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EXPLORING THE LINKS BETWEEN HUMAN RESOURCE MANAGEMENT AND KNOWLEDGE MANAGEMENT:

Organizational commitment, organizational citizenship behavior and knowledge sharing in portuguese public organizations

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ABSTRACT

Organizational commitment, defined as the individual attitude towards the organization, is related to a whole set of behaviors, including knowledge sharing behaviors, product from the organizational process where individuals mutually exchange their - implicit and explicit – knowledge and jointly create new knowledge, and organizational citizenship behaviors, defined as behaviors that, while not formally required by job tasks, decisivelly contribute to organizational success.

In present research, we try to find the relationships between organizational commitment, knowledge sharing attitudes and organizational citizenship behaviors in portuguese public administration specific framework, exploring the links between Human Resource Management and Knowledge Management.

To achieve the proposed goal, we performed a study based on a quantitative methodology, using for this purpose a sample of workers from three local portuguese public organizations. The survey questionnaire was an auto-response questionnaire, composed by items from the three different scales that operationalize the constructs explored in our theoretical research.

The municipalities, portuguese local administration units, are a particular reality in portuguese public management context, with well defined particularities and evident boundaries - a delimited surface, a clearly defined intervention spectrum and a whole of available human, material and financial resources.

In present Master's Degree Dissertation in Business Administration, we were able to conclude that, despite the lack of a knowledge-sharing culture in portuguese public organization management strategies, portuguese public sector workers are willing to exhibit affective commitment and organizational citizenship behaviors, required attitudes for successful knowledge sharing.

Proving that public administration workers exhibit those related behaviors and attitudes should be the starting point to transforming relatively uncompetitive public sector organizations into dynamic and knowledge-intensive learning organizations.

JEL Classification System: *O15 Human Resources, Human Development; D23 Organizational Behavior, D83 Information and Knowledge*

RESUMO

O comprometimento organizacional, entendido como a atitude do indivíduo para com a organização, encontra-se intimamente relacionado com todo um conjunto de comportamentos, entre os quais se incluem os comportamentos de partilha do conhecimento, produto do processo organizacional em que os indivíduos mutuamente partilham o seu conhecimento – implícito e explícito – e conjuntamente criam novo conhecimento, e comportamentos de cidadania organizacional, entendidos como os comportamentos que, apesar de não requeridos formalmente pelas tarefas de trabalho, contribuem para o sucesso organizacional.

Na presente investigação, procuramos perceber as relações entre o comprometimento organizacional, as atitudes de partilha de conhecimento e os comportamentos de cidadania organizacional no contexto específico da administração pública portuguesa, alicerçando assim os "links" entre a Gestão de Recursos Humanos e Gestão do Conhecimento.

Para a prossecução do objectivo proposto, foi realizado um estudo assente numa metodologia quantitativa, recorrendo para o efeito a uma amostra de colaboradores de três autarquias locais portuguesas, aos quais foi aplicado um questionário de auto-resposta, composto por itens das três diferentes escalas que operacionalizam os construtos que ancoram a investigação.

Os municípios, unidades administrativas do sector público local português, constituem uma realidade única no contexto da gestão pública portuguesa, com particularidades bem assentes e fronteiras bem definidas – uma área territorial delimitada, um espectro de intervenção claramente definido e uma significativa quantidade de recursos humanos, materiais e financeiros disponíveis.

A presente Dissertação de Mestrado em Gestão permitiu concluir que, apesar da falta de uma cultura de partilha de conhecimento nas estratégias de gestão das organizações públicas portuguesas, existe predisposição para a exibição de comprometimento organizacional afectivo e comportamentos de cidadania organizacional entre os trabalhadores da administração local portuguesa, atitudes necessárias para uma bem sucedida partilha de conhecimento.

A demonstração de que os trabalhadores da administração pública exibem este tipo de comportamentos e atitudes, interrelacionados entre si, constitui o ponto de partida para a transformação das relativamente pouco competitivas organizações públicas em verdadeiras organizações aprendentes.

Sistema de Classificação JEL: *O15 Recursos Humanos, Desenvolvimento Humano; D23 Comportamento Organizacional, D83 Informação e Conhecimento*

Palavras-chave: *Comprometimento organizacional; comportamentos de cidadania organizacional; partilha de conhecimento; Gestão do Conhecimento; Gestão de Recursos Humanos; Sector Público*

"Science is not achieved by distancing oneself from the world; as generations of scientists know, the greatest conceptual and methodological challenges come from engagement with world."

Whyte, Greenwood and Lazes, 1991, pp. 21

PART TWO

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EXECUTIVE SUMMARY

The main goal of the present investigation was the study of relationships between organizational commitment, organizational citizenship behavior and knowledge sharing attitudes in portuguese public administration specific context, establishing and exploring the links between Human Resource Management and Knowledge Management.

The specific goals of investigation included:

- The study of the relation between affective organizational commitment and knowledge sharing in portuguese public administration workers
- The study of the relation between affective organizational commitment and organizational citizenship behavior in portuguese public administration workers
- The study of the relation between knowledge sharing and organizational citizenship behavior in portuguese public administration workers

The constructs included in the research theoretical model are affective organizational commitment, knowledge sharing and organizational citizenship behavior. Organizational commitment can be defined as the relative strength of an individual's identification with, and involvement in a particular organization. Knowledge sharing behaviors are defined as the result from the organizational process where individuals mutually exchange their knowledge, simultaneously bringing and getting new knowledge. Finally, organizational citizenship behavior can be defined as an individual extra-role effort, the discretionary behaviors that exceed the formal role requirements and that improve the overall function of the organization.

To achieve the proposed goals, a quantitative study was performed, using a sample of 116 workers from three local portuguese public organizations, choosed by a convenience-sampling technique. Scales used to operationalize investigation constructs were adapted from instruments tested and used in previous investigations.

The choose of local administration specific context was mainly related to an easier access to information sources, but also because the municipalities, portuguese local political-administrative units, are a particular reality in portuguese public management framework, with well defined particularities and evident boundaries.

Investigation results show that portuguese public sector workers exhibit affective commitment, organizational citizenship and knowledge sharing behaviors. Research also concluded that all these hypothetical constructs were significantly correlated.

However, contrary to our expectations, no statistically significant relations were found between the exhibition of affective commitment to the organization and specific variables related to portuguese public sector framework, such as the type of employment relationship, the number of years in public administration and the number of years in present organization.

Our research results can be better understood using the "social glue" provided by some Human Resource Management related constructs, such as the concepts of Organizational Culture, Learning Organization, Psychological Contract and Trust.

Organizational Culture is identified as a major catalyst to knowledge sharing. A knowledge-sharing culture depends not only on directly including knowledge in the organization strategy, but also on changing individuals perception of their psychological contract, in order to induce a change in individual attitudes and behaviors that make workers willingly and consistently share their knowledge. Trust, coming from a supportive environment, is a key element in an individual's decision to exhibit those attitudes and behaviors, in which are included affective organizational commitment and organizational citizenship behavior.

Despite the lack of a knowledge-sharing culture in portuguese public organization management strategies, proving that public administration workers exhibit affective commitment, organizational citizenship and knowledge sharing behaviors and attitudes is understood as the starting point to transforming relatively uncompetitive public sector organizations into dynamic and knowledge-intensive learning organizations.

PART ONE

THEORY, CONCEPTUAL FRAMEWORK AND HYPOTHESES

1. KNOWLEDGE MANAGEMENT IN THE ORGANIZATION

1.1. Knowledge, the Most Strategically Important Organizational Resource

"The Master said, Yu, shall I teach you what knowledge is? When you know a thing, to recognize that you know it, and when you do not know a thing, to recognize that you do not know it. That is knowledge" (Confucius, 551-479 bC, *cit in* Hunt, 2003: 101).

The nature of work has a changing landscape (Tenaski, 1995). Capital and labor-intensive firms are being replaced by knowledge-intensive firms, characterized by their emphasis on *knowledge*.

In today's economy, an organization's available knowledge is becoming an increasingly important *resource* (Nonaka, 1994; Leonard and Sensiper, 1998; Van den Hooff and De Ridder, 2004), probably the most strategically important (Pettigrew and Whip, 1993; Nonaka and Takeuchi, 1995).

The notion of knowledge has been discussed for centuries by various philosophers and scientists, since Confucius and Aristotle. The classical notion that a person's certainty is an essential element of a person's knowledge comes to our days. Indeed, the everyday usage of the concept of knowing implies that a higher level of certainty is required to say that one knows something than to say that one believes it to be so (Hunt, 2003).

Knowledge can be defined as *"undeniable facts and objective truths as well as an institutionalized, socially constructed enactment of reality"* (Furusten, 1995, *cit in* Sena and Shani, 1999: 3).

According to various authors, knowledge can be best understood in terms of three related but not interchangeable concepts: data, information and knowledge. The assumption seems to be that if knowledge is not something that is different from data or information, then there is nothing new or interesting about knowledge management (Fahey and Prusak, 1998). A commonly held view is that *data* are set of discrete, objective facts about events.

Information is a processed and organized data presented in context. Data become information when its creator adds meaning or value. Similarly, *knowledge* is derived from information as information is derived from data. In this standpoint, knowledge can be viewed as information in context, the information possessed in the mind of individuals together with an understanding of how to use it (Dretske, 1981; Davenport and Prusak, 1998; Alavi and Leidner, 2001; Galup *et al.,* 2003)[1].

Since knowledge can be found in many forms and entities – including organization culture and identity, routines, policies, systems and documents –, the interlocking of data and information sources when combined with human assets, produce an evolving *learning* environment. The infinite number of sources, when organized, can enable an organization to better manage the learning process (Alavi and Leidner, 2001; Galup *et al.*, 2003).

Because knowledge-based resources are usually difficult to imitate and socially complex, various authors posit that new organizational knowledge provides the basis for organizational renewal and long-term sustainable *competitive advantage* (Drucker, 1994; Nonaka, 1994; Nonaka and Takeuchi, 1995; Inkpen, 1996, Alavi and Leidner, 2001; Nonaka and Toyama, 2003).

In the *knowledge based economy*, individuals and organizations are obliged to focus on maintaining and enhancing their knowledge in order to innovate, and their ability to learn, adapt and change becomes a core competency for survival (Murteira, 2004; Metaxiotis *et al.,* 2005).

In these terms, *knowledge workers* are those employees who apply their theoretical and practical understanding of a specific area of knowledge to produce outcomes of a commercial, social or personal value (Tampoe, 1993). *Intellectual capital*, or organizational wisdom (Davenport and Prusak, 1998), is defined as the application of collective knowledge within the organization.

Lloyd (1996) discusses the knowledge value chain concept where ideas, know-how, skills, competencies and other forms of intellectual capital can be transformed into intellectual assets with a measurable value to the organization. He notes that the intellectual capital needs

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[1] Tuomi (1999, in Alavi and Leidner, 2001) makes the iconoclastic argument that the often-assumed hierarchy from data to knowledge is actually inverse: Knowledge must exist before information can be formulated and before data can be measured to form information. The author argues that knowledge exists which, when articulated, verbalized and structured, becomes information which, when assigned a fixed representation and standard interpretation, becomes data. Critical to this argument is the fact that knowledge does not exist outside of an agent, it is indelibly shaped by one's needs as well as one's initial stock of knowledge (Fahey and Prusak, 1998).

to be visualized as the interchange of human capital, organizational capital and costumer capital.

Drucker (1994) points out that there's a mutual dependence: the organization needs to serve and nurture the knowledge worker while at the same time the worker needs the value-creating processes and infrastructure of the organization, as well as conversations with colleagues to unleash and leverage their knowledge.

Drawing on the work of Polanyi (1962, 1975), Nonaka (1994) explicated two dimensions of knowledge in organizations. According to this taxonomy[2], knowledge can be either *explicit* (knowledge that is formal, unambiguous, systematic, falsifiable and scientific) or *tacit* (knowledge that is intuitive, bodily, interpretive, ambiguous and nonlinear) (Nonaka, 1994; Nonaka and Takeuchi, 1995). *Table 1* distinguishes these two forms of knowledge.

TABLE 1

Explicit vs. Tacit knowledge (adapted from Nonaka, 1994; Nonaka and Takeuchi, 1995; and António, 2006)

Explicit knowledge	Tacit knowledge
- Formal	- Intuitive
- Unambiguous	- Ambiguous
- Scientific	- Difficult to reduce to a scientific equation
- Articulated	- Non articulated
- Observable in use	- Non observable in use
- Verifiable	- Non verifiable
- Simple	- Complex

Only explicit knowledge is the province of information technology, including the communication systems by which people informally share their observations and the more

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[2] The tacit-explicit knowledge classification is widely cited; although sundry other knowledge taxonomies are suggested in literature, eschewing the recondite subtleties of the tacit-explicit dimension. According to Nonaka (1994), knowledge can also be viewed as existing in the individual or the collective. *Individual* knowledge is created by and exists in the individual whereas *social* knowledge is created by and inherent in the collective actions of a group. Zack (1998) refer to knowledge as *procedural* (know-how), *causal* (know-why), *conditional* (know-when) or *relational* (know-with). Alavi and Leidner (2001), citing a KPMG Research Report, identify *pragmatic* knowledge as the type of knowledge that is useful to the organization. Examples include knowledge about customers, products, processes and competitors, which can include best practices, heuristic rules, patterns, software code, business processes, frameworks and models.

formal repositories in which structured knowledge is stored for later reuse (Markus, 2001, *cit. in* Galup *et al.*, 2003).

In contrast, tacit knowledge is stored only in the mind of the expert and is not available for inspection (Davenport and Prusak, 1998), so it cannot be captured, documented, verified, codified and disseminated by a team of domain experts and knowledge intermediaries[3] (Galup *et al.*, 2003). Thus, the personal nature of tacit knowledge requires willingness on the part of those workers who possess it to share and communicate it (Robertson and O'Malley Hammersley, 2000; Hislop, 2003).

Although there has been a growing acknowledgement that much organizational knowledge is tacit in nature (Davenport and Prusak, 1998; Haldin-Herrgard, 2000), a growing number of writers are questioning the neat dichotomy between tacit and explicit knowledge, and instead suggest that tacit and explicit forms of knowledge are inseparable, mutually dependent and reinforcing qualities of knowledge (Prichard, 2000; Alavi and Leidner, 2001; Kluge *et al.*, 2001, *cit. in* Hislop, 2003). In effect, tacit knowledge forms the background necessary for assigning the structure to develop and interpret explicit knowledge (Polanyi, 1975). Leonard and Sensiper put it succinctly by arguing that *"all knowledge has tacit components"* (1998: 113).

1.2. Knowledge Management: An Organizational Changing and Developing Process

The traditional organization theory is based on the view of an organization as an information-processing machine that takes and processes information from the environment to solve a problem and adapts to the environment based on a given goal. Because of the *bounded rationality* of human beings (March and Simon, 1958), an organization is necessary to deal with a complex reality[4]. Reality is cut into pieces of information that are small and simple enough for one person to process. Then the information is processed and reassembled by the

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[3] According to Hunt (2003), tacit knowledge is a concept like gravity. You cannot see it, but can only observe its effects. Because knowledge is an invisible, intangible asset and cannot be directly observed, many people and organizations do not explicitly recognize the importance of knowledge, in contrast to their more visible financial and capital assets (Sveiby, 1997, *cit in* Hunt, 2003).

[4] March and Simon (1958) theory recognizes that organizational members have motives, drives, and are limited in knowledge and capacity to learn and solve problems. According to the authors, human beings have limited mental skills. That means that the creation, storage, processing, transfer and reception of knowledge have a cost. The bounded rationality implies that the knowledge that a decider possesses is limited to a minuscule part of humanity's global knowledge.

organizational members so that the organization as a whole deals with the complex reality in the end. This is a clearly static and passive view of the organization.

However, this perspective fails to capture the dynamic process through which the organization interacts with the individuals and the environment. Instead of merely solving problems, organizations create and define problems, develop and apply knowledge to solve the problems, and then further develop new knowledge through the action of problem solving. In this changing and developing process, the organization is not merely an information-processing machine, but an entity that creates knowledge through action and interaction (Nonaka and Toyama, 2003).

Hence, the *management of knowledge* in an organization is much more than the storage and manipulation of data and information. It is *"an attempt to recognize the human assets within the minds of individuals and leverage them as organizational assets that can be accessed and used by a broader set of individuals on whose decisions the firm depends"* (Sena and Shani, 1999: 5). So, knowledge management is purported to increase innovativeness and responsiveness, helping the organization to compete (Alavi and Leidner, 2001).

Knowledge management has gained a great deal of attention from both the academic and practitioners' point of view (Wiig, 1993; Metaxiotis *et al.,* 2005). Myriad researchers have presented knowledge management methodologies, frameworks and technologies. More than 15 years after its introduction, knowledge management is now a keyword in bibliographic databases and forms the conceptual nucleus of a developing literature[5] (Moffett *et al.*, 2003; Metaxiotis *et al.,* 2005).

According to Metaxiotis and cols. (2005), historically we can distinguish three generations of knowledge management. The period 1990-1995 can be called as the *first generation of knowledge management*. During this stage, many initiatives focused on defining knowledge management, investigating the potential benefits of knowledge management for business and designing specific knowledge management projects (Senge, 1991; Wiig, 1993; Nonaka, 1994; Nonaka and Takeuchi, 1995). According to Nonaka (1994), knowledge management requires a commitment to create new, task-related knowledge, disseminate it throughout the organization and embody it in products, services and systems.

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[5] Knowledge management has its origins in a number of related business improvement areas, such as total quality management (TQM), business process re-engineering (BPR), information systems (IS) and human resource management (HRM). It emerged on the maps of strategy consultants and conference organizers in the beginning of 1990's, although the knowledge debate has started much earlier, with authors as Hayek (1945) or Habermas (1972).

The *second generation of knowledge management* started to emerge around 1996 with many corporations setting up new jobs for knowledge management specialists and *"chief knowledge officers"* (Metaxiotis *et al.*, 2005: 7). During this generation, knowledge management issues, systems, frameworks, technologies, operations and practices became combined and also quickly absorbed to everyday organizational discourse (Holsapple and Joshi, 1997; Ross and Ross, 1997; Davenport and Prusak, 1998; McAdam and Reid, 2000; Weggeman, 2000; Alavi and Leidner, 2001; Liao, 2003).

Resulting from new insights and practices, a *third generation of knowledge management* emerged around 2002 with new methods and results. According to Wiig (2002), one difference from the earlier knowledge management generations is the degree to which the third generation is integrated with the enterprise's philosophy, strategy, goals, practices, systems and procedures and how it becomes part of each employee's daily work-life and motivation. This generation emphasizes the link between theory and practice, between knowing and action (Wiig, 2002; Paraponaris, 2003; Zárraga and García-Falcón, 2003; Metaxiotis *et al.*, 2005).

Thus, the management of intellectual capital can be traced to two streams of thought – strategy and measurement. According to Ross and Ross (1997), strategy focuses on the study of the creation and use of knowledge and the relationship between knowledge and success and value creation, while measurement focuses on developing information systems, measuring organization's knowledge. The third generation of knowledge management seems to integrate these two streams of thought, focusing the research in the organization's *strategy* and re-examining its role.

