, 1997). Organizational learning, learning organizations and intellectual capital are also related subjects that often overlap with knowledge management.

There are three basic approaches to knowledge management in literature (ROOS and VON KROGH, 1996): first, the information processing epistemology, where knowledge is information, and companies are information processing units. According to this point, the more information processing capacity a company possesses, the more knowledge it will be able to create. Second, the network epistemology, where knowledge is the outcome of social processes, a result of the interaction of people in social networks. From this point of view, companies should invest in connecting people, enhancing existing networks and creating new ones, especially using information technology. Third, the self-referential epistemology, where knowledge is a private process inside each person. Thus, knowledge is dependent on each one, his history and previous experiences, and a company’s knowledge is within its employees. So, it should create an environment that stimulates dialogues throughout the organization, in order to share and develop knowledge.

Knowledge can also be seen by two points of view (VON KROGH, 1998). A traditional one, the cognitivist perspective, where knowledge is the outcome of a modeling and logical reasoning process, which represents the world using numbers and objects. So knowledge is a set of models, explicitly and logically defined, and human brain is a kind of machine, which processes of modeling and reasoning can be replicated by another human brain. At the other end, to the constructionist perspective, knowledge is the result of a process of creation or construction, which depends on the previous personal experience and perceptions of the individual. Thus, knowledge depends on the unique context of each person, and it is not replicable by another person. It is not totally objective, possessing a personal aspect, a tacit dimension.

Knowledge management therefore has to deal with information, people and their personal characteristics, organizational structure and its social setting. Knowledge is both tacit and explicit, and can be created, stored, disseminated and used by persons, groups and organizations. The actions related to knowledge management in literature usually stress two processes: (1) creation and (2) transfer and dissemination of knowledge. The first process is related to the concern on creating new knowledge, capturing existing knowledge within the organization and organizing it. Some actions related to this process are: discovering and structuring (DEMAREST, 1997), acquisition, property and storage (JORDAN and JONES, 1997), creation, (WIIG, 1997), accumulation, transfer and transformation (Hedlund, 1994), acquisition and transformation (SARVARY, 1999). Discovering and creation suggest innovation processes, while acquisition and accumulation suggest processes related to use of existing
knowledge. The second process is concerned to make knowledge available to all organization. Actions related to this process are: dissemination and use (DEMAREST, 1997), dissemination (JORDAN and JONES, 1997, SARVARY, 1999), transfer (WIIG, 1997, HEDLUND, 1994).

Consulting is a human talent intensive activity, depending heavily on the consultant personal knowledge, skills, creativity and energy (DOOREWARD and MEIHUIZEN, 1998). HANSEN et al. (1999) found two basic knowledge management strategies in consulting firms. Some companies use a codification strategy, stored in electronic document systems, which allows its storage and dissemination. Three roles were distinguished to IT tools in consulting firms: speeding up the consulting process, storing firm’s knowledge and selling part of this stored knowledge (GADREY, 1989). Thus knowledge is explicit, i.e., can be coded and reused. Another group of consulting companies uses a personalization strategy, which intent is to provide creative and analytical advice to strategic problems. Knowledge is primarily transferred by personal contact, so these firms major concern is to build networks to link people.

According to HANSEN et al. (1999), each one of these strategies are related to their competitive strategies (or market/product approaches) of the firms: codification would be related to the experience/efficiency approach (MAISTER, 1993, DOOREWARD and MEIHUIZEN, 1998), which seeks to provide fast, low cost and highly reliable solutions to known problems (though not highly innovative); and personalization would be related to the expertise approach (idem), which aims to deliver high customized solutions to new and complex problems. Thus, knowledge management strategies derive from and are a part of corporate strategies. SARVARY (1999) also states that KM is the main business process to consulting firms, and that it will shape new patterns of competition in this industry.

Research planning

Consulting firms have been experiencing many changes during the last years. Their market relationships have changed, pushing them to modify their management practices and their products. In addition to market changes, IT tools have also impacted their business, helping them to build powerful KM systems. Their capability (and the IT tools used to build them) to change consulting industry has already been recognized (SARVARY, 1999). Thus, in order to better understand KM systems in consulting firms, a first question arose:

Which is the architecture of consulting firms’ KM systems?