Typically represented by the SWOT framework (Andrews, 1971), the positioning school mainly focuses on the environment in which the organization operates (Porter, 1980). According to this perspective, the role of strategy is to adapt the organization to the threats and opportunities in the environment with the given strengths and weaknesses of the organization. The environment can be viewed as a moving target to which the organizations are desperately trying to modify their operations. Hence, the positioning school tends to stress the analysis of the environment and ignore the internal process of the organization (António, 2006).

On the other hand, the *resource-based view* of the organization does look inside of firms, in terms of the resources it owns. According to this perspective, the organization is a collection of resources, and those with superior resources will earn rents (Penrose, 1959; Rumelt, 1984; Wernerfelt, 1984; Prahalad and Hamel, 1990; Teece and Shuen, 1997). In this

view, organizations need to keep their unique resources in order to obtain competitive advantages through such conditions as imperfect imitability, imperfect substitutability and limited mobility of resources (Wernerfelt, 1984; Barney, 1995).

An organization's *distinctive competence* is based on those unique and specialized resources, assets and skills it possesses. According to Penrose (1959), organization's knowledge is a distinctive competence that can be used to build competitive advantage and economic wealth. The *knowledge-based theory* explains the dynamism in which the organization continuously builds such distinctive competences through the interactions with the environment. Thus, strategy can be conceptualized as a combination of internal resources and competences as well as environmental adjustments (Nonaka and Toyama, 2003).

So, in current hyper-competitive context (Lopes, n/a), knowledge management is seen as a response to a *"mess"*, that is, environmental conditions that call for the organization to develop methods for adaptation (Lillrank *et al.*, 1998). It can be described as a set of resources and requirements that an organization needs to fulfill for the adaptation to successful.

Thus, there is general agreement that the primary objectives of knowledge management are to identify and leverage the collective knowledge in an organization to achieve the overriding goal of helping organizations compete and survive (Choo, 1996, *cit in.* Metaxiotis, 2005). Although these objectives are somewhat distinct from the objectives in information management, it is also agreed that success in knowledge management depends on efficient information systems and successful information management.

So, knowledge management is largely regarded as a process involving various activities. Slight discrepancies in the delineation of these activities appear in the literature. However, at a minimum, research in this area considers the four basic activities of *creating/constructing*, *storing/retrieving*, *transferring* and *applying knowledge* (Holzner and Marx, 1979; Davenport and Prusak, 1998; Alavi and Leidner, 2001; Hlupic *et al.*, 2002). Consequently, successful organizations are those that create new knowledge, disseminate it widely throughout the organization and quickly embody it into new technologies, products and services (Inkpen, 1996; Lillrank *et al.*, 1998).

This framework is grounded in the sociology of knowledge (Holzner and Marx, 1979) and is based on the view of organizations as social collectives and knowledge systems. The process of knowledge management does not represent a discrete, independent and monolithic organizational phenomenon, but an interconnected and intertwined set of activities. It consists

of a dynamic and continuous set of processes and practices embedded in individuals, as well as in groups and physical structures (Alavi and Leidner, 2001).

Table 2 presents some of the most important research contributions to the field of knowledge management, which are considered today as reference points.

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TABLE 2

Important Research Contributions to Knowledge Management

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Theme	Author(s)
Distinction between explicit and tacit knowledge	Nonaka and Takeuchi (1995)
Knowledge management foundations	Wigg (1993)
Knowledge management frameworks	Holsapple and Joshi (1997)
Successful knowledge management projects	Davenport and Prusak (1998)
Knowledge management technologies	Liao (2003)

1.3. Knowledge Management in Action: The Creation and Transfer of Knowledge in the Organization

Organizational knowledge starts with individuals (Sena and Shani, 1999). This knowledge needs to be shared throughout the organization. Otherwise, it will have limited impact on organizational effectiveness. Thus, organizational *knowledge creation* represents a process whereby the knowledge held by individuals is amplified and internalized as part of an organization's knowledge base (Nonaka, 1994).

Nonaka and Toyama (2003) conceptualize knowledge creation as a dialectical process, in which various contradictions are synthesized through dynamic interactions among various entities (individuals, groups, organizations) and the environment[6]. These entities coexist with the environment because they are subject to environmental influence as much as the environment is influenced by the entities, in a dynamic process. So, the authors conceptualized knowledge creation as a synthesizing process through which an organization

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[6] According to the authors, the key to understanding the knowledge-creation process is dialectic thinking and acting, which transcends and synthesizes antithetical concepts such as order and chaos, micro and macro, part and whole, mind and body, tacit and explicit, self and other, deduction and induction, and creativity and efficiency (Nonaka and Toyama, 2003).

interacts with individuals and the environment to transcend emerging contradictions that the organization faces. This interconnection between agents and the structure makes the knowledge process to occur as a dynamic and inter-linked interaction from as individual-to-societal level (Nonaka and Toyama, 2003).

Knowledge is not just a part of the reality. It is a reality viewed from a certain angle (context). In knowledge creation, one cannot be free from one's one context. Social, cultural and historical contexts are important for individuals (Vygotsky, 1986) because such contexts give the basis for one to interpret information to create meanings. Hence, in knowledge creation, one tries to see the entire picture of reality by interacting with those who see the reality from other angles, that is, sharing their contexts (Nonaka and Toyama, 2003).

Once generated – from internal operations between individuals or from environment sources communicating with the organization in a dynamic process – knowledge cannot reside passively in the minds of employees (Nonaka and Takeuchi, 1995). It has to be accessed, synthesized, augmented and developed, in a formal manner through training or in a less formal way through work-related experiences (Sena and Shani, 1999).

The *transfer of knowledge* in an organization has become a *"critical factor"* (Syed-Ikhsan and Rowland, 2004: 95) in an organization's success and competitiveness. Major and Cordey-Hayes see knowledge transfer as a "*conveyance of knowledge from one place, person, ownership, etc., to another. It involves two or more parties and there has to be a source and a destination"* (2000: 411).

Generally, when something is being transferred, someone will gain it and someone else will lose it. However, tacit knowledge, as an intangible asset, is different from tangible assets. Tangible assets tend to depreciate in value when they are used, but knowledge grows when used and depreciates when not used. This means that knowledge will keep on growing whenever a person shares it or not. And when someone transfers their knowledge, they do not lose it (Syed-Ikhsan and Rowland, 2004).

So, the nature of knowledge itself makes organizational knowledge difficult to transfer as it is embedded in the organizational processes, procedures, routines and structures (Teece, 2000). Thus, every organization needs to identify where knowledge resides and strategies should be designed *"in order to ensure knowledge is being created, transferred and protected in the right way and with the right individuals"* (Bloodgood and Salisbury, 2001: 55). Teece asserts that *"knowledge, which is trapped inside the minds of key employers, in the file drawers of databases, is of little value if not supplied to the right people at the right time"*

(2000: 38). This important dimension is identified by Syed-Ikhsan and Rowland as the *"accuracy of knowledge transfer"* (2004: 99).

Thus, knowledge has the highest value, the most human contribution, the greatest relevance to decisions and actions and the greatest dependence on a specific situation or context (Weggeman, 2000). It is also the most difficult of content types to manage, because it originates and is applied in the minds of human beings (Metaxiotis *et al.,* 2005). So, the question that remains still valid is the following: "Can knowledge be managed?"

In rapidly changing and increasingly complex working arrangements, new knowledge is continuously being created, re-defined as well as being distorted. In this complex environment, it is still questionable as to what is being managed or as to whether knowledge can be managed (Gill and Whittle, 1993).

Although some aspects of knowledge, as culture, organizational structure, communication processes and information can be managed, knowledge itself, arguably, cannot (Kakabadse *et al.*, 2003, in Metaxiotis *et al.,* 2005). Reviewing knowledge management literature, it can be argued that knowledge management is not about managing knowledge but about changing organizational cultures and strategies to ones that value learning and sharing (Gill and Whittle, 1993; Brown and Woodland, 1999; Metaxiotis *et al.,* 2005).

1.4. The Knowledge Sharing Process: Knowledge Donating *versus* Knowledge Collecting

As we have seen, although individual knowledge is an important organizational resource, organizations can only begin to effectively manage knowledge resources when employees are willing to share knowledge (Lin, 2006). The sharing of knowledge between individuals and departments in the organization is considered to be a crucial process in translating individual knowledge to organizational knowledge (Osterloh and Frey, 2000; Van den Hooff and De Ridder, 2004).

According to Reid (2003), knowledge sharing creates opportunities to maximize organization ability to meet those needs and generates solutions and efficiencies that provide a business with a competitive advantage.

Knowledge sharing could be defined as the process where individuals mutually exchange their - implicit and explicit – knowledge and jointly create new knowledge (Van den Hooff and De Ridder, 2004).

That definition implies that all knowledge sharing process consists of both bringing and getting knowledge. According to Davenport and Prusak (1998), knowledge transfer involves two actions which are *transmission* (sending or presenting knowledge to a potential recipient) and *absorption* (by that person or group). Consequently, knowledge sharing involves both a *knowledge source* and a *knowledge receiver* (Weggeman, 2000), and in some instance we can talk about *knowledge supply* and *knowledge demand* (Ardichvili *et al.,* 2003).

Van den Hooff and De Ridder (2004) combine these perspectives in labeling two central processes:

a) *Knowledge donating* is defined as the communication to others what one's personal intellectual capital is.

b) *Knowledge collecting* is the process of consulting colleagues in order to get them to share their intellectual capital.

Both processes are active processes, either actively communicating to others what one knows, or actively communicating to others what one knows, or actively consulting others in order to learn what they know (Van den Hooff and De Ridder, 2004).

These processes can be expected to be influenced by a large number of factors. The literature concerning the factors affecting knowledge sharing has identified a number of different variables, from "hard" issues such as *technologies* and *tools* (Hlupic *et al.*, 2002) to "soft" issues such as *intention/motivation* (Robertson and O'Malley Hammersley, 2000; Ardichvili *et al.,* 2003; Hinds and Pfeffer, 2003; Lin, 2006), *awareness of knowledge needs* (Van den Hooff and De Ridder, 2004), *interpersonal trust* (Dirks and Ferrin, 2001; Lucas, 2005; Sharkie, 2005; Lin, 2006), *communication climate* (Zárraga and García-Falcón, 2003; Van den Hooff and De Ridder, 2004) and *organizational culture* (Hlupic *et al.*, 2002; Moffett *et al.*, 2003; Lin, 2006).

Moreover, the personal nature of tacit knowledge is sufficient to inhibit the willingness of workers to share their knowledge (Robertson and O'Malley Hammersley, 2000; Hislop, 2003). The inherent tension between workers and the organizations which they work over who owns and controls their knowledge is neatly summed up by Scarbrough, who suggests that *"knowing as an active, lived experience is in a constant state of tension with knowledge as a commodity within firms and markets"* (1999: 6).

Storey and Barnett (2001, *cit. in* Hislop, 2003) suggest that knowledge is a resource with a significant amount of potential status and power, and argue that any attempt to manage, control or codify organizational knowledge is likely to produce internal conflict and *turf wars*,

as questions of who owns and controls knowledge are likely to emerge in all organizations, to some extent.

Furthermore, the organizations with high turnover rates have the risk of losing valuable knowledge (Alvesson, 2000). This is a particular problem for organizations which employ workers with specialized knowledge, which is a sought-after market resource (Robertson and O'Malley Hammersley, 2000).

Thus, the typically conflictual nature of organizational life, combined with the personal nature of knowledge, and the fact that it represents an important potential power resource, means that the agency of the person who possesses it is required for it to be shared, and that the departure of workers from organizations also results in a loss of knowledge (Hislop, 2003).

So, a growing body of research has shed a significant amount of light on determining which factors promote or impede the sharing of knowledge within groups and organizations. In this study, we focus in one of the most important of such influences: the *organizational commitment*.

2. THE ORGANIZATIONAL COMMITMENT

2.1. The Commitment Components: Affective, Continuance and Normative Commitment

Attempting to provide a full and complete picture of the theory and research on the topic of organizational commitment is a complex task, due both to the enormous volume of writing and the extensive diversity of perspectives on the topic. So, we will focus our analysis in the description of specific issues that can be useful to a better understanding of our theoretical framework.

Mowday and cols. (1979) and Steers (1977) have laid the foundations for an extensive body of research into organizational commitment. In its most consensual definition, Mowday and cols. (1979: 226) define organizational commitment as *"the relative strength of an individual's identification with, and involvement in a particular organization"*.

The literature concerning this subject has identified various dimensions of organizational commitment construct (Salancik, 1977; Mowday *et al.,* 1979; Reichers, 1985). But one of the most useful distinctions is presented by Meyer and Allen (Allen and Meyer, 1990, 1996; Meyer and Allen, 1991, 1997), who distinguish three different components of commitment, each one reflecting a different type of attachment to the organization. Each component is considered to develop as a function of different determinants and to have different implication for organizational behavior, as shown in *Table 3*.

According to Meyer and Allen (1991), *affective commitment* refers to the employee emotional attachment to, identification with, and involvement in the organization. *Continuance commitment* refers to an awareness of the costs associated with leaving the organization. Finally, *normative commitment* reflects a feeling of obligation to continue employment.

TABLE 3

The Organizational Commitment Components (adapted from Allen and Meyer, 1990; and Meyer and Allen, 1991)

Organizational commitment component	Antecedents	Relation with the organization	Feeling towards the organization
Affective	- work experience - work conditions - personal expectations	- emotional attachment - identification - involvement	- want to continue employment
Continuance	- function benefits - available jobs	- recognize of high costs associated with leaving	- need to continue employment
Normative	- personal values - perceived obligations	- feeling of obligation	- ought to continue employment

2.2. Organizational Commitment and Knowledge Sharing

A large number of studies have come to conclusion that knowledge management ultimately depends upon people (Nonaka, 1994; Nonaka and Takeuchi, 1995; Tenaski, 1995; Inkpen, 1996). However, it is precisely the *people* (or *human resource*) aspect that has been the most neglected is studies in the field of Knowledge Management (Inkpen, 1996; Scarbrough, 1999; Soliman and Spooner, 2000; Hislop, 2003; Oltra, 2005). Moreover, human resource practitioners and analysts have been slow in making their mark in this emerging field (Storey and Quintas, 2001; Hislop, 2003).

In fact, as we had seen previous, when knowledge management emerged as a subject of particular interest to both academics and practitioners, in the early 1990's, much of the knowledge management literature was heavily focused on technological issues. But the knowledge management conceptual landscape has changed, such that the importance of human and social factors has been increasingly recognized (Soliman and Spooner, 2000; Oltra, 2005).

Importantly, in today's context of work, people and knowledge are two concepts inextricably joined. In fact, both people and knowledge are to be regarded as having special potential as scarce and idiosyncratic resources, consistent with the premises of the resource-based approach to strategic management (Rumelt, 1984; Wernerfelt, 1984; António, 2006).

Paradoxically, however, while the importance of these issues has been widely articulated, people management perspectives have yet to be fully developed, and the knowledge management literature has made only partial and limited use or human resource management concepts and frameworks (Storey and Quintas, 2001; Hislop, 2003).

In other words, although managers are usually keen to recognize the relevance of human, cultural and social issues for knowledge management initiatives to succeed, a number of structural, organization-embedded elements - *e.g.* rigid structures, old-fashioned cultural traditions, unfriendly policies and routines, communication pitfalls - create obstacles to the knowledge management efforts which are quite difficult to overcome (Tampoe, 1993; Edmondson and Moingeon, 1996; Inkpen, 1996; Scarbrough, 1999).

So, currently, the literature has reached the point of acknowledging the importance of human resource variables in Knowledge Management, but has not made the next step of investigating and theorizing these issues in detail (Hislop, 2003; Oltra, 2005). In those studies, one key issue emerged: the organizational commitment.

Mostly in theoretical studies, various authors have specifically investigated the relationship between organizational commitment and knowledge sharing attitudes and behaviors (Robertson and O'Malley Hammersley, 2000; Hall, 2001; Jarvenpaa and Staples, 2001; Storey and Quintas, 2001; Smith and McKeen, 2002; Hislop, 2003; Van den Hooff and De Ridder, 2004).

The starting point for this approximation between commitment and knowledge sharing is the idea that the success of any knowledge management initiative is likely to be critically dependent of having suitably motivated people taking an active role in the process (Robertson and O'Malley Hammersley, 2000). In other words, that success requires that *"employees are willing to share their knowledge and expertise"* (Storey and Quintas, 2001: 359).

So, it is assumed that it is possible to develop a set of human resource management *"best practices"* (Hislop, 2003: 192) which facilitates knowledge sharing. According to Hislop's model, there are five factors mediating this relationship: 1) employee high commitment, 2) motivation and retention of knowledge workers, 3) human resource management and business strategy congruence, 4) developing human and social capital and 5) developing and supporting learning.

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In this line of thought, Storey and Quintas (2001) suggest that developing trust, motivation and commitment of workers represents one of the key issues in relation to the management of knowledge workers. According to these authors, workers with high levels of organizational commitment are less likely to leave, are more likely to be highly motivated and will probably be more willing to share their knowledge within the organization.

Hall (2001) notes that people are more willing to share their knowledge if they are convinced that doing so is useful – if they have the feeling that they share their knowledge in an environment where doing so is appreciated and where their knowledge will actually be used. So, according to that author, an individual who is more committed to the organization and has more trust in both management and coworkers, is more likely to be willing to share their knowledge.

As affective commitment is positively related to individuals' willingness to commit extra effort to their work, this is the kind of organizational commitment that can be expected to be related to knowledge sharing (Van den Hooff and De Ridder, 2004). Also Jarvenpaa and Staples (2001) argues that it does be expected that affective commitment to the organization creates positive conditions for knowledge sharing. According to them, greater commitment may engender beliefs that the organization has rights to the information and knowledge one has created or acquired.

However, Van den Hooff and De Ridder (2004) found that commitment influences knowledge donating but not knowledge collecting. The authors advance that a possible explanation could be that *"employees who feel a strong commitment do not want to bother their colleagues"* (Van den Hooff and De Ridder, 2004: 125).

So, we expect that the degree of affective commitment to the organization is positively related with knowledge sharing attitudes. We establish here the *"bridge between human resource management and knowledge management, via organizational commitment"*, as Hislop (2003: 183) advocates. The following hypothesis thus is proposed:

H1. *Affective organizational commitment is positively related to knowledge sharing in portuguese public administration workers*

2.3. The Antecedents and Consequences of Organizational Commitment

The literature concerning the factors affecting organizational commitment has identified a number of different variables that can be identified as antecedents and consequences of individual's commitment to the organization.

Research indicates as primary *antecedents* of organizational commitment:

- *Personal values* (Mowday *et al.*, 1979; DeCotiis and Summers, 1987; Mathieu and Zajac, 1990; Meyer *et al.*, 1998)
- *Work experiences* (Meyer and Allen, 1997; Meyer *et al.*, 1998)
- *Organizational characteristics* (Brooke *et al.*, 1988; Meyer and Allen, 1997; Meyer *et al.*, 1998; Carochinho, 1998)
- *Perceived structure* (DeCotiis and Summers, 1987)
- *Perceived processes* (Brooke *et al.*, 1988; DeCotiis and Summers, 1987)
- *Information and communication climate* (DeCotiis and Summers, 1987; Guzley, 1992; Meyer and Allen, 1997; Carochinho, 1998 ; Van den Hooff and De Ridder, 2004)
- *Job satisfaction*[7] (Porter *et al.*, 1974 ; Brooke *et al.*, 1988 ; DeCotiis and Summers, 1987; Carochinho, 1998)

There is also an enormous literature which illustrates that the levels of commitment workers feel for their organizations closely influence their attitudes to, and behavior within, the workplace. So, there are a large number of general attitudes and behaviors at work that have been shown to be shaped by levels of commitment.

Research indicates as fundamental *consequences* of organizational commitment:

- *Voluntary turnover intentions* (Mowday *et al.*, 1979; DeCotiis and Summers, 1987; Mathieu and Zajac, 1990; Meyer and Allen, 1997; Iverson and Buttigieg, 1999; Chen and Francesco, 2000; Riketta and Landerer, 2005)
- *Attendance at work/absenteeism* (Mathieu and Zajac, 1990; Gellatly, 1995; Meyer and Allen, 1997; Riketta and Landerer, 2005)
- *Worker "in-role" effort and performance* (DeCotiis and Summers, 1987; Mathieu and Zajac, 1990; Meyer *et al.*, 1993; Riketta and Landerer, 2005)

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[7] Porter and cols. (1974) suggest that commitment and satisfaction are strongly related yet distinguishable attitudes. Each construct appears to contribute unique information about the individual's relationship to the organization.

- *Individual motivation* (DeCotiis and Summers, 1987; Mathieu and Zajac, 1990; Meyer and Allen, 1997).

Worker in-role effort is defined as the way how workers carry out the tasks for which they are formally responsible (DeCotiis and Summers, 1987). Social identity theory (Tajfel, 1978; Tajfel and Turner, 1986) allows a theoretical justification of why organizational commitment especially influence work performance.

Social identity theory assumes that persons have a striving for a positive social identity. According to Tajfel (1978), this striving is a derivative from the universal human need for high self-esteem. Thus, once having identified with a group, a person strives to achieve or maintain a positive image of that group, making personal efforts at improving the group's standing relative to other groups (Tajfel, 1978; Tajfel and Turner, 1986).

In an organizational context, this means that the stronger an employee's identification with the organization, the stronger the employee's motivation to perform well and make the organization superior to competitors or, more generally, to improve the organization's status (Riketta and Landerer, 2005). Because identification with the organization is, as we have seen, a key component of affective organizational commitment as commonly defined and operationalized (Allen and Meyer, 1990; Meyer and Allen, 1991), social identity theory helps to explain why organizational commitment relates positively to performance.

However, research suggests other type of work behavior that is influenced by organizational commitment. In fact, higher levels of *extra-role effort*, or *organizational citizenship behavior,* are also related to organizational commitment (Organ and Ryan, 1995; Robinson and Morrison, 1995).

In next point, we explore that relationship, particularly important to present study.

3. THE ORGANIZATIONAL CITIZENSHIP BEHAVIOR

3.1. The Extra-Role Behaviors

Employees constantly exert discretionary behavior that exceeds their formal role requirements and that improves the overall function of the organization (Smith *et al.*, 1983*; Bolon, 1997; Coyle-Shapiro, 2002). This behavior is known as *organizational citizenship behavior*.

It has now been almost fifty years since Katz (1964) identified three basic types of employee behavior that are critical for the overall effectiveness of any organizational system: 1) people must be induced to enter and remain within the system, 2) people must carry out their role assignments in a dependable fashion and 3) there must be innovative and spontaneous activity in achieving organizational objectives that goes beyond the role specifications.

The third pattern of behavior identified by Katz is called *extra-role* behavior and is *"vital to organizational survival and effectiveness"* (1964: 132). Indeed, an organization that depends solely upon the first two types of behavior would appear to be a very fragile social system.

Katz (1964) provided several examples of important extra-role behaviors, including (a) actions that protect the organization and its property; (b) constructive suggestions for improving the organization; (c) self-training and additional responsibility; (d) creating a favorable climate for the organization in this surrounding environments; and (e) cooperative activities.

Later, the term *organizational citizenship behaviors* (Smith *et al.,*1983; Organ, 1988, 1990) was created to depict those extra-role behaviors previously defined and described by Katz (1964). According to Organ, the organizational citizenship behavior represents *"individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system and that in the aggregate promotes the affective functioning of the organization"* (1988: 23).

Thus, organizational citizenship behavior consists of informal contributions that participants can choose to make or withhold, without regard to considerations of sanctions of formal incentives (Cohen and Kol, 2004).

A number of conceptually distinct dimensions of organizational citizenship behaviors have been identified by researchers, including altruism, courtesy, general compliance, cheerleading, peacekeeping, sportsmanship, civic virtue and conscientiousness (Organ, 1988, 1990; Podsakoff and MacKenzie, 1997; Cohen and Kol, 2004).

In general, it has been argued that citizenship behaviors may enhance organizational performance by *"lubricating the social machinery of the organization, reducing friction and/or increasing efficiency"* (Podsakoff and MacKenzie, 1997: 135).

3.2. Organizational *versus* Individual Citizenship Behaviors

As defined by Organ (1988, 1990), organizational citizenship behaviors can be viewed as a subset of prosocial organizational behaviors (Bolon, 1997). According to Brief and Motowidlo (1986), there are several different types of prosocial organizational behaviors, depending upon whether such behaviors are functional or dysfunctional for the organization; whether they are role-prescribed or extra-role; and whether they are directed at an individual (coworker or supervisor), the organization or any other target (*e.g.* customer, supplier).

Thus, organizational citizenship behaviors are functional for the organization and extra-role in nature. In addition, they can be directed at the organization or the individual. Although citizenship behaviors have frequently been treated as a unidimensional construct, recent studies are proving that we can distinguish between citizenship behavior directed toward individuals and citizenship behavior directed toward the organization. These studies found, through factor analysis, that items could be distinguished based upon the target of behavior (Williams and Anderson, 1991; Bolon, 1997).

According to Williams and Anderson (1991), it is important to discriminate between the following:

- Organizational citizenship behaviors that benefit the general *organization* (carrying out role requirements well beyond minimum required levels)
- Organizational citizenship behaviors that immediately benefit specific *individuals* (helping a specific other person with an organizationally relevant task or problem) but though this means contribute to the organization

3.3. Organizational Commitment and Organizational Citizenship Behavior

As we had seen, the widespread interest in organizational citizenship stems primary from belief that these behaviors enhance organizational effectiveness (Podsakoff and MacKenzie, 1997; Cohen and Kol, 2004). Because of this, a great deal of research (Smith *et al.,* 1983; Brief and Motowidlo, 1986; Brief and Roberson, 1989; Organ, 1990; Organ and Ryan, 1995; Bolon, 1997; Podsakoff and MacKenzie, 1997; Cohen and Kol, 2004) has attempted to identify the characteristics that encourage employees to exhibit organizational citizenship behaviors.

Podsakoff and MacKenzie (1997) combine these characteristics in labeling four categories:

- *Attitudinal/subordinate* characteristics (*e.g.* conscientiousness, perceptions of fairness, agreeableness, affectivity, satisfaction)
- *Task/work* characteristics (*e.g.* task scope, task feedback, intrinsically satisfying tasks)
- *Organizational* characteristics (*e.g.* formalization, inflexibility, spatial distance)
- *Leadership* behaviors (*e.g.* leader supportiveness, contingent reward behavior, transformational leadership)

In attempts to identify attitudinal variables that are related to organizational citizenship behavior, attention as focused primarily on *job satisfaction*. Based on the extensive social psychology literature that documents the correlation between a person's good mood and that person's likelihood to engage in helpful behaviors, first research on this area suggests that one reason job satisfaction may be related to organizational citizenship behavior is that it primarily reflects affect – mood – at work, and positive affect fosters extra-role behaviors (Smith *et al.,* 1983; Motowidlo, 1984, *cit in* Bolon, 1997).

A second and more recent explanation for the influence of job satisfaction on organizational citizenship behavior derives from the studies of Brief and Roberson (1989). The authors has founded that job satisfaction measures contain substantial cognitive content. In particular, Organ (1988, 1990), has maintained that job satisfaction measures tap, to a large degree, fairness cognitions.

In contrast to previous studies, other authors (Schappe, 1998; Farh, et al., 1990) are skeptical of the relationship between the two variables and argue that job satisfaction is not related to organizational citizenship behavior or consider such a relationship spurious.

Instead, we agree with Aloitaibi (2001), which concludes that the relationship between job satisfaction and citizenship behavior depends on the nature of the job satisfaction measure.

However, more recently, researchers have been showing that organizational citizenship behavior is mostly related with a strong correlate of satisfaction, the *organizational commitment* (Bolon, 1997; Schappe, 1998; Alotaibi, 2001).

As we had seen, affective organizational commitment describes employee's emotional attachment to the organization and is developed from the characteristics of the organization, the characteristics of the job and the work experiences of the individual (Meyer and Allen, 1991, 1997). Affective commitment is related with the degree of belief by the individual that the organization, management and fellow workers are supportive, capable of treating employees fairly and have a capacity to contribute positively to an employee's self worth and feeling of personal competence and achievement (Sharkie, 2005).

Leong and cols. (1996) further argue that a strong affective bond gives employees a sense of purpose, contributes to their satisfaction and therefore will be positively related to a measure of their personal well-being. An employee who as a positive affective commitment is likely to exhibit behavior which is in the best interests of organization, but isn't directly or explicitly recognized by their formal reward system. This is the behavior that promotes organization's affective functioning, the organizational citizenship behavior (Organ, 1988; Alotaibi, 2001).

So, it is expected that individuals who are affectively committed to the organization should be more likely to be associated with the performance of citizenship behaviors than individuals lacking in such commitment.

Thus, we propose the following hypothesis:

H2. Affective organizational commitment is positively related to organizational citizenship behavior in portuguese public administration workers

3.4. Knowledge Sharing and Organizational Citizenship Behavior

As we have seen, knowledge transfer requires the willingness of a group or individual to work with others and share knowledge to their mutual benefit (Syed-Ikhsan and Rowland, 2004). This shows that knowledge transfer will not occur in an organization unless its employees and work groups display a high level of cooperative and organizational citizenship behavior (Storey and Quintas, 2001).

As defined in this context, organizational citizenship behavior is discretionary and behavior that is not explicitly required, and covers factors as cooperation, the sharing of constructive ideas and the giving of loyalty, which may aid the performance of the organization (Smith *et al.*, 1983*;* Bolon, 1997; Coyle-Shapiro, 2002).

So, organizational citizenship behaviors are influenced by the expected benefits and costs of sharing knowledge within the organization and determine whether their knowledge is retained or shared with others (Brown and Woodland, 1999).

Thus, we should expect a connection between knowledge sharing within the organization and organizational citizenship behavior. Based on this, our third hypothesis is:

H3. Knowledge sharing is positively related to organizational citizenship behavior in portuguese public administration workers

4. Human Resource Management in the Organization: The "Social Glue" to Understand our Research

4.1. The Agglutinant Concept of Organizational Culture

Much of the existing research on knowledge creation and transfer in the organizations focuses on the source and state of knowledge. Only recently, researchers have been studying the conditions that facilitate knowledge sharing. Descriptive studies have identified culture as a major catalyst, or alternatively a major hindrance to knowledge creation and sharing (Davenport and Prusak, 1998; Reid, 2003).

The concept of *knowledge-sharing culture* is considered a key element of effective knowledge management and it's related to the process of alignment of knowledge sharing with organizational culture (McDermott and O'Dell, 2001; Reid, 2003; Syed-Ikhsan and Rowland, 2004; Lin, 2006).

Stoddart (2001, in Syed-Ikhsan and Rowland, 2004) argues that knowledge sharing can only work if the culture of organization promotes it. Any changes need to be developed in line with the existing organizational culture. And if the wrong cultural norms exist, regardless of the effort and good intention of individuals trying to promote and share knowledge, little knowledge transfer is likely to be forthcoming as a result.

Here, culture is defined as *"the shared values, beliefs and practices of the people in the organization"* (McDermott and O'Dell, 2001: 76). Hence, organizational culture focal point is the symbolic and interpretative construction of organizational life (Gomes, 2000), or, in Reto and Lopes view, *"the subjective and the political-ideological dimensions of organizational analysis"* (1990: 34). The organizational culture defines the *"shoulds"* and the *"oughts"* of organizational life by specifying behaviors that are deemed important in the organization (Somech and Drach-Zahavy, 2004: 283).

So, according to McDermott and O'Dell (2001), in organizations with a knowledge-sharing culture, employees share ideas and insights because they see it as natural, rather than as something they are forced to[8].

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[8] McDermott and O'Dell (2001) used face-to-face interviews to identify five important issues about aligning knowledge sharing with organizational culture. These issues include: 1) The creation of a knowledge-sharing culture requires a visible connection between sharing knowledge and practical business goals, problems or results; 2) Knowledge-sharing activities need to match the organizational style, rather than directly to copy the practices developed by other organizations; 3) Knowledge sharing is tightly linked to pre-existing organization

Several studies have noted that the ability of organizations to successfully promote knowledge-sharing culture depends not only on directly including knowledge in the organization strategy, but also on changing individual attitudes and behaviors to make them willingly and consistently share their knowledge (Moffett *et al.*, 2003; Jones *et al*, 2006; Lin, 2006).

One of those attitudes is, as was seen before, affective commitment to the organization. Individuals should be more willing to share knowledge when they are affectively committed to the organization (Hall, 2001; Van den Hooff and De Ridder, 2004). So, managers need to pay careful attention to establish a positive social interaction climate to enhance employee affective commitment to the organization, which in turn will influence knowledge sharing.

Other of those behaviors that make individuals willingly share knowledge is organizational citizenship behavior (Brown and Woodland, 1999; Storey and Quintas, 2001). At least some of the beliefs, norms and values that make up knowledge-sharing culture most probably do serve to provide opportunities for organizational citizenship behavior (Somech and Drach-Zahavy, 2004).

Somech and Drach-Zahavy (2004) explore this relation between organizational culture and organizational citizenship behavior. According to the authors, for example, some organizations may value collaboration, whereas others may value competition: helping co-workers will be encouraged in the former and constrained in the later. Some organizations may endorse social responsibility values that encourage the spreading of goodwill, while others may be more inwardly focused.

4.2. The Importance of a Learning Organization

The process of acquiring and retaining knowledge in memory is called *learning* (Vygotsky, 1986). Traditionally, learning has been defined as the relatively permanent modification of the behavior potential which accompanies practice. The behavioral potential that is modified is the knowledge (of a person, or a group, or any living system) (Miller, 1978, *cit in* Hunt, 2003).

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core values; 4) Knowledge-sharing networks are built on existing networks that people use in their daily work; 5) Knowledge sharing is included in routine performance appraisal.

The pressures to better utilize human capital as organizations are faced with tougher competition increased the interest in the phenomena of *organizational learning*.

Organizational learning is a system of principles, activities, processes and structures that enable an organization to realize the potential inherent in its human capital's knowledge and experience (Shani and Mitki, 1999). According to Senge (1991), organizational learning incorporates all activities and processes taking place on the individual, team and organizational levels[9].

In this context, organizational learning mechanisms are *"institutionalized structural and procedural arrangements, and informal systematic practices that allow organizations systematically to collect, analyse, store, disseminate and use information that is relevant to the performance of the organization and its members"* (Popper and Lipshitz, 1999, *cit in* Somech and Drach-Zahavy, 2004: 284).

Edmondson and Moingeon (1996) identified two different kinds of organizational learning processes:

- *Learning how* – organizational members engaging in processes to transfer and improve existing skills or routines and learning.
- *Learning why* – organizational members diagnosing causality.

These organizational learning mechanisms and processes play a critical role in organizational citizenship behavior, knowledge sharing and development of human capital.

The theoretical connection between learning and organizational citizenship behavior was proposed by Simon (1990). The author maintains that rational self-interest precludes certain types of behaviors – the citizenship behaviors – that provide no obvious benefit to the individual. The fact that organizational citizenship behaviors actually do occur indicates that some net advantage is associated with them (Somech and Drach-Zahavy, 2004). Organizational learning, which is expressed in suggestions, recommendations and information obtained through social channels, helps overcome the bounded rationality (Simon, 1990) of the individual and serves as a decisive motive for organizational citizenship behaviors. Simon makes a strong case that people who are disposed to exhibit these behaviors are more sensitive to information in their environment.

Regarding learning structures, organizational learning mechanisms and processes establish organizational decentralized and flexible structures, which provide opportunities for

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[9] Schein (1993) notes that there are, at least, three distinctly different types of learning: 1) knowledge acquisition and insights (cognitive learning); 2) habits and skill learning; and 3) emotional conditioning and learning anxiety.

organizational members to learn through active participation and enhance involvement and commitment (Durham *et al*., 1997, *cit in* Somech and Drach-Zahavy, 2004). We agree that this should lead individuals to engage in behaviors that will help the organization achieve its goals and rise group cohesion, whether or not these behaviors are part of the employee's role – organizational citizenship behaviors (Senge, 1991). Similarly, influencing organizational tasks and processes by establishing organizational learning mechanisms for continuous learning is the key to promoting individual citizenship behaviors by encouraging individuals to cooperate and share knowledge (Organ, 1990; Podsakoff and MacKenzie, 1997; Somech and Drach-Zahavy, 2004).

Argyris and Schon (1978) distinguish between *double* and *single-loop learning*, where single-loop learning is that which organizations do for corrective purposes - incremental changes. Double-loop is more generative and involves learning on a more fundamental level, where basic assumptions are changed.

Researchers agree that, although a complete learning mode should include both single and double-loop learning, double-loop learning is the type that is lacking in existing knowledge management frameworks (Metaxiotis *et al.*, 2005). Thus, the tacit dimension of knowledge is experienced through *implicit learning* (Chao, 1996) or through the process of *experiential learning*[10] (Kolb, 1984).

The kind of knowledge required in order undertaking self-assessment, effective learning and development requires openness, a sharing of views about individual and organizational performance, and flexibility (Brown and Woodland, 1999).

So, we agree with Spender's perspective on *"social knowledge"* (Spender, 1996, *cit in* Hunt, 2003: 106). Only cooperation, trust and supportiveness among organizational members can create a positive social interaction climate, which helps the elimination of resistance barriers to knowledge sharing and organizational learning. The creation of a *"learning culture"* (Brown and Woodland, 1999: 194), with a climate as above, not only facilitates the creation and sharing of knowledge but also prevents knowledge loss.