And also, due to the growing importance of KM to consulting firms, it is likely that we could expect intense changes inside consulting firms, and so, changes in their organizational structures. Thus our second question was:

Are there changes in consulting firms’ organizational structures, due the use of KM systems?

To address these questions a qualitative research was designed. To select firms to the research, we designed a theoretical sample (GLASER and STRAUSS, 1967). Firms were selected according to the kind of service they deliver: whether oriented to standardized systems implementation or customized strategic analysis. First, a typology related to the original expertise area of management consulting firms was developed (using consulting firms’ history, in WASHBURN, 1996). Some of them come from a human resources background (HR), some from accountancy/audit and tax advisory (A), others from operations management and strategic planning (SP) and some from the IT (IT).\(^1\)

\(^1\) As all typologies, it is a simplified classification, which takes into account one single dimension of analysis (Miller, 1988), but it is consistent with other typologies that can be found in the literature (e.g. Détrie, 1989, Bounfour, 1989, Greiner and Nees, 1989) that also use original expertise area, but mixing it with size, product diversity, country of origin and market orientation.
Our assumption was that, due to their original expertise area, A and IT firms would offer standardized products, while SP firms would deliver customized services. HR firms would stand in an intermediate position, but closer to the standardized end. It is likely that different service approaches lead to differences in knowledge management strategies. For instance, HANSEN et al. (1999) found that companies from an audit/accountancy background (Ernst & Young) possess a knowledge strategy that is very different of companies from a strategic planning background (McKinsey and Bain). But it is important to note that, as already argued, there is a convergence of service offer towards strategic consulting, so it is expected that many A, IT and HR firms would be developing customized approaches.

The sample included five firms, from the 50 biggest management consulting firms (KENNEDY, 1998): two SP firms, one HR, one IT and one A firm. So we chose two firms on the customized end, two on the standardized end, and one in the middle. We conducted semi-structured interviews in the Sao Paulo office of each one of the selected firms, attempting to interview at least a partner and whenever possible, a senior consultant or the KM manager. The basic questions were about how each one uses KM systems, and about the relationships within units and possible changes in their organizations. We performed eight interviews (1 to 1.5 h), and each interview was recorded, transcribed, and transcriptions submitted to interviewees’ comments.

Field results and discussion

All interviewed firms stated the use of KM systems, although in different levels. For instance in one of them the Sao Paulo office was using the KM system for seven years, but in another, the Sao Paulo office was just starting its implementation, although the firm has already a KM system for two years. In all firms, the structure of the KM systems found was basically the same: a “formal” part, composed by electronic databases, and a “yellow pages” part, were one can find consultants expertise, previous experiences and their emails and phone number. Databases are designed to store explicit knowledge while “yellow pages” are designed to make easier to find people and ask them for information, personal point of view, advice, i.e., tacit knowledge.

Consulting firms’ KM systems usually put high emphasis on explicit knowledge. Starting from information gathered from engagements, many of them work to produce “knowledge objects” (SARVARY, 1999), pieces of successful methods, experiences and information that are “cleaned” or “sanitized” from references to specific clients, making possible to use them in future engagements. This information, stored in databases, is explicit, and is easily accessed by any consultant. It is interesting that some of the interviewees recognize that the so-called “sanitization” process lead to lose of knowledge, while other firmly deny this possibility. Since management consulting is primarily an analytical task (PHILLS, 1996), emphasis on explicit knowledge can be understood, although a partner stressed that the database’s usefulness is limited to standardized tasks, and is not useful to engagements where factors such culture or local legislation are important.

The management of databases deals with two aspects: a syntactic part, related how information is stored and retrieved, which main concern is standardization, procedures and patterns; and a semantic part, related to the meaning of the database content. The syntactic part is usually managed by support structures, linked to the international firm. International firms are governing structures, that don’t provide serves directly to clients, but are concerned to broad issues such as: product development, international marketing and the development of international strategies, international liability and cost allocation within units. Large multinational consulting firms have international firms as a part of their management structures (ROSE, 1998). We found differences related to the semantic part: some firms leave the storage of new information in databases entirely up to consultants, while others possess a more centralized approach. New information has to be sent first to the so called “knowledge center”, the support structure already mentioned, which is in charge of structuring and storing it.