Human Resource Management necessarily involves a *"cultural change"* (Gill and Whittle, 1993: 282). The replacement of the theories-in-use (Argyris and Schon, 1978)

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[10] Kolb's learning cycle has four stages around which all learners continuously circle: 1) The perception of the objective world (*Concrete Experiences* stage); 2) The beginning of internalization (*Observational and Reflective* stage; 3) The stepping back from reality and drawing of conclusions and generalizations (*Abstract Conceptualization* stage); 4) The checking of theories and hunches by testing in new situations (*Active Experimentation* stage) (Kolb, 1984).

requires a double-loop learning process of creative thinking and change, inducing knowledge sharing and organizational citizenship behaviors.

4.3. The Psychological Contract Model: An Integrating Framework

Guest and Conway (1997) had developed a model that provides a useful framework for linking organizational commitment to other related concepts, such as knowledge sharing and organizational citizenship behavior. So, this model has evident significance in the perception of the relations that we conceptualize in our theoretical framework.

Guest and Conway's model of the psychological contract is presented in *Figure 1*.
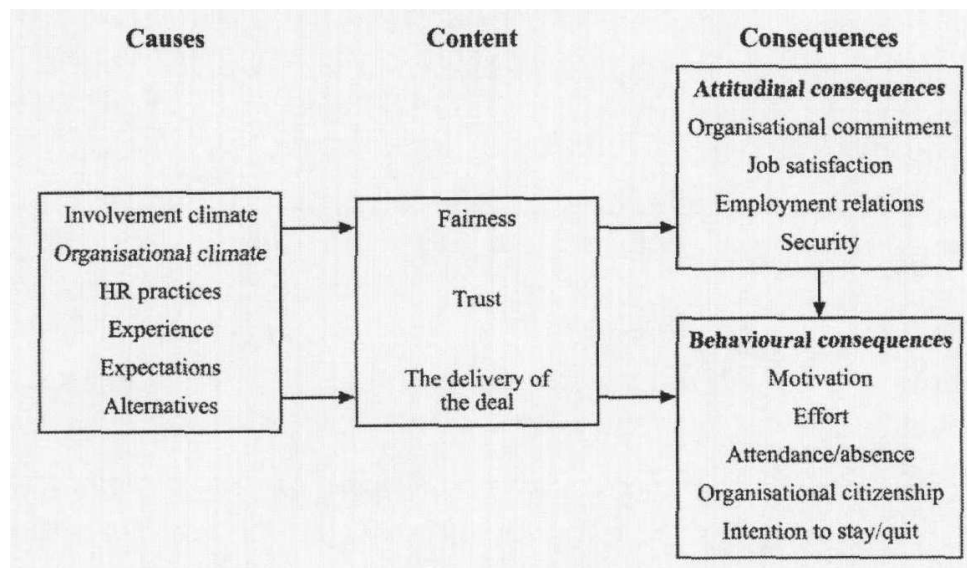
Figure 1. Guest and Conway's Model of the Psychological Contract [Source: Guest and Conway, 1997, p.6, Fig.1.]

One of the advantages of Guest and Conway's model of the psychological contract is that it acts as an integrating framework (Hislop, 2003), linking together related concepts such as organizational commitment, the psychological contract and job satisfaction into a unified model.

Other advantage of Guest and Conway's model is that it effectively links together how people feel about the extent to which the organizations for which they work have met their

expectations with both the underlying causes of these feelings and also the likely attitudinal and behavioral consequences of them.

In broad terms, the *psychological contract* represents the perceptions both the employee and the organization bring to the employment relationship of their mutual obligations (Herriot *et al.*, 1997).

According to Guest and Conway (1997, 2001), the heart of psychological contract relates to fairness, trust and delivery of the deal. *Fairness* stems from factors such as the sense of equity which exists, and the extent to which people are valued and rewarded for their contribution (Flood *et al.*, 2001). *Trust*, in this context, relates to confidence in someone or something, and involves an expectation about future outcomes (Hislop, 2003; Sharkie, 2005). And *delivery of the deal* relates to the extent to which workers believe that key promises and obligations they expect of the organization have been met (Guest, 1998).

In this model, *organizational commitment* is seen as an attitudinal consequence of the psychological contract, with a positive psychological contract assumed to produce positive levels of commitment. On the other hand, a violation of the psychological contract has potentially negative implications for worker commitment, loyalty and motivation (Guest and Conway, 1997).

Guest and Conway (1997, 2001) have tested and evaluated their model and, while the results give support to the theorized model, they weren't able to confidently demonstrate a causal link between the factors examined. Although there is a widespread consensus that the psychological contract and the levels of commitment are closely related, questions still exist concerning the nature and causality of those relationship.

Assuming that debates exist regarding the way the concepts Guest and Conway's model use are theorized and linked, Hislop (2003) introduced in the model variables related with knowledge management, specifically examining attitudes and behaviors towards knowledge sharing (cf. *Figure 2.*).
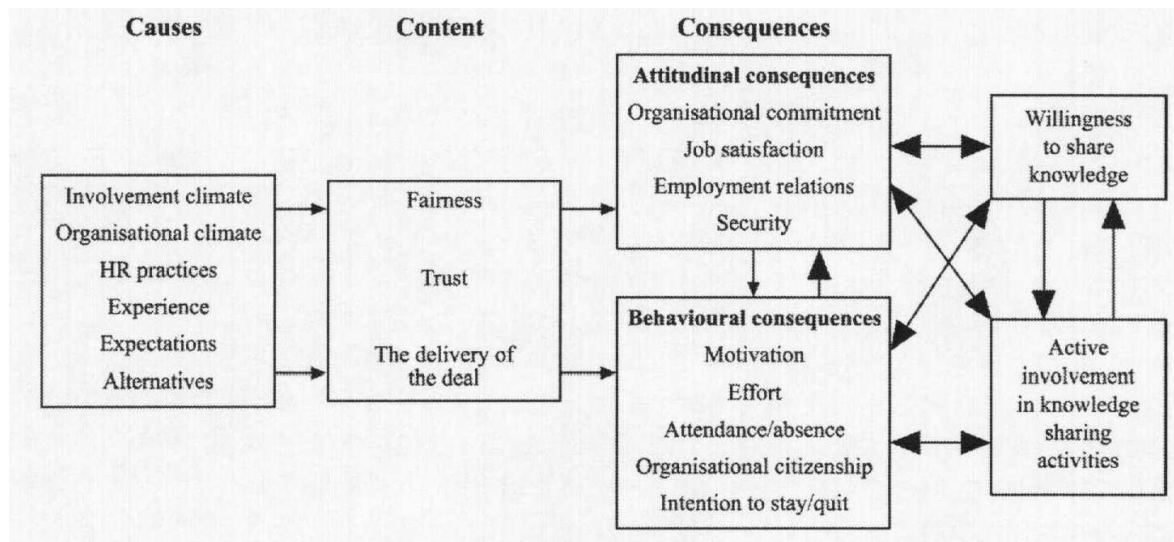
Figure 2. The Guest and Conway Psychological Contract Model Linked to Knowledge Sharing [Source: Hislop, 2003, p. 194, Fig. 3.]

Following the Guest and Conway model, Hislop (2003) found that organizational commitment affect a large number of attitudes and behaviors relevant to the management and sharing of knowledge:

- Attitudes of workers towards knowledge-sharing activities
- Extent to which workers actively participate in knowledge-sharing activities
- Loyalty of workers to their organization and the likelihood that they will choose to remain with it

Brown and Woodland (1999) also argue that the sharing of knowledge is dependent on an individual's perception of their psychological contract. This perception will be influenced by the expected benefits and costs of sharing their knowledge and may determine whether their knowledge is retained or shared with others.

According to Turnley and cols. (2003), is this perception of psychological contract who, which in turn, determines employee's organizational citizenship behavior. In addition, the authors indicate that psychological contract fulfillment is more strongly related to citizenship behavior directed at the organization that to citizenship behavior directed at one's colleagues.

These links between the psychological contract and the analyzed variables in our study - knowledge sharing, organizational commitment and organizational citizenship behavior - are

of great contemporary relevance, due to the significant impact of ongoing changes in the nature of the employment relationship (Hislop, 2003).

At the level of rhetoric, it has been widely argued that, if organizations can induce high levels of organizational commitment from their workers, then this can have positive benefits for the organization in terms of increased loyalty, reduced turnover levels, and in workers being more willing to provide discretionary effort for the organization (Guest and Conway, 1997; Storey and Quintas, 2001).

However, one of the major conclusions from much of this research has been that there has been a significant disjuncture between the rhetoric and reality of the changes in the traditional employment relationship that have been occurring. The traditional employment relationship characterized by its behavioral principles of long-term commitment, reciprocity and internal promotion has been adversely affected by the competitive pressures of the marketplace and management practices such as restructuring, downsizing and benchmarking (Atkinson, 2002; Sharkie, 2005).

For instance, there is a growing body of evidence that a large number of organizations still emphasize control, rather than commitment-based employment practices (Cully *et al.*, 1999, *cit. in* Hislop, 2003). Changes can also be identified in terms of a number of other factors, associated with the higher levels of precariousness in the employment relationship. Those factors include increased intensification, short-term horizons, limited employment duration, low incomes, reduced job security, lack of control over working conditions and reduced promotion opportunities (Gallie *et al.*, 1998; Atkinson, 2002, Sharkie, 2005).

Research suggests that, as a consequence of these changes, and the extent to which this has led to workers perceiving their employees to have violated the psychological contract (Atkinson, 2002; Beaumont and Harris, 2002), organizational commitment levels may have decreased witnessing the rise of a *"contract culture"* (Hislop, 2003: 192), where workers have little loyalty or affective commitment for the organizations in which they work (Gallie *et al.*, 1998).

Thus, the traditional psychological contract existing under the lifetime employment model has been replaced by one with a strong element of precariousness in the employment relationship, defined as *"the new psychological contract"* (Sharkie, 2005: 38). The critical problem is that the organization is expecting from this employees whose level of commitment towards the organization is likely to have been diminished by the changed security and advancement conditions offered by the employer (Capelli, 1999).

4.4. The Moderator Role of Trust

Trust is a key element in an individual's decision to share knowledge and to exhibit citizenship behaviors. So, we can say that trust has a moderator role in linking our research constructs.

According to Sharkie (2005), trust coming from affective commitment and a supportive environment will encourage conversation and the sharing of ideas, with trust being defined by O'Malley and Tynan (1997) as a belief, expectation, confidence or perception that another party's motives and intentions are honorable and supportive and that the other party will behave with integrity. As a result of trust, individuals are willing to rely on that other party in an exchange relationship in order to achieve positive outcomes.

Mayer and cols. also argue that trust is the moderator of *"the willingness of a party to be vulnerable to the actions of another party and their perception that the other party will respond in an equitable manner"* (1995: 715).

So, trust is concerned about how to handle risk and uncertainty. With risk and uncertainty ever present in organizations, individuals are going to be vulnerable in such areas as reputation, self-efficacy and financial position if they enter into a sharing relationship (Newell *et al.*, 2002, cit in Sharkie, 2005). Based on this approach, trust is *"the psychological mechanism used by an individual to decide if exposure to vulnerability by sharing ideas with another party will be associated with an acceptable level of risk of hurt to themselves"* (Sharkie, 2005: 41). This psychological mechanism can't be prescribed or imposed, because trust is used by as individual to assess if the organization, management and fellow workers have treated them fairly, kept their promises and met their obligations in the past and can be relied on to do so in the future (O'Malley and Tynan, 1997).

Based on that and according to literature (Mayer *et al.*, 1995; Dirks and Ferring, 2001; Sharkie, 2005), in high-trust environments, individuals and groups may be predisposed to converse, act cooperatively and share knowledge. High-trust situations also allow individuals to be able to share their ideas without the downside risk of having these ideas subjected to ridicule. Besides that, an employee in a high-trust setting is likely to exhibit extra-role behavior which is in the best interests of the organization, the citizenship behavior. In contrast, in low-trust environments, conversations suffer and higher levels of competitive behavior and lower levels of knowledge sharing are likely to result (Dirks and Ferring, 2001).

We agree with Sharkie (2005) when the author postulates that trust is formed from individual perceptions of the culture of the organization. In fact, the potential for knowledge sharing and demonstration of extra-role behaviors will be maximized when individuals perceive that organizational culture is trusting, caring, fair and non-threatening, thus committed to the organization.

So, trust is a key element in the decision by an individual to share their personal knowledge with others and to exhibit citizenship behaviors. The level of trust is a strong determinant of the willingness of that individual to participate in the organizational communication process and potentially lead to a sharing of knowledge with others.

5. ABOUT THE PUBLIC ADMINISTRATION

5.1. Public *versus* Private Sector

Far as long as anyone cares to remember, we have been mired in a debate over the allocation of resources between the so-called *private* and *public* sectors. Whether it is capitalism versus communism, privatization versus nationalization, or the markets of business versus the controls of government, the arguments have always pitted private, independent forces against public, collective ones (Mintzberg, 1996).

Although public and private management have the same background, *management* and *government* are substantially different (Mintzberg, 1996; Bilhim, 1997; Rocha, 2001; Riege and Lindsay, 2006). According to Allison (1987, *cit. in* Rocha), *"they are at least as different as they are similar and the differences are more important than the similarities"* (2001: 36).

First, *contextual frameworks* for the private and public sector are known to differ. The private sector is usually highly influenced by its competitive environment (e.g. markets, products, business processes and technologies), whereas the public sector concentrates less on market issues and more on information provision and service delivery (Bilhim, 1997; Reis and Reis, 2006).

Second, whereas the private sector is often *shareholder*-dependent, the public sector concentrates on *stakeholder* interests and tends to involve multiple parties in the management process, thus being more complicated to deal with (Cong and Pandya, 2003).

Another difference between the private and public sector is *flexibility*. The public activities have legal and regulation restrictions in many orders. Further, most of services provided by government, including accessibilities, social security, and economic policy, involve complex trade-offs between competing interests. So, public organizations constantly suffer politic influence and citizens' pressure (Mintzberg, 1996).

Fourth, *organizational culture* and *values system* for the private and public sector also differ. Whereas the private sector is mostly concerned with economic efficiency and rationality, the public sector is clearly more concentrated on politic conformity (Barata, 1997).

Finally, *measurement* also differs in the private and public sector. In public administration, performance and effectiveness can't be fully and properly evaluated by

objective measures. Many of the real benefits of government activities can't simply be measured.[11] (Mintzberg, 1996).

Although all these differences between private and public administration, we agree with Mintzberg, when he postulates that *"government may need managing, but management could use a little governing, too"* (1996: 82). According to the author, the private sector is not all good, and the public sector is not all bad: each has its place in a balanced society. In that context, societies get the public services they expect. If people believe that government is bumbling and bureaucratic, then that is what it will be. If, in contrast, they recognize public service as a noble calling, then they will end up with strong government.

5.2. Knowledge Management in Public Organizations

Although knowledge management has been widely discussed by many academics and practitioners, how knowledge management theories and frameworks are applied in the public organizations is not well understood due to little evidence being published in the literature (Riege and Lindsay, 2006).

However, the concept of knowledge management is not new to the Public Sector, and whether intentionally or unintentionally, knowledge management initiatives have always been integrated in government tasks, inseparable from strategy, planning, consultation and implementation (Reis and Reis, 2006).

In an empirical study in a public organization in Malaysia, Syed-Ikhsan and Rowland (2004) investigated and examined the availability of a knowledge management strategy in the Ministry of Entrepreneur Development of Malaysia. The authors examined the perceptions on the benefits, problems, responsibilities and technological aspects that are entailed in managing organizational knowledge and also the issues that encourage and restrict knowledge creation and knowledge sharing. The study revealed that the Ministry doesn't have any specific knowledge management strategy, but also revealed that the knowledge was available and embedded in the Ministry's procedures and policies. Other pertinent conclusion was that most

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[11] According to Mintzberg (1996), things have to be expressed in quantitative terms, to be sure, especially costs. But many government activities can't simply be fully and properly evaluated by objective measures. Some rather simple and directly delivered ones do – especially at the municipal level – such as garbage collection. But besides that it's difficult to find outputs that can be objectively measured. The author sustains that many activities are in the public sector precisely because of measurement problems: *"if everything was so crystal clear and every benefit so easily attributable, those activities would have been in the private sector long ago"* (Mintzberg, 1996: 79).

of the employees still felt that the head of the Ministry or the heads of the divisions/units were the ones who were responsible for managing knowledge in the Ministry. Only 48% of the organization members felt that the responsibility to manage knowledge in the Ministry should be everyone's job.

Liebowitz and Chen (2003) conducted another study on knowledge management issues in public sector, where they investigated how knowledge management could build and nurture a knowledge sharing culture in an organization. The authors found that government agencies are typically hierarchical and bureaucratic organizations that make sharing of knowledge difficult. Liebowitz and Chen argued that most people in public organizations seem reluctant to share knowledge because they *"keep knowledge close to their heart as they move through the ranks by the knowledge is power paradigm"* (2003: 422).

One of the most important comprehensive studies on knowledge management in public administration was conducted by Wiig (2002). The author investigated how knowledge management could play important roles in public organizations, particularly in four main areas: 1) enhance decision making within public services; 2) aid the public in participating effectively in decision making; 3) build competitive societal intellectual capital capabilities and 4) develop a knowledge management work force.

Wiig (2002) argued that it is important to have comprehensive knowledge management within and in support of public administration. This approach will increase the citizens' quality of life and allow *"the society to prosper and increase its viability by making its people and institutions work smarter"* (Wiig, 2002: 238).

Through local policy in particular, politicians and public service workers use knowledge to shape their domestic environment and try to make a difference (Bridgman and Davis, 2004, in Riege and Lindsay, 2006). Societal responsibilities for delivering public policy that benefit the common good further enhance the importance of effective knowledge management in public services (Wiig, 2002). Furthermore, public administration is under continual pressure from the society to increase their effectiveness and quality with fewer resources (McAdam and Reid, 2000).

Clear communication of policy outputs and outcomes to stakeholders can be the starting point to transforming relatively uncompetitive public sector organizations into dynamic and knowledge-intensive learning organizations. Whilst knowledge has been recognized as a core strategic asset in increasingly dynamic public business environments and communities, more effective governing and public policy development depends on a more

systematic and effective capture, dissemination, transfer and application of organizational knowledge (Riege and Lindsay, 2006).

5.3. Human Resource Management in Public Organizations

According to Kikert (1994, *cit. in* Rocha, 2001), Govern is not a rational actor that acts unilaterally or dominates hierarchically. The public sector has to solve social and community problems, so government's major job is the mediation between the various actors in political networks. This concept of *network government* is flanked by market autonomy and bureaucratic hierarchy.

In the best-seller "*In Search of Excellence: Lessons from America's Best Run Companies*", Peters and Waterman (1982), the authors that had launched the foundations for *New Public Management*, recognized the importance of *persons* and *culture* as characteristics that explain the organization skill of innovation.

According to Syed-Ikhsan and Rowland, *"knowledge-sharing culture is one of the most important elements that need to be understood before implementing any new strategies in public organizations"* (2004: 100). Some public organizations will constantly falling behind practices of leading private sector firms unless they start being conscious of the benefits of setting knowledge management goals and strategies (Wiig, 2002), that is, viewing knowledge as a significant competitive differentiator and resource of wealth and value-creation (Riege and Lindsay, 2006). And the main driver for efficiency of knowledge management initiatives in public services is the change of organizational culture[12].

According to Riege and Lindsay (2006), public sector faces four critical issues to obtain this change of culture. First, drive efficiencies across all public services, for instance, by connecting silos of information across different levels of government and across borders. Second, develop new or consolidating outdated systems to improve the overall performance, and capitalize on a broader, more integrated and easier accessible knowledge base. Third, improve accountability and mitigating risk by making informed decisions and resolve issues faster, supported by access to integrated information across all organizational boundaries. And fourth, deliver better and more cost-effective constituent services such as enhancing

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[12] According to Parker and Bradley (2000, in Syed-Ikhsan and Rowland, 2004), understanding the organizational culture will certainly help explain the outcomes of the reform process in terms of fit or absence of fit between public sector culture and the objectives and strategies of the reform.

partnerships with, and responsiveness to, the public, thereby clearly demonstrating a higher return on taxpayers' money[13].

5.4. Portuguese Local Administration Particularities

In Portugal, according to the portuguese Constitution, since 1976, the public democratic system includes the municipalities. Municipal management is centralized in those local political-administrative units, 'Municípios', particularly different from central administration units.

According to Pereira (1997), portuguese local administration units have well defined particularities. That doesn't happen with a strong number of central administration units, which are part of a large structure without evident boundaries. The portuguese municipalities have a delimited surface, a clearly defined intervention spectrum and a whole of available human, material and financial resources.

Municipalities are not only public administration units, but also independent government units. So, these units have the same politic and democratic legitimacy that is recognized to central government. This means that municipalities have effective politic autonomy and autonomous decision ability. In this context, management tools and techniques and strategic planning assume a particular relevance in local administration.

Municipalities are also entities with a clear face – the president. The presidential role is extremely important for these administration units, concerning to their visibility, external relations and internal functioning. This *voice of command* allows a better organization of management tasks, strategic planning and facilitates the communication of policy outputs and outcomes to stakeholders.

Unlike mostly of other countries, including near European countries, portuguese municipalities are extremely autonomous administration units in terms of politics, structure and finances. Local sector municipalities are government politic entities and real productive units. They produce and distribute a large spectrum of community services and, in some places, they even are the main local productive units (Correia, 1997).

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[13] E-government, for instance, increasingly replaces traditional means of accessing public services via personal visits, phone calls, and main delivery with new dimensions, such as online information tools, electronic services and other features that help citizens contact public sector more efficiently. E-government offers organizations on all levels to become more open and transparent thereby enhancing and reinforcing democratic participation, more service-oriented by providing personalized and inclusive services to each citizen, and more productive by delivering maximum value for taxpayers' money (West, 2005).

However, municipalities also have notorious fragilities. Local politic leadership not always is equivalent to management skill. The president of these administration units is locally elected by population and could not be prepared to manage complex entities as municipalities.

Although financial autonomy of local administration units, municipal income volume, compared to other countries, is relatively low. Besides that, although the diversity and multidimensionality of municipalities actuation, portuguese legislation is standard. This legal uniformity has evident problems, because it is unrealistic and complex (Pereira, 1997).

These fragilities would not be able to keep local sector in the track of modernity in terms of management practices and efficient outcomes. However, we agree with Pereira, who describes the excellent ambience of local administration as the perfect context for modernity absorption and better use of management advanced resources and methods. According to the author, local government is, inclusively, "*the most capable of innovation*" (1997: 216).

Other relevant issue that should be considered in portuguese public administration management strategies is related to the significant impact of ongoing changes in the nature of the employment relationship in the workers psychological contract (Hislop, 2003). As in private sector, the traditional public employment relationship, characterized by its behavioral principles of long-term commitment, reciprocity and internal promotion, has been adversely affected by management practices and financial pressures (Atkinson, 2002; Sharkie, 2005).

Higher levels of precariousness have been recently introduced in municipalities, with a clear impact in the public employment relationship, by factors including lack of control over working conditions, short-term horizons, limited employment duration, low incomes, reduced job security, and reduced promotion opportunities (Gallie et al., 1998; Atkinson, 2002, Sharkie, 2005).

In portuguese public organizations, type of employment relationship includes 'Nomination' and 'Contract'. The first is applied mostly to senior workers and is related to long-term commitment, unlimited employment duration and job security. The second is applied mostly to younger workers and is a consequence of referred changes, with a strong element of precariousness in the employment relationship, defined by Sharkie (2005) as the new psychological contract.

According to what we had said before, seeing organizational commitment as an attitudinal consequence of the psychological contract, it is expected a positive relation between seniority in public administration and in present organization and the exhibition of affective commitment to the organization.

As precariousness should lead to a reduction in affective organizational commitment, we can also expect that workers with an employment relationship of 'Nomination' have a different level of affective commitment to the organization than workers with a employment relationship of 'Contract'.

So, considering the unique features of the portuguese local administration, we added to our research the following hypothesis:

H4. The number of years in public administration is positively related to affective commitment in portuguese public administration workers

H5. The number of years in present organization is positively related to affective commitment in portuguese public administration workers

H6. There is a difference between affective organizational commitment in portuguese public administration workers with an employment relationship of 'Nomination' and portuguese public administration workers with an employment relationship of 'Contract'.

In this context, should we expect to find commitment, organizational citizenship and knowledge sharing behaviors in portuguese public workers? Or its exhibition is limited by the lack of a knowledge-sharing culture in public organization strategies? We explore here the links between Human Resource Management and Knowledge Management in portuguese public organizations.

PART TWO

EMPIRICAL RESEARCH AND DISCUSSION

1. METHOD AND ANALYSIS

The basilar question for our investigation is:

What are the relationships between organizational commitment, organizational citizenship behavior and knowledge sharing in three organizations from portuguese public administration?

1.1. Sample

The sample was composed by respondents from three different public organizations from portuguese local administration. The survey questionnaire was administrated to 116 workers between September and December 2012.

The choose of local administration specific context was mainly related to an easier access to information sources, but also because the local political-administrative units, the municipalities, are a particular reality in portuguese public management.

As we saw in previous chapter, portuguese local administration units have well defined particularities and evident boundaries. The portuguese municipalities have a delimited surface, a clearly defined intervention spectrum and a whole of available human, material and financial resources (Pereira, 1997). Those facts produce a very interesting (and not many times well understood due to little evidence being published in the literature) context to our investigation.

Sample distribution was based in geographical criteria. Thus, as shown in *Figure 3*, the sample was composed by:

1) 31 workers from a local public organization from the Center of Portugal – "Município da Sertã" – a municipality from Sertã, situated in Castelo Branco District, with a total area of 446.7 km² and a total population of 16,208 inhabitants.

2) 43 workers from a local public organization from the South of Portugal – "Município de Mora", situated in Évora District, with a total area of 443.0 km² and a total population of 5,525 inhabitants.

3) 42 workers from a local public organization from the North of Portugal – "Município de Arouca" – a municipality from Arouca, situated in the Greater Metropolitan Area of Porto, with a total area of 329.1 km² and a total population of 24,038 inhabitants.
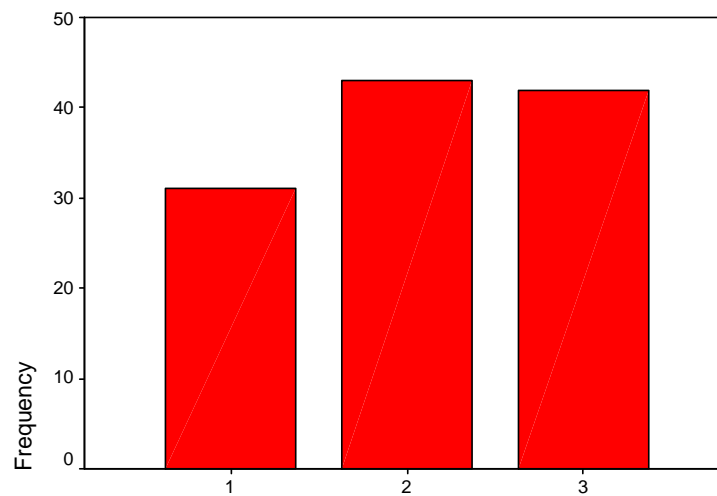
Figure 3. Sample distribution by employing organization [1 - Sertã; 2 – Mora; 3 – Arouca]

The survey questionnaire was an *auto-response questionnaire* (cf. Annexes), composed by items from the different scales that operationalize the constructs included in our research model. Questionnaire was mailed to employees through personal contacts within the three sampled organizations. In essence, this is a convenience-sampling technique, whereby the researcher gains access to the sample via the contact nets in the organizations.

On the auto-response questionnaire, participants were told that the survey was for scientific purposes only and that the participation was voluntary. Furthermore, respondents were assured of the confidentiality of their results.

Questions relating to the demographic variables of gender, age, highest qualification and education area, were included in the questionnaire that the respondents completed. Information was also provided about the employing organization, present occupation, type of

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employment relationship and number of years in public administration and in present organization.

41,4 percent of the respondents were male, and 58,6 percent were female (cf. *Figure 4*).
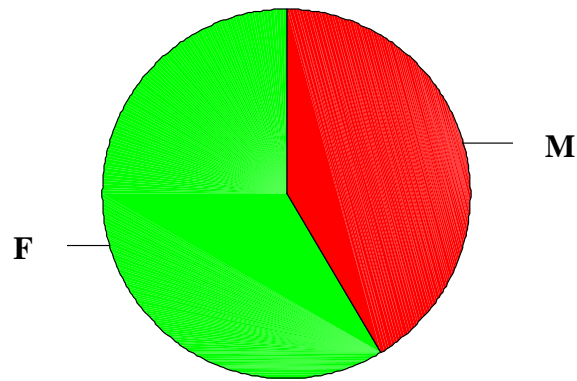
Figure 4. Sample distribution by gender [M – Male; F – Female]

In terms of age, 23,3 percent of respondents were 30 years old or younger, 38,8 percent were 31-40 years old, 31,0 percent were 41-50 years old, and the remaining 6,9 percent were 51 years old or older (cf. *Figure 5*).
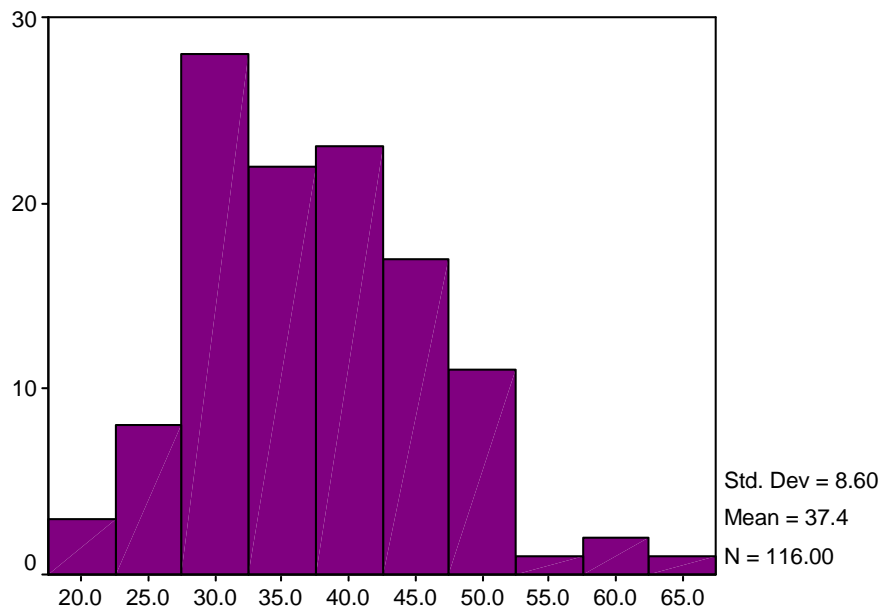
Figure 5. Sample distribution by age

Sample presents a mean of age of 37,4 years, with a standard deviation of 8,6 years, with a minimum of 21 years and a maximum of 64 years. *Figure 6* shows age distribution of respondents by employing organization.
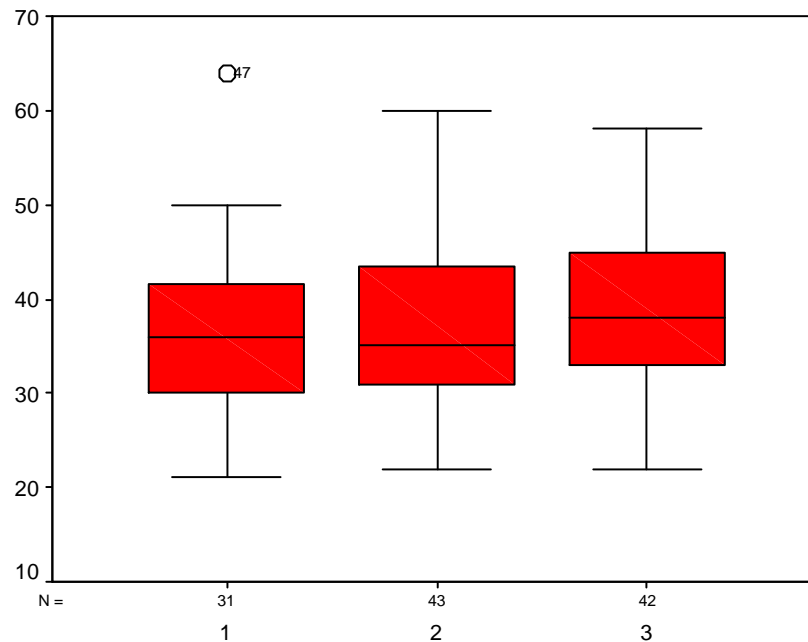
Figure 6. Age distribution of respondents by employing organization [1 - Sertã; 2 – Mora; 3 – Arouca]

Figure 7 shows sample distribution by type of public employment relationship. 46,2 percent of respondents were employed on 'Nomination' and the remaining 53,8 percent were employed on 'Contract'.

In terms of highest qualification of respondents, 37,9 percent of participants had a Pre-Bologna Graduation, 18,1 percent of participants had a Post-Graduation academic degree and 11,2 percent of participants had a Secondary School education level (12 years of education).

About the number of years in public administration, sample presents a mean of 10,16 years, with a standard deviation of 8,64 years, and with a minimum of 1 year and a maximum of 32 years. 76,6 percent of respondents had less than 15 years in public administration.

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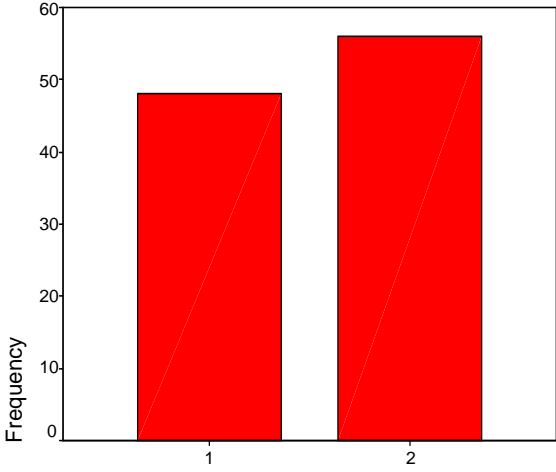
Figure 7. Sample distribution by type of employment relationship [1 - Nomination; 2 – Contract]

Figure 8 shows number of years in public administration by gender, with the male respondents having more seniority in public administration than the female respondents.
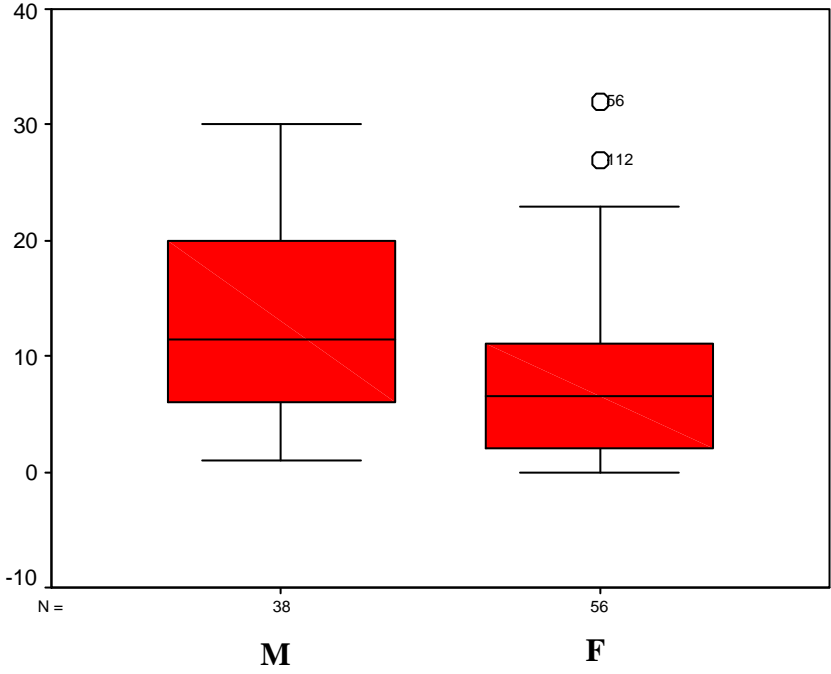
Figure 8. Number of years in public administration by gender [M – Male; F – Female]

In terms of number of years in present organization, sample presents a mean of 8,88 years, with a standard deviation of 7,49 years. As per the number of years in public administration, the minimum of years in present organization is 1 and the maximum is 32 years. 81,6 percent of respondents had less than 15 years in present public organization.

Figure 9 shows number of years in present organization by gender.
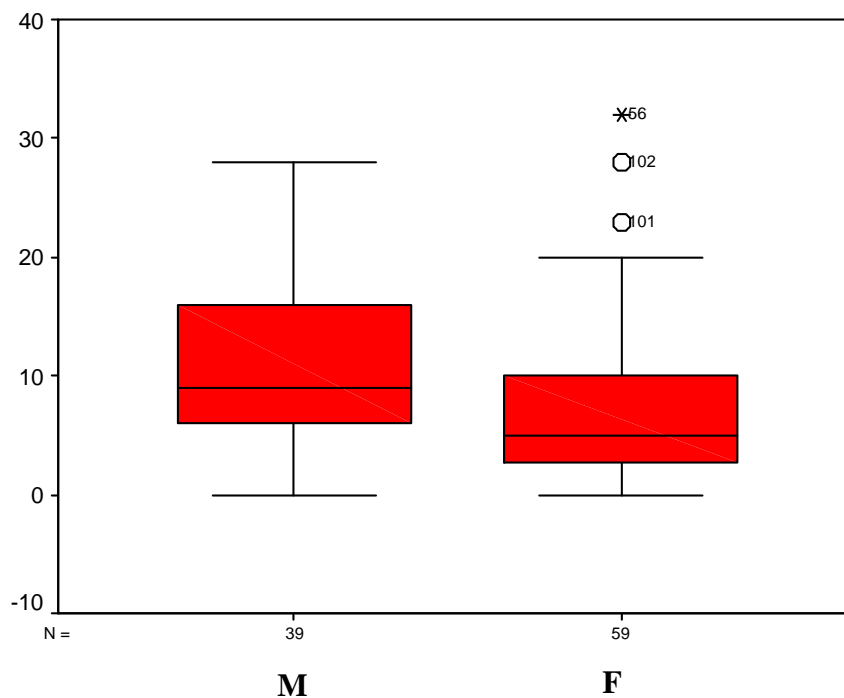
Figure 9. Number of years in present organization by gender [M – Male; F – Female]

1.2. Measurement

For present investigation, was adopted a *positivistic mindset* and a *quantitative research methodology*, focused on the collection and analysis of numerical data and statistics.