Transfer of tacit knowledge is made by “old ways”: phone calls, meetings, e-mails, i.e., personal contact. Previous information about the expertise of partners, managers or senior consultants make possible to experienced consultants to rapidly access them by a phone call. Thus, building relationship networks is an important task to consultants, specially for those are in charge of managing
engagements. Most of the firms promote mentoring programs, where partners, managers and senior consultants advise less experienced or new professionals, helping them to plan their careers and to build their networks. When a consultant doesn’t possess any previous contact about a subject, he can use KM system directories (the “yellow pages”), to search for expertise inside the firm. Also engagement managers use directories to compose their teams.

Some firms are making a centralization movement, increasing the power of existing support structures, which are now in charge of managing their KM systems (specially databases). These structures, previously a kind of information supplier to consultants, are now responsible to gather and synthesize information provided by their engagements, producing “knowledge objects” (SARVARY, 1999). In these firms, local offices are more independent and strong. Depending on its size, a local office can host also a KM office. But we found one firm that is changing towards a global structure, strongly oriented by industry. In this firm, local offices are changing their roles, becoming infrastructure providers. Senior consultants no longer are linked to them, only junior consultants (forming a pool) and support staff. So, a consultant is no longer part of a local office, but a part of a virtual department, which possess professional scattered all over the world. Consultants’ mobility among offices is expected to increase, as the flow of information. To this firm, the KM system is an enabler of the new structure.

It is interesting to note that these two behaviors were found among the same kind of firms (A and IT firms, i.e., in the standardized end). So, the market/product approach is not the only determining factor to define KM strategy and related modifications. To the firms above mentioned, although the main KM orientation would be the same (a codification strategy), the resulting organizational structure is very different. An important factor to explain these differences would be each firm’s history (Greenwood et al., 1999). Many consulting firms grew by association with local firms, in loose coupled networks, where partnership is local whether many others grew by opening offices, usually on their clients’ demand, producing networks more tightly connected. In many of these firms, partnership is global. It seems thus that the kind of network is also a factor that, together with market/product approach, determined the adoption of one of the two structures.

Conclusions

In this initial study of consulting firms’ KM systems, we found that they put high emphasis on explicit knowledge. Thus, an important part of their systems are electronic databases, where information from their previous experiences is stored, either by a centralized or decentralized process, and can be retrieved by consultants. The main source of this information is previous engagements with their clients. This information is summarized and reorganized producing a knowledge object. But, as some of the interviewees recognize, the applicability of this information is limited, stressing the importance of tacit knowledge. To the transfer of this kind of knowledge, consulting firms rely on personal contact, which is made by phone calls, faxes and emails. Some firms reward consultant’s openness to share information, while others attempt to promote this behaviour in their consultants by building an environment and a culture of knowledge sharing.

Organizational changes were found: the increasing power of support structures inside some firms and the adoption of global structures inside another ones. In the first case, KM is more centralized, and local offices possess less autonomy, and in the second case, KM approach is more decentralized. We found that a possible explanation to these different approaches is the kind of network, i.e., the way local units’ network was formed, whether loose or more connected, would play an important role in defining which approach is used. Thus, organizational history in this case seems to help understanding the way each firm develops and forms its KM strategy, but further research should be made to confirm these findings.

It has also been pointed that larger firms will be more competitive, due to their broader client base, and thus, information source. But it seems that big firms are more likely to make engagements with big multinationals companies, which are able to take advantage of these experiences. As stated to one partner, to local and medium-size clients this advantage does not seem so important. Thus, the
competitive advantage that KM systems would bring to larger firms could be restricted only to the big multinational clients, not reaching medium-size and local companies’ market.

This intended to be a brief study about KM in consulting firms. We were able to understand the structure of these systems, and we found evidence that, as expected, changes are occurring inside consulting firms, due to the use of KM systems. Further research is been planned to support and enlarge these findings.

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