In this context, our strategy is based on a *correlational study*, with the purpose of looking for relationships and establishing associations between the constructs included in the theoretical model.

Scales used to operationalize those constructs were adapted from related instruments and previous investigations. *Table 4* lists those instruments, constructs and the related literature.

TABLE 4

Instruments Used for Constructs Measurement

References	Instruments	Original Constructs	Items
Allen and Meyer (1990) [Adapted for portuguese context by Nascimento and cols., 2008]	*Organizational Commitment Scale*	Affective Organizational Commitment	1*, 4*, 6, 9*, 11, 14, 17, 20*
Van den Hooff and cols. (2002)	*Knowledge Sharing Scale*	Knowledge Donating	2, 7, 12, 15, 18, 21
Smith and cols. (1983) [modified by Riketta and Landerer, 2005]	*Organizational Citizenship Behavior Scale*	Organizational Citizenship Behavior	3, 5, 8, 10, 13, 16, 19*, 22*

* Reverse scored

Responses to the 22-item auto-response questionnaire were measured on a seven-point Likert-like scale. Respondents were asked to indicate their agreement or disagreement in regard to each item from 1 (= strongly disagree) to 7 (= strongly agree).

Affective organizational commitment was measured using the portuguese adaptation of the items of Allen and Meyer (1990) organizational commitment scale, adapted and validated for portuguese context by Nascimento and cols. (2008).

Those items are presented in *Table 5*.

TABLE 5

Organizational Commitment Scale (adapted from Allen and Meyer, 1990)

Original Version	Portuguese Version
I do not feel a strong sense of belonging to my firm (reverse scored)	1 Não tenho um elevado sentimento de pertença relativamente a esta organização (cotação inversa)
I do not feel "emotionally attached" to this firm (reverse scored)	4 Não me sinto "ligado emocionalmente" a esta organização (cotação inversa)
This firm has a great deal of personal meaning to me	6 Esta organização tem um grande significado pessoal para mim
I do not feel like "party of the family" at this firm (reverse scored)	9 Não me sinto como "fazendo parte da família" desta organização (cotação inversa)
I would be very happy to spend the rest of my career with this firm	11 Ficaria muito feliz se passasse o resto da minha carreira nesta organização
I enjoy discussing my firm with people outside it	14 Gosto de falar sobre esta organização para outras pessoas
I really feel as if this firm's problems are my own	17 Na realidade, sinto os problemas desta organização como se fossem meus
I think I could easily become as attached to another firm as I am to this one (reverse scored)	20 Sinto que poderia facilmente ficar "ligado emocionalmente" a outra organização tal como me sinto "ligado" a esta (cotação inversa)

For knowledge sharing, we used items of a knowledge management scan tested and used in a large number of organizations by Van den Hooff and cols. (2002).

The items used are presented in *Table 6*.

TABLE 6

Knowledge Sharing Scale (adapted from Van den Hooff _et al._, 2002)

Original Version	Portuguese Version
When I've learned something new, I see to it that colleagues in my department can learn it as well	2 Quando aprendo alguma coisa nova, partilho-a com os colegas do meu departamento/divisão para que possam aprendê-la também
I share the information I have with colleagues within my department	7 Partilho a informação que possuo com os meus colegas de departamento/divisão
I share my skills with colleagues within my department	12 Partilho aquilo que sei fazer no trabalho com os meus colegas de departamento/divisão
When I've learned something new, I see to it that colleagues outside my department can learn it as well	15 Quando aprendo alguma coisa nova, partilho-a com os colegas de outros departamentos/divisões para que possam aprendê-la também
I share the information I have with colleagues outside of my department	18 Partilho a informação que possuo com os colegas de outros departamentos/divisões
I share my skills with colleagues outside of my department	21 Partilho aquilo que sei fazer no trabalho com os colegas de outros departamentos/divisões

Finally, organizational citizenship behavior was measured with eight items of a scale used and statistically tested by Riketta and Landerer (2005), that is a modification and adaptation of the common organizational citizenship behavior scale of Smith and cols. (1983).

Those items are presented in _Table 7_.

TABLE 7

Organizational Citizenship Behavior Scale (adapted from Smith *et al.*, 1983, modified by Riketta and Landerer, 2005)

Original Version	Portuguese Version
In the last six months, I have voluntarily done more work than required	3 Nos últimos seis meses, por iniciativa própria, trabalhei mais do que era requerido
In the last six months, I helped colleagues when they had much work to do	5 Nos últimos seis meses, ajudei colegas quando eles tinham muito trabalho para fazer
In the last six months, I have tried to recruit volunteers for organization	8 Nos últimos seis meses, tentei recrutar voluntários para trabalhar na organização
In the last six months, I have voluntarily helped my supervisor with his/her work	10 Nos últimos seis meses, ajudei voluntariamente o(a) meu(minha) chefe/superior no seu trabalho
In the last six months, I have spontaneously made suggestions to improve work processes	13 Nos últimos seis meses, efectuei sugestões para melhorar processos de trabalho, por minha iniciativa pessoal
In the last six months, I have talked favorably about organization to my acquaintances	16 Nos últimos seis meses, elogiei abertamente esta organização junto dos meus amigos
In the last six months, I have taken more or longer breaks during working hours than allowed (reverse scored)	19 Nos últimos seis meses, durante o período de trabalho fiz mais/maiores pausas do que aquelas que me eram permitidas (cotação inversa)
In the last six months, I have criticized organization in front of my acquaintances (reverse scored)	22 Nos últimos seis meses, critiquei de forma negativa a organização em frente a amigos (cotação inversa)

With the exception of the affective organizational commitment scale, who is the portuguese adaptation of the items of Allen and Meyer (1990) scale, developed by Nascimento and cols. (2008), the translation of the original English version of the questionnaire scales into Portuguese language was done by the researcher and reviewed by a colleague, an university English professor, to assure clarity of terminology.

A preliminary form of the survey questionnaire (pre-test) was administered to a sample of five individuals, in order to determine specific inputs related to questionnaire elaboration and application, avoiding possible misunderstandings or incorrect interpretations.

1.3. Analysis

In order to find how hypothetical constructs were measured in terms of the observed variables, the investigation questionnaire composed by items from the different scales that operationalize the constructs identified in our research model was factor analyzed.

Factor analysis was conducted on the 22 items of the auto-response questionnaire to ensure that all the items were loaded on their hypothesized dimensions and to found the existence, in our sample, of affective organizational commitment, knowledge sharing and organizational citizenship behavior. The instrument items were analyzed using Principal Component Factor Analysis as extraction method and Varimax with Kaiser Normalization as rotation method.

Then, was used a correlational design, with the purpose of looking for relationships and establishing associations between the measured variables. Pearson Correlation Coefficients, showing bivariate correlations among the study variables, were determined and analyzed, using Statistical Package for the Social Sciences (SPSS).

Finally, a Student's test was used to find eventual statistical differences between types of employment relationship groups in terms of affective organizational commitment.

2. RESULTS

To confirm the dimensions identified in the auto-response questionnaire composed by items from the different scales that operationalize the constructs included in our research model, the instrument was factor analyzed. The items were analyzed using Principal Component Factor Analysis with Varimax Rotation. The Component Matrix is presented in *Table 8*.

Internal reliability coefficients for the 22-item auto-response questionnaire were relatively high, ranging from .52 to .86, with a median of .67 (Cronbach alpha). So, the internal consistency reliabilities of the different variables measured in this study were not so quite respectable as initially expected, but reasonably satisfactory.

The results of the factor analysis confirmed the multi-dimensionality of the instrument used in our investigation. Two components emerged from knowledge sharing scale, adapted from Van den Hooff and cols. (2002) scan, and three components emerged from organizational citizenship behavior scale, which items were adapted from Smith and cols. (1983) common organizational citizenship behavior scale.

Table 9 presents the six components that emerged from auto-response questionnaire factor analysis.

TABLE 8

Rotated Component Matrix[a]

Items	Factor Loadings					
	1	2	3	4	5	6
I 6. This firm has a great deal of personal meaning to me	.772					
14. I enjoy discussing my firm with people outside it	.731					
4. I do not feel "emotionally attached" to this firm (reverse scored)	.702					
9. I do not feel like "party of the family" at this firm (reverse scored)	.698					
20. I think I could easily become as attached to another firm as I am to this one (reverse scored)	.697					
17. I really feel as if this firm's problems are my own	.660					
11. I would be very happy to spend the rest of my career with this firm	.659					
1. I do not feel a strong sense of belonging to my firm (reverse scored)	.609					
II 21. I share my skills with colleagues outside of my department		.804				
18. I share the information I have with colleagues outside of my department		.780				
15. When I've learned something new, I see to it that colleagues outside my department can learn it as well		.569				
10. In the last six months, I have voluntarily helped my supervisor with his/her work		.522				
III 2. When I've learned something new, I see to it that colleagues in my department can learn it as well			.811			
7. I share the information I have with colleagues within my department			.669			
12. I share my skills with colleagues within my department			.637			
IV 3. In the last six months, I have voluntarily done more work than required				.645		
5. In the last six months, I helped colleagues when they had much work to do				.638		
13. In the last six months, I have spontaneously made suggestions to improve work processes				.427		
V 16. In the last six months, I have talked favourably about organization to my acquaintances					.716	
8. In the last six months, I have tried to recruit volunteers for organization					.677	
VI 19. In the last six months, I have taken more or longer breaks during working hours than allowed (reverse scored)						.860
22. In the last six months, I have criticized organization in front of my acquaintances (reverse scored)						.516

a. Rotation converged in 14 iterations.

<div align="center">

TABLE 9

Component Description

</div>

I	Affective Organizational Commitment (AOC)	
II	Knowledge Sharing	Knowledge Donating (KS 1)
III		Willingness to Knowledge Sharing (KS 2)
IV		Altruism (OCB 1)
V	Organizational Citizenship Behavior	Participation (OCB 2)
VI		Sense of Duty (OCB 3)

The first component (component I - AOC) which emerged from factor analysis was affective organizational commitment, correspondent to the eight-item scale from Allen and Meyer (1990) investigations, adapted and validated for portuguese context by Nascimento and cols. (2008). The Cronbach alpha obtained for this component ranges from .61 to .77.

The factor analysis identified two components for knowledge sharing. The first (component II – KS 1) was a four-item scale related to the communication to others what worker's personal intellectual capital is, attitudes and behaviors which Van den Hooff and De Ridder (2004) called as 'knowledge donating'. This component includes items like "I share the information I have with colleagues outside of my department" and "When I've learned something new, I see to it that colleagues outside my department can learn it as well". The Cronbach alpha obtained for this component ranges from .52 to .80.

The second knowledge sharing factor that emerged from questionnaire (component III – KS 2) was a four-item scale which related to willingness to enact knowledge sharing practices, including the share of information and skills. Component items included "When I've learned something new, I see to it that colleagues in my department can learn it as well" and "I share the information I have with colleagues within my department'. The Cronbach alpha obtained for this component varies between .64 e .81 (cf. *Table*).

Three components related to organizational citizenship behavior emerged from factor analysis. The first (component IV – OCB 1) includes two items related to 'altruism' behaviors, such as working more than required or helping a specific other person with an organizationally relevant task or problem. The Cronbach alphas obtained for this component items were .64 and .65.

The second organizational citizenship behavior component (component V – OCB 2), which we called 'participation', includes items related to suggestions for improving the organization and recruitment of volunteers to organization. The Cronbach alpha obtained for this component ranges from .43 to .72.

The analysis also identified a third factor (component VI – OCB 3), a two-item scale which related to 'sense of duty', that is, carrying out role requirements well beyond minimum required levels. The Cronbach alphas obtained for this scale items were 0.86 and 0.52.

Factor analysis provided support for the evidence that, in our sample, composed by respondents from three different portuguese public organizations, workers effectively exhibit affective organizational commitment, knowledge sharing and organizational citizenship behavior.

Table 10 displays the descriptive statistics and the bivariate (Pearson's product-moment) correlations among the study variables.

As may be seen from the Table, the examination of Pearson correlations between the study variables indicates that all the hypothetical constructs investigated (affective organizational commitment, knowledge sharing and organizational citizenship behavior) were significantly correlated.

With respect to Hypothesis 1, as predicted, both knowledge sharing components (knowledge donating and willingness to knowledge sharing) correlated significantly with affective organizational commitment ($r = .35$, $p < .01$ and $r = .28$, $p < .01$, respectively). As the raw score correlations presented indicate, Hypothesis 1 was supported in terms of a positive relationship between affective organizational commitment and knowledge sharing.

We also found a significantly and positively correlation between both measures of knowledge sharing ($r = .65$, $p < .01$). This result reinforces the idea that knowledge donating can only occur when individuals are willing to share their existing knowledge.

Also organizational citizenship behavior components (altruism, participation and sense of duty) correlated significantly with affective organizational commitment ($r = .21$, $p < .05$, $r = .66$, $p < .01$ and $r = .51$, $p < .01$, respectively). Clearly, participation appears to be the most important organizational citizenship behavior component in terms of its relationship with affective organizational commitment. These significant correlations supported Hypothesis 2 in terms of relationship between affective organizational commitment and organizational citizenship behavior.

TABLE 10

Means, Standard Deviations and Correlation Coefficients for the Study Variables

Variables	Mean	SD	I	II	III	IV	V	VI	1	2	3	4
I – Affective Organizational Commitment (AOC)	3.66	.81	1.00									
II – Knowledge Donating (KS 1)	4.08	.57	.35**	1.00								
III - Willingness to Knowledge Sharing (KS 2)	4.35	.52	.28**	.65**	1.00							
IV - Altruism (OCB 1)	4.03	.71	.21*	.36**	.44**	1.00						
V - Participation (OCB 2)	3.52	.81	.66**	.42**	.33**	.35**	1.00					
VI - Sense of Duty (OCB 3)	3.99	.86	.51**	.23*	.25**	.23*	.43**	1.00				
1. Age			-.03	-.06	-.12	.01	.04	-.05	1.00			
2. Type of employment relationship			.04	.05	.06	-.03	-.02	-.09	-.33**	1.00		
3. Years in public administration			-.03	-.15	-.20	-.03	.11	-.15	.73**	-.37**	1.00	
4. Years in present organization			.01	-.02	-.15	-.11	-.00	-.06	.61**	-.30**	.71**	1.00

N = 116

* P < .05

** P < .01

The component measures of organizational citizenship behavior were also significantly and positively related to both measures of knowledge sharing. Altruism correlated significantly with knowledge donating (r = .36, p < .01) and with willingness to knowledge sharing (r = .44, p < .01). Participation was significantly and positively related with knowledge donating (r = .42, p < .01) and with willingness to knowledge sharing (r =

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.33, p < .01). And sense of duty also correlated significantly with both knowledge sharing components (r = .23, p < .05 and r = .25, p < .01, respectively). This supported Hypothesis 3, showing a positive relationship between knowledge sharing and organizational citizenship behavior.

Pearson correlations also indicate that none of the analyzed demographic variables (age, type of employment relationship and number of years in public administration and in present organization) were significantly related to affective organizational commitment, knowledge sharing and organizational citizenship behavior components.

With these results, we didn't find empirical support to both Hypotheses 4 and 5. Contrary to expected, affective organizational commitment weren't significantly related with seniority in public administration (r = -.03, p = .78) and in present organization (r = .01, p = .92).

Next, to find if Hypothesis 6 was supported, we tested the differences between 'Nomination' and 'Contract' workers in affective organizational commitment scale. *Table 11* displays independent samples test results obtained.

TABLE 11

Means Comparison between 'Nomination' and 'Contract' Workers in Affective Organizational Commitment Component

T value	Sig. (2-tailed)	Mean Difference	Standard Error Difference	95% confidence interval of the difference
-.42	.68	-.07	.17	[-.398, .259]

We started to analyze equality of variances, using Levene's test. Statistic value of that test indicated that we should assume equal variances (F = .094, p > .05).

Student's test value is t = .42 (p = .675) and 95% confidence interval of the difference is [-.398, .259], which contains the zero. With these results, we aren't able to assume statistical differences between types of employment relationship groups ('Nomination' and 'Contract') in affective organizational commitment component.

Contrary to Hypothesis 6, that predicted a difference between affective organizational commitment in workers with a employment relationship of 'Nomination' and workers with a

employment relationship of 'Contract', no significant differences between groups were registered.

3. DISCUSSION

The aim of this research was to examine the relations between organizational commitment, organizational citizenship behavior and knowledge sharing in three portuguese public organizations, adopting a quantitative methodology and using a correlational design, with the purpose of looking for relationships and establishing associations between the constructs included in the theoretical model.

As part of this process, we explored the links between hypothetical constructs (organizational commitment, organizational citizenship behavior and knowledge sharing) and between them and some particularities of portuguese public administration.

Our results found that portuguese public sector workers exhibit not only affective commitment to the organization, but also organizational citizenship behaviors required for successful knowledge sharing. We also achieved the conclusion that affective organizational commitment, knowledge sharing and organizational citizenship behavior are significantly correlated among public administration workers.

However, contrary to our expectations, we didn't found statistically significant relations between other variables (v.g. type of employment relationship, seniority in public administration and in present organization) and the exhibition of affective commitment to the organization.

Our research results can be better understood using the "social glue" provided by some Human Resource Management related constructs, such as the concepts of Organizational Culture, Learning Organization, Psychological Contract and Trust. In this point, we find appropriate to cross some of those constructs with our results and open some discussion issues directly related to research main findings.

3.1. Linking Human Resource Management and Knowledge Management

One of the main objectives of the study was to show and analyze and linkages which exist between the broad domains of Human Resource Management and Knowledge Management. This approximation is achieved by the recognition of the centrality of human and social factors in shaping the attitudes of workers towards knowledge sharing and organizational citizenship behavior exhibition.

According to our investigation results, we think that, despite the contemporary discussion and advocacy of career self-management, organizational career management activity would enhance commitment, organizational citizenship behavior and knowledge sharing to the organization.

An organization that supports knowledge sharing among its members and promotes organizational citizenship behaviors is likely to establish more effective and efficient processes. With the understanding of these internal processes of knowledge creation and sharing and promotion of organizational citizenship behaviors, organization is opening doors to an effective Knowledge Management. And these doors are opened by Human Resource Management practices of involvement and satisfaction climate and human capital valorization culture and other factors directly affecting organizational commitment.

So, for us now is clear that the relation between an organization's member level of affective commitment to the organization and the extent to which that member shares knowledge and exhibits organizational citizenship behaviors tend to be bigger in organizations with people oriented Human Resource Management practices.

3.2. Organizational commitment and knowledge sharing and organizational citizenship behaviors: One-way relations?

The relationship between attitude and behavior may not be one-way (that attitudes affect behavior). The opposite may be equally possible – where people's attitudes and values are affected by their participation in particular activities.

Our results found statistical support for the fact that, in portuguese public administration, organizational commitment is importantly linked to knowledge sharing attitudes and behaviors, but the assumption of causality between those two constructs is likely to be complex and unclear (Hislop, 2003).

Literature suggests that levels of affective commitment induce positive knowledge sharing behaviors, but the opposite could also be plausible argued, that the type of experiences people have from participating in knowledge-sharing activities may affect their level of organizational commitment. For example, if workers have a positive experience of knowledge-donating, this will probably increase their loyalty to the organization.

The same is valid with the significant relation found between organizational affective commitment and organizational citizenship behavior. Our results show that organizational

commitment is positively related with extra-role behaviors in public administration workers, but is unclear that is affective organizational commitment who induces organizational citizenship behaviors (and not the opposite). Exhibition of extra-role behaviors like altruism, participation and sense of duty (the ones that we identified in our investigation) will probably have a positive impact in global individual attitude towards the organization.

3.3. The influence of Organizational Culture: Cultural barriers to knowledge sharing

Our next question is: what types of organizational cultures foster knowledge sharing and organizational citizenship behaviors exhibition?

Human Resource Management and Knowledge Management strategies usually require profound cultural renovations and change (Gill and Whittle, 1993), because, traditionally, organizations have rewarded their employees based on their individual performance and know-how.

That cultural change implies a lot of incentives, which are mostly important to overcome some of the major barriers to knowledge sharing. These barriers include the lack of employee time to contribute their knowledge and a corporate culture that not rewards contributing and sharing of insights.

Many organizations, particularly in public sector, are relatively lean and many employees do not have time or disposition to make knowledge available, share it with others, teach and mentor others, use their expertise to innovate, or find ways of working smarter. Moreover, organization members tend to feel that their futures with the organization are dependent upon the expertise they generate and not on the extent to which they help others. In such situations, it is then expected that individuals will attempt to build up and defend their own hegemonies of knowledge (von Krogh, 1998, *cit. in* Alavi and Leidner, 2001).

Also, as suggested by Storey and Barnett (2001, *cit. in* Hislop, 2003), knowledge is a resource with a significant amount of potential status and power. Thus, any attempt to manage, control or codify organizational knowledge is likely to produce internal conflict and turf wars about who owns and controls knowledge.

Particularly in portuguese public administration, there is a tendency for individuals to use knowledge as their source of status and power for personal advantage rather than as an organizational resource. We believe that most employers see critical knowledge as a guarantee of continued employment, and are resistant to change and reluctant to share their

knowledge. Syed-Ikhsan and Rowland (2004) agree that most knowledge is not shared and is held by public sector employees because they see information as an asset that needs to be protected and kept to themselves, not passed to other departments, agencies or individuals.

This helps to explain why, despite wasn't a statistically significant correlation, we found a negative relationship between knowledge sharing components and variables like age, number of years in public administration and number of years in present organization. Seniority in work increases resistance to change and reluctance to share knowledge, particularly in public administration, where knowledge is more seen as a source of status and power for personal advantage rather than as an organizational resource.

As we saw in our conceptual framework, people do not share knowledge without a strong affective commitment to the organization, so employees would certainly not give it away without concern for what they may gain or lose by doing so. Hence, it helps to explain why we didn't find empirical support to our hypotheses concerning a positive relationship between affective organizational commitment and number of years in public administration and in present organization.

So, as an incentive, in many organizations, particularly in public ones, a major cultural shift may be required to change employees' attitudes – particularly, their affective commitment levels – so that they willingly and consistently share their knowledge and underpin extra-role behaviors.

As our investigation postulates, a knowledge-sharing culture, main goal of those needed cultural change, depends not only on directly including knowledge in the organization strategy, but also on promoting people oriented management practices that would change individuals perception of their psychological contract, in order to induce also a change in individual attitudes and behaviors that make workers willingly and consistently share their knowledge.

Then, must cultural change occur before management initiatives can be successfully undertaken? Or can management initiatives facilitate cultural change? Or both?

3.4. The influence of a Learning Organization: The key to promoting organizational citizenship behaviors and knowledge sharing

As we had seen, organizational learning mechanisms and processes establish organizational decentralized and flexible structures, which provide opportunities for

organizational members to learn through active participation and enhance involvement and commitment (Durham *et al*., 1997, *cit in* Somech and Drach-Zahavy, 2004). This lead individuals to engage in organizational citizenship behaviors, those that will help the organization achieve its goals and rise group cohesion, whether or not these behaviors are part of the employee's role (Senge, 1991).

Similarly, influencing organizational tasks and processes by establishing organizational learning mechanisms for continuous learning is the key to promoting individual citizenship behaviors by encouraging individuals to cooperate and share knowledge (Organ, 1990; Podsakoff and MacKenzie, 1997; Somech and Drach-Zahavy, 2004).

The previously mentioned profound cultural change in public administration strategies implies the replacement of the theories-in-use (Argyris and Schon, 1978) and requires a double-loop learning process of creative thinking, organizational learning mechanism essential to inducing organizational citizenship behaviors and fostering knowledge sharing. Trust, coming from a supportive environment, is a key element to that process, inducing individual's decision to exhibit those attitudes and behaviors.

So, we think that cultural change must occur simultaneously with management initiatives and strategies in order to create dynamic and intensive learning processes.

3.5. The challenges of new employment relationship

Although many of recent social and economic changes in employment regulations have tended to move power in the direction of employees, this movement had resulted, as we saw before, in limited employment duration, lack of protection in employment regulation and short-term relations, defined by Sharkie (2005) as the new psychological contract.

In fact, the decline in the traditional employment relationship has lead to a greater level of precariousness in the employment relationship. Making transposition to our study variables, that precariousness should lead to a reduction in affective commitment level and, consequently, reduces the willingness to share knowledge and the exhibition of extra-role behaviors.

Organizations with these flexible and atypical employment systems, in contrast to stable employment systems, in which we can include classic public administration, tend to lose their ability to retain their most skilled workers and to be increasingly unable to utilize those knowledge resources that are embedded in organizations social structure.

However, higher levels of precariousness have been recently introduced in portuguese public administration, with a clear impact in the public employment relationship. Workers with an employment relationship of 'Nomination' tend to represent the classical paradigm of protection in employment regulation and long-term relations, while workers with an employment relationship of 'Contract' tend to represent the new psychological contract.

In our research, recognizing the existence of affective commitment in portuguese public employees, we tried to discover if there's any difference between 'Nomination' and 'Contract' workers in affective organizational commitment exhibition. Results didn't found significant differences between those two groups, showing that 'Contract' workers were equally committed to the organization.

So, in the particular context of portuguese local administration, precariousness appears to not lead to a reduction in affective commitment level. More studies across portuguese public organizations are needed to better clarify this relationship.

3.6. Knowledge Management in action: Can knowledge be effectively managed?

A final discussion issue emerged from our investigation results. Although the relations found between theoretical constructs and the subsequent established links between the broad domains of Human Resource Management and Knowledge Management in public context, how can we reduce our model to the operational level?

We agree that more effective governing and public policy development depends on a more systematic and effective management of organizational knowledge in public sector (Riege and Lindsay, 2006). As we said, we think that a cultural shift is required to change portuguese public employees' attitudes and behaviors so that they willingly and consistently share their knowledge.

Now, how can we here establish the link between theory and practice, between knowing and action, between organization's strategy and employee's daily work-life and motivation, acknowledged by the third generation of knowledge management, as defined by Wiig (2002)?

The management of knowledge in an organization is much more than the storage and manipulation of data and information. Tacit knowledge is stored only in the mind of the expert (Davenport and Prusak, 1998) and, as an invisible and intangible asset, is not easy to manage.

Although tacit and explicit forms of knowledge are inseparable and mutually dependent (Prichard, 2000; Alavi and Leidner, 2001), in many occasions, particularly in public administration, where knowledge is a resource with a significant amount of potential status and power (Storey and Barnett, 2001, *cit. in* Hislop, 2003), only the employer's explicit knowledge - including information, communication and skills - can effectively be managed.

Tacit knowledge cannot be easily captured, documented, verified, codified and disseminated (Galup *et al.*, 2003). Thus, when respondents were answering the survey questionnaire items that measure knowledge sharing probably were thinking only about explicit forms of knowledge.

So, in our opinion, is only possible to talk about Knowledge Management in portuguese public organizations as a holistic, agglutinated and integrative practice.

4. LIMITATIONS

There are some limitations to this study that must be mentioned, requiring further examination and additional research.

First, we are working with limited empirical data. Other experimental studies are needed to establish clear relationships between the variables. Specifically, our results suggest that there is an relationship between affective organizational commitment, knowledge sharing attitudes and organizational citizenship behaviors among portuguese public administration workers, but do not demonstrate a causal relationship between variables, v.g. that affective commitment directly causes donation of organizational knowledge or exhibition of organizational citizenship behaviors, and that level of extra-role behaviors causes changes in knowledge sharing. More longitudinal studies across organizations are also needed.

Second, this study did not consider all consequences and determinants of affective organizational commitment, of willingness to knowledge sharing and of organizational citizenship behaviors exhibition. A myriad of other variables might play a role. Other studies are required to explore different relationships between those and other variables directly related to Knowledge Management and Human Resource Management.

Third, the survey questionnaire was an auto-response questionnaire. While this is common in organizational research, it is nonetheless problematic. Self-reported measures of work behavior likely lead to an overestimation of actual work behavior and may lead to inflated correlations due to halo error and mono-method bias. It's recognized that some participants try to please the researcher, lie to make themselves look better, or have mistaken memories. And the fact that all the items of the questionnaire were assessed by the same source at the same time may also produce another statistical bias – the effect of common method variance. Thus, the results interpretation should be cautious, particularly the means of the analyzed variables and the absolute size of the correlations obtained herein. However, these statistical effects do not necessarily distort observed interactions between variables and hence do not necessarily impair the conclusiveness of our analysis.

Fourth, the generalizability of our results across organizations, sectors and countries remain to be explored. Based on a sample of 116 respondents drawn from one particular context (three portuguese public organizations from local administration), interesting significant results have been obtained. We tried to create a representative sample from portuguese public administration in order to not affect investigation results. However, the

sample is unrepresentative of the general population. In fact, a larger sample that brings more statistical power would have allowed more valuable statistical analysis and increased generalization of the results. Moreover, the research should be tested further using samples from other countries, since cultural differences among organizations influence individual perceptions regarding sharing knowledge and extra-role behavior exhibition, and also from other sectors, in face of public administration particularities. We strongly believe that research in this area particularly in a public organization or in a private organization would have different results. In further chapters (cf. "Implications" and "Further Research"), we'll examine with more detail those particularities of Public Sector.

5. IMPLICATIONS

Most previous research, which focused on investigating knowledge sharing and citizenship behaviors as individual-related, identified various characteristics of individuals that might foster the tendency of an organization's members to engage in knowledge sharing and to employ citizenship behaviors.

Our results go an important step farther by linking those constructs with the affective organizational commitment and identifying these behaviors and attitudes in a public administration framework. In this level, top management should modify organizational frameworks (broadly defined to include organizational characteristics and practices) in order to improve organizational effectiveness.

Thus, this study has important implications for (both public and private) top management, as following:

First, as we found in our results, managers must consider that knowledge donating can only occur when individuals are willing to share their existing knowledge. Affective commitment to the organization helps the elimination of resistance barriers to knowledge sharing, facilitating trust, fairness and cooperation – in both management and coworkers – as postulated by Guest and Conway's (1997, 2001) model of the psychological contract.

Second, managers should create a positive social interaction climate, characterized by top management support, employee involvement and commitment to the organization, reward and incentive systems inducing knowledge sharing and organizational citizenship behaviors, in order to facilitate both management and employees to socialize and interact frequently, proposing ideas for new opportunities and fostering a knowledge-sharing culture.

Third, it is important to select and retain those employees who identify with the organization's mission, goals and objectives. This requires that the organization's mission be specified and clearly communicated, and goals and objectives be successfully drawn from organization's mission. We know that individuals cannot be affectively committed, unless they are familiar with the organization's mission, goals and objectives. So, according to our study relationships, a clear and successful communication of organization's mission, goals and objectives should have impact in worker's exhibition of organizational citizenship and knowledge sharing behaviors.

Fourth, if top managers truly want to create that environment that encourages employees to display organizational citizenship behaviors and share knowledge within the

organization, they may want to exhibit such behaviors and attitudes themselves in order to communicate to employees that such behaviors are valued by the organization and to demonstrate them that commitment exists.

Specifically in public organizations, we found that some of the major barriers to knowledge sharing include the lack of employee time to contribute their knowledge and a corporate culture that not rewards contributing and sharing of insights. As portuguese public organization members tend to feel that their futures with the organization (and with the public sector) are dependent upon the expertise they generate and not on the extent to which they help others, they will attempt to use knowledge as their source of status and power for personal advantage and to build up and defend their own hegemonies of knowledge. But, as is here demonstrated that there is an actual exhibition of affective organizational commitment, knowledge sharing attitudes and organizational citizenship behaviors among portuguese public administration workers, is now clear that public sector top management must promote a major cultural change, which implies a lot of incentives (facilitating trust, cooperation, involvement and commitment to the organization) and the communication to employees that organizational citizenship behaviors and donate knowledge behaviors are valued by the organization.

6. FURTHER RESEARCH

In present chapter, we propose a research agenda based on our investigation results, discussion and limitations.

6.1. The influence of Human Resource Management strategies and practices

While research has shown that Human Resource Management policies and practices can influence commitment levels and underpin extra-role behaviors and knowledge sharing attitudes, further research is required in this area, mostly because, as outlined earlier, much of the empirical work in this theme is based on theoretical studies and limited data.

According to Hislop (2003), specific Human Resource Management strategies and practices whose effect on organizational commitment, knowledge-sharing attitudes and organizational citizenship behaviors requires to be further investigated include: a) the extent to which *decision-making processes* are fair and equitable; b) the role of *appraisal and reward systems*; c) the importance of *job design*, through giving workers autonomy and making work fulfilling and rewarding; d) the combined effect of *organizational culture* and *work values*; e) the influence of *job security*; and f) the role played by *internal promotion* and career opportunities.

Hence, there is significant potential for Human Resource Management analysts and practitioners to make a valuable contribution towards the development of these links between the broad domains of Knowledge Management and Human Resource Management. That is particularly relevant because, as yet, the Knowledge Management literature, while acknowledging the importance of human and social issues to Knowledge Management initiatives, has yet to fully embrace and engage with Human Resource Management concepts and frameworks.

6.2. The impact of contemporary changes in the employment relationship in the psychological contract

In our research, recognizing the existence of contemporary changes in the employment relationship of portuguese public employees, we didn't found significant differences between 'Nomination' and 'Contract' workers in affective organizational commitment exhibition.

Further empirical research is required into the ways in which contemporary changes in the employment relationship are affecting the psychological contract of workers and all the linked variables, including particularly organizational commitment, knowledge-sharing and extra-role behaviors.

New employment relationship, even in public administration, had resulted in limited employment duration, lack of protection in employment regulation, short-term horizons, low incomes, reduced job security, lack of control over working conditions and reduced promotion opportunities (Gallie *et al.*, 1998; Atkinson, 2002, Sharkie, 2005). That promotes the question about the relevance and validity of the way the psychological contract is theorized – by Guest and Conway (1997, 2001) among others – regarding the extent to which and ways in which the psychological contract of workers has changed (Beaumont and Harris, 2002).

Our inconclusive results forward us to questions like: Is the nature of the psychological contract really changing, with workers having reduced expectations regarding employment security and career opportunities? And what real impact do such changes have on both the affective commitment that workers feel to their organizations and their directly related knowledge-sharing attitudes and organizational citizenship behaviors?

6.3. The public administration specific context

Additional empirical research is required in order to extend investigation results to the portuguese public administration global context. A larger sample of public organizations (not only from local administration context, but also from central administration) would increase generalization of the results.

As we said before, the research model should also be tested further using samples from other sectors, in face of public administration particularities. We strongly believe that

research in this area particularly in a public organization or in a private organization would have different results.

Particularly in public sector, we think that political issues need to be explored more, because the success of implementing Knowledge Management and Human Resource Management initiatives and strategies in public administration framework has to be always in line with the political aspects.

In sum, this study has attempted to make a decisive approach between Human Resource Management and Knowledge Management, introducing the concepts of organizational commitment, organizational citizenship and knowledge sharing – and its relationships – to the portuguese public administration context. Undoubtedly, many significant and pertinent issues remain to be examined in future research and practice that will provide additional insights about the explored links.

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http://www.aeaweb.org/
http://www.iscte-iul.pt/
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http://drive.google.com/
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ANNEXES

Survey Questionnaire

ISCTE ⬡ Business School
Instituto Universitário de Lisboa

O Questionário que se segue integra-se no trabalho de investigação no âmbito de Tese de Mestrado da Escola de Gestão do Instituto Superior das Ciências do Trabalho e da Empresa.

Todas as informações nele prestadas são absolutamente confidenciais. Se tiver alguma dúvida, contacte imediatamente o investigador. Obrigado.

DADOS PESSOAIS

Sexo:

Masculino ❑

Feminino ❑

Idade _____

Habilitações Literárias:

Sem Escolaridade ❑

1.º Ciclo - 4.º ano (ex-4.ª classe) ❑

2.º Ciclo - 6.º ano (ex-Ciclo Preparatório) ❑

3.º Ciclo - 9.º ano (ex-5.º ano dos Liceus) ❑

Ensino Secundário - 11.º ano (ex-7.º ano dos Liceus) ❑

Ensino Secundário – 12.º ano ❑

Curso Profissional ❑

Bacharelato ❑

Licenciatura (Pré-Bolonha) ❑

Licenciatura (Pós-Bolonha) ❑

Pós-Graduação ❑

Mestrado (Pré-Bolonha) ❑

Mestrado (Pós-Bolonha) ❑

Doutoramento ❑

Outra _____

Área de Formação _____

Organização Onde Trabalha Actualmente _____

Profissão/Carreira Profissional _____

N.º de Anos de Carreira na Administração Pública _____

N.º de Anos de Carreira na Organização Actual _____

Tipo de Vínculo com a Organização Actual:

Nomeação ❑

Contrato ❑

Outro _____

ISCTE ⬤ Business School
Instituto Universitário de Lisboa

QUESTIONÁRIO

Apresentam-se de seguida um conjunto de afirmações que representam possíveis intenções e comportamentos das pessoas em relação à Organização onde trabalham actualmente. Não há respostas certas ou erradas.

Indique o grau de concordância relativamente a cada uma das afirmações apresentadas, assinalando com um círculo uma das sete alternativas possíveis.

1. Não tenho um elevado sentimento de pertença relativamente a esta Organização.

1	2	3	4	5	6	7
Discordo Totalmente	Discordo Moderadamente	Discordo Ligeiramente	Não Concordo Nem Discordo	Concordo Ligeiramente	Concordo Moderadamente	Concordo Totalmente

2. Quando aprendo alguma coisa nova, partilho-a com os colegas do meu Departamento/Divisão para que possam aprendê-la também.

1	2	3	4	5	6	7
Discordo Totalmente	Discordo Moderadamente	Discordo Ligeiramente	Não Concordo Nem Discordo	Concordo Ligeiramente	Concordo Moderadamente	Concordo Totalmente

3. Nos últimos seis meses, por iniciativa própria, trabalhei mais do que era requerido.

1	2	3	4	5	6	7
Discordo Totalmente	Discordo Moderadamente	Discordo Ligeiramente	Não Concordo Nem Discordo	Concordo Ligeiramente	Concordo Moderadamente	Concordo Totalmente

4. Não me sinto "ligado emocionalmente" a esta Organização.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

5. Nos últimos seis meses, ajudei colegas quando eles tinham muito trabalho para fazer.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

6. Esta Organização tem um grande significado pessoal para mim.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

7. Partilho a informação que possuo com os meus colegas de Departamento/Divisão.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

8. Nos últimos seis meses, tentei recrutar voluntários para trabalhar na Organização.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

9. Não me sinto como "fazendo parte da família" desta Organização.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

10. Nos últimos seis meses, ajudei voluntariamente o(a) meu(minha) chefe/superior no seu trabalho.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

11. Ficaria muito feliz em passar o resto da minha carreira nesta Organização.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

12. Partilho aquilo que sei fazer no trabalho com os meus colegas de Departamento/Divisão.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

13. Nos últimos seis meses, efectuei sugestões para melhorar processos de trabalho, por minha iniciativa pessoal.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

14. Gosto de falar sobre esta Organização para outras pessoas.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

15. Quando aprendo alguma coisa nova, partilho-a com os colegas de outros Departamentos/Divisões para que possam aprendê-la também.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

16. Nos últimos seis meses, elogiei abertamente esta Organização junto dos meus amigos.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

17. Na realidade, sinto os problemas desta Organização como se fossem meus.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

18. Partilho a informação que possuo com os colegas de outros Departamentos/Divisões.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

19. Nos últimos seis meses, durante o período de trabalho fiz mais/maiores pausas do que aquelas que me eram permitidas.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

20. Sinto que poderia facilmente ficar "ligado emocionalmente" a outra Organização tal como me sinto "ligado" a esta.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

21. Partilho aquilo que sei fazer no trabalho com os colegas de outros Departamentos/Divisões.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

22. Nos últimos seis meses, critiquei de forma negativa a Organização em frente a amigos.

1	2	3	4	5	6	7
Discordo Totalmente	*Discordo Moderadamente*	*Discordo Ligeiramente*	*Não Concordo Nem Discordo*	*Concordo Ligeiramente*	*Concordo Moderadamente*	*Concordo Totalmente*

Statistical Tables

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
IDADE	116	21	64	37.40	8.597
N.º de Anos de Carreira na Administração Pública	94	0	32	10.16	8.635
N.º de Anos de Carreira na Organização Actual	98	0	32	8.88	7.494
Valid N (listwise)	92				

SEXO

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	48	41.4	41.4	41.4
	2	68	58.6	58.6	100.0
	Total	116	100.0	100.0	

IDADE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21	1	.9	.9	.9
	22	2	1.7	1.7	2.6
	23	1	.9	.9	3.4
	25	1	.9	.9	4.3
	26	3	2.6	2.6	6.9
	27	3	2.6	2.6	9.5
	28	8	6.9	6.9	16.4
	29	2	1.7	1.7	18.1
	30	6	5.2	5.2	23.3
	31	8	6.9	6.9	30.2
	32	4	3.4	3.4	33.6
	33	7	6.0	6.0	39.7
	34	4	3.4	3.4	43.1
	35	6	5.2	5.2	48.3
	36	2	1.7	1.7	50.0
	37	3	2.6	2.6	52.6
	38	6	5.2	5.2	57.8
	39	3	2.6	2.6	60.3
	40	2	1.7	1.7	62.1
	41	7	6.0	6.0	68.1
	42	5	4.3	4.3	72.4
	43	4	3.4	3.4	75.9
	44	5	4.3	4.3	80.2
	45	1	.9	.9	81.0
	46	5	4.3	4.3	85.3
	47	2	1.7	1.7	87.1
	48	1	.9	.9	87.9
	49	5	4.3	4.3	92.2
	50	1	.9	.9	93.1
	51	3	2.6	2.6	95.7
	52	1	.9	.9	96.6
	55	1	.9	.9	97.4
	58	1	.9	.9	98.3
	60	1	.9	.9	99.1
	64	1	.9	.9	100.0
	Total	116	100.0	100.0	

Case Processing Summary

	SEXO	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
N.º de Anos de Carreira na Administração Pública	1	38	79.2%	10	20.8%	48	100.0%
	2	56	82.4%	12	17.6%	68	100.0%

Case Processing Summary

	SEXO	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
N.º de Anos de Carreira na Organização Actual	1	39	81.3%	9	18.8%	48	100.0%
	2	59	86.8%	9	13.2%	68	100.0%

Organização Onde Trabalha Actualmente

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	31	26.7	26.7	26.7
	2	43	37.1	37.1	63.8
	3	42	36.2	36.2	100.0
	Total	116	100.0	100.0	

Case Processing Summary

	Organização Onde Trabalha Actualmente	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
N.º de Anos de Carreira na Administração Pública	1	25	80.6%	6	19.4%	31	100.0%
	2	32	74.4%	11	25.6%	43	100.0%
	3	37	88.1%	5	11.9%	42	100.0%

Case Processing Summary

	Organização Onde Trabalha Actualmente	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
N.º de Anos de Carreira na Organização Actual	1	25	80.6%	6	19.4%	31	100.0%
	2	36	83.7%	7	16.3%	43	100.0%
	3	37	88.1%	5	11.9%	42	100.0%

Case Processing Summary

	Organização Onde Trabalha Actualmente	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
IDADE	1	31	100.0%	0	.0%	31	100.0%
	2	43	100.0%	0	.0%	43	100.0%
	3	42	100.0%	0	.0%	42	100.0%

Habilitações Literárias

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10	6	5.2	5.2	5.2
	11	4	3.4	3.4	8.6
	12	3	2.6	2.6	11.2
	13	21	18.1	18.1	29.3
	14	1	.9	.9	30.2
	2	1	.9	.9	31.0
	3	2	1.7	1.7	32.8
	4	6	5.2	5.2	37.9
	5	4	3.4	3.4	41.4
	6	13	11.2	11.2	52.6
	7	11	9.5	9.5	62.1
	9	44	37.9	37.9	100.0
	Total	116	100.0	100.0	

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Tipo de Vínculo com a Organização Actual

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	48	41.4	46.2	46.2
	2	56	48.3	53.8	100.0
	Total	104	89.7	100.0	
Missing	System	12	10.3		
Total		116	100.0		

N.º de Anos de Carreira na Administração Pública

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	6	4.3	6.4	6.4
	1	9	6.4	9.6	16.0
	2	6	4.3	6.4	22.3
	3	6	4.3	6.4	28.7
	4	5	3.6	5.3	34.0
	5	4	2.9	4.3	38.3
	6	3	2.1	3.2	41.5
	7	4	2.9	4.3	45.7
	8	3	2.1	3.2	48.9
	9	4	2.9	4.3	53.2
	10	8	5.7	8.5	61.7
	11	5	3.6	5.3	67.0
	12	5	3.6	5.3	72.3
	14	1	.7	1.1	73.4
	15	3	2.1	3.2	76.6
	16	1	.7	1.1	77.7
	17	1	.7	1.1	78.7
	18	2	1.4	2.1	80.9
	19	1	.7	1.1	81.9
	20	3	2.1	3.2	85.1
	22	1	.7	1.1	86.2
	23	4	2.9	4.3	90.4
	26	1	.7	1.1	91.5
	27	4	2.9	4.3	95.7
	28	1	.7	1.1	96.8
	30	2	1.4	2.1	98.9
	32	1	.7	1.1	100.0
	Total	94	67.1	100.0	
Missing	System	46	32.9		
Total		140	100.0		

N.º de Anos de Carreira na Organização Actual

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	2.9	4.1	4.1
	1	11	7.9	11.2	15.3
	2	4	2.9	4.1	19.4
	3	1	.7	1.0	20.4
	3	5	3.6	5.1	25.5
	4	10	7.1	10.2	35.7
	5	7	5.0	7.1	42.9
	6	5	3.6	5.1	48.0
	7	4	2.9	4.1	52.0
	8	7	5.0	7.1	59.2
	9	4	2.9	4.1	63.3
	10	5	3.6	5.1	68.4
	11	3	2.1	3.1	71.4
	12	4	2.9	4.1	75.5
	14	3	2.1	3.1	78.6
	15	3	2.1	3.1	81.6
	16	3	2.1	3.1	84.7
	17	1	.7	1.0	85.7
	18	3	2.1	3.1	88.8
	20	3	2.1	3.1	91.8
	22	1	.7	1.0	92.9
	23	1	.7	1.0	93.9
	25	1	.7	1.0	94.9
	27	2	1.4	2.0	96.9
	28	2	1.4	2.0	99.0
	32	1	.7	1.0	100.0
	Total	98	70.0	100.0	
Missing	System	42	30.0		
Total		140	100.0		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
VAR00001	116	1.50	4.88	3.6552	.80566
VAR00002	116	2.50	5.00	4.0819	.57083
VAR00003	116	2.33	5.00	4.3534	.51694
VAR00004	116	2.00	5.00	4.0302	.71106
VAR00005	116	1.67	5.00	3.5172	.80739
VAR00006	116	1.00	5.00	3.9871	.85836
Valid N (listwise)	116				

Correlations

		IDADE	N.º de Anos de Carreira na Administraç ão Pública	N.º de Anos de Carreira na Organização Actual	Tipo de Vínculo com a Organização Actual	VAR00001	VAR00002	VAR00003	VAR00004	VAR00005	VAR00006
IDADE	Pearson Correlation	1	.734**	.613**	-.325**	-.030	-.055	-.119	.005	.042	-.048
	Sig. (2-tailed)	.	.000	.000	.001	.751	.555	.202	.956	.654	.612
	N	116	94	98	104	116	116	116	116	116	116
N.º de Anos de Carreira na Administração Pública	Pearson Correlation	.734**	1	.710**	-.370**	-.030	-.148	-.200	-.030	.108	-.152
	Sig. (2-tailed)	.000	.	.000	.000	.777	.156	.054	.771	.299	.144
	N	94	94	92	89	94	94	94	94	94	94
N.º de Anos de Carreira na Organização Actual	Pearson Correlation	.613**	.710**	1	-.300**	.011	-.022	-.154	-.108	-.003	-.057
	Sig. (2-tailed)	.000	.000	.	.004	.918	.833	.130	.290	.978	.577
	N	98	92	98	93	98	98	98	98	98	98
Tipo de Vínculo com a Organização Actual	Pearson Correlation	-.325**	-.370**	-.300**	1	.042	.045	.060	-.026	-.016	.091
	Sig. (2-tailed)	.001	.000	.004	.	.675	.649	.545	.791	.873	.360
	N	104	89	93	104	104	104	104	104	104	104
VAR00001	Pearson Correlation	-.030	-.030	.011	.042	1	.345**	.283**	.213*	.658**	.511**
	Sig. (2-tailed)	.751	.777	.918	.675	.	.000	.002	.022	.000	.000
	N	116	94	98	104	116	116	116	116	116	116
VAR00002	Pearson Correlation	-.055	-.148	-.022	.045	.345**	1	.650**	.363**	.417**	.233*
	Sig. (2-tailed)	.555	.156	.833	.649	.000	.	.000	.000	.000	.012
	N	116	94	98	104	116	116	116	116	116	116
VAR00003	Pearson Correlation	-.119	-.200	-.154	.060	.283**	.650**	1	.436**	.327**	.249**
	Sig. (2-tailed)	.202	.054	.130	.545	.002	.000	.	.000	.000	.007
	N	116	94	98	104	116	116	116	116	116	116
VAR00004	Pearson Correlation	.005	-.030	-.108	-.026	.213*	.363**	.436**	1	.354**	.232*
	Sig. (2-tailed)	.956	.771	.290	.791	.022	.000	.000	.	.000	.012
	N	116	94	98	104	116	116	116	116	116	116
VAR00005	Pearson Correlation	.042	.108	-.003	-.016	.658**	.417**	.327**	.354**	1	.432**
	Sig. (2-tailed)	.654	.299	.978	.873	.000	.000	.000	.000	.	.000
	N	116	94	98	104	116	116	116	116	116	116
VAR00006	Pearson Correlation	-.048	-.152	-.057	.091	.511**	.233*	.249**	.232*	.432**	1
	Sig. (2-tailed)	.612	.144	.577	.360	.000	.012	.007	.012	.000	.
	N	116	94	98	104	116	116	116	116	116	116

**·. Correlation is significant at the 0.01 level (2-tailed).

*·. Correlation is significant at the 0.05 level (2-tailed).

Group Statistics

	Tipo de Vínculo com a Organização Actual	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	1	48	3.6224	.83693	.12080
	2	56	3.6920	.84509	.11293

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
VAR00001	Equal variances assumed	.094	.760	-.420	102	.675	-.0696	.16549	-.39782	.25868
	Equal variances not assumed			-.421	99.867	.675	-.0696	.16537	-.39766	.25852

Dissertation Defense Presentation

ISCTE ◉ **Business School**
Instituto Universitário de Lisboa

Exploring the Links Between Human Resource Management and Knowledge Management:

Organizational commitment, organizational citizenship behavior and knowledge sharing in portuguese public organizations

Ricardo Alexandre Rodrigues Nunes

Business Administration
Master's Degree Dissertation

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Exploring the Links Between Human Resource Management and Knowledge Management

1. Conceptual Framework
2. Hypotheses
3. Investigation Goals
4. Method and Analysis
5. Main Results
6. Discussion Points
7. Limitations
8. Implications
9. Further Research
10. Main Conclusion

1. Conceptual Framework

Knowledge Management in the Organization

- Knowledge, the Most Strategically Important Organizational Resource

- Knowledge Management: An Organizational Changing and Developing Process

- Knowledge Management in Action: The Creation and Transfer of Knowledge in the Organization

- The Knowledge Sharing Process: Knowledge Donating *versus* Knowledge Collecting

1. Conceptual Framework

Explicit vs. Tacit knowledge
(adapted from Nonaka, 1994; Nonaka and Takeuchi, 1995; and António, 2006)

Explicit knowledge	Tacit knowledge
- Formal	- Intuitive
- Unambiguous	- Ambiguous
- Scientific	- Difficult to reduce to a scientific equation
- Articulated	- Non articulated
- Observable in use	- Non observable in use
- Verifiable	- Non verifiable
- Simple	- Complex

1. Conceptual Framework

The Organizational Commitment

- The Commitment Components: Affective, Continuance and Normative Commitment

- Organizational Commitment and Knowledge Sharing

- The Antecedents and Consequences of Organizational Commitment

1. Conceptual Framework

The Organizational Commitment Components
(adapted from Allen and Meyer, 1990; and Meyer and Allen, 1991)

Organizational commitment component	Antecedents	Relation with the organization	Feeling towards the organization
Affective	- work experience - work conditions - personal expectations	- emotional attachment - identification - involvement	- want to continue employment
Continuance	- function benefits - available jobs	- recognize of high costs associated with leaving	- need to continue employment
Normative	- personal values - perceived obligations	- feeling of obligation	- ought to continue employment

1. Conceptual Framework

The Organizational Citizenship Behavior

- The Extra-Role Behaviors

- Organizational *versus* Individual Citizenship Behaviors type of employment relationship includes 'Nomination' and 'Contract'

- Organizational Commitment and Organizational Citizenship Behavior

- Knowledge Sharing and Organizational Citizenship Behavior

1. Conceptual Framework

Human Resource Management:

The "Social Glue" to Understand our Research

- The Agglutinant Concept of Organizational Culture

- The Importance of a Learning Organization

- The Psychological Contract Model: An Integrating Framework

- The Moderator Role of Trust

2. Hypotheses

Hypothesis 1. *Affective organizational commitment is positively related to knowledge sharing in portuguese public administration workers*

Hypothesis 2. *Affective organizational commitment is positively related to organizational citizenship behavior in portuguese public administration workers*

Hypothesis 3. *Knowledge sharing is positively related to organizational citizenship behavior in portuguese public administration workers*

2. Hypotheses

Public Administration Particularities

- Public _versus_ Private Sector
- Portuguese Local Administration
- Type of employment relationship: 'Nomination' _versus_ 'Contract'

2. Hypotheses

Hypothesis 4. *The number of years in public administration is positively related to affective commitment in portuguese public administration workers*

Hypothesis 5. *The number of years in present organization is positively related to affective commitment in portuguese public administration workers*

Hypothesis 6. *There is a difference between affective organizational commitment in portuguese public administration workers with an employment relationship of 'Nomination' and portuguese public administration workers with an employment relationship of 'Contract'.*

3. Investigation Goals

Main Goal

    The study of relationships between organizational commitment, organizational citizenship behavior and knowledge sharing attitudes in portuguese public administration specific context, establishing and exploring the links between Human Resource Management and Knowledge Management.

3. Investigation Goals

Specific Goals

- The study of the relation between affective organizational commitment and knowledge sharing in portuguese public administration workers

- The study of the relation between affective organizational commitment and organizational citizenship behavior in portuguese public administration workers

- The study of the relation between knowledge sharing and organizational citizenship behavior in portuguese public administration workers

4. Method and Analysis

Sample

- 116 respondents from three different portuguese local public organizations

Research Strategy

- Quantitative Methodology

- Correlational Study

Measurement

- 22 items Auto-response Questionnaire

4. Method and Analysis

Instruments Used for Constructs Measurement

References	Instruments	Original Constructs	Items
Allen and Meyer (1990) [Adapted for portuguese context by Nascimento and cols., 2008]	*Organizational Commitment Scale*	Affective Organizational Commitment	1*, 4*, 6, 9*, 11, 14, 17, 20*
Van den Hooff and cols. (2002)	*Knowledge Sharing Scale*	Knowledge Donating	2, 7, 12, 15, 18, 21
Smith and cols. (1983) [modified by Riketta and Landerer, 2005]	*Organizational Citizenship Behavior Scale*	Organizational Citizenship Behavior	3, 5, 8, 10, 13, 16, 19*, 22*

4. Method and Analysis

Analysis

- Factor analysis conducted on the 22 items of the auto-response questionnaire
  - Extraction method: Principal Component Factor Analysis
  - Rotation Method: Varimax with Kaiser Normalization
- Pearson Correlation Coefficients
- Student's Test

5. Main Results

- The results of the factor analysis confirmed the multi-dimensionality of the instrument used in our investigation
  - The first component emerged from factor analysis was affective organizational commitment
  - Two components emerged from knowledge sharing scale
  - Three components emerged from organizational citizenship behavior scale

5. Main Results

Component Description

I	Affective Organizational Commitment (AOC)	
II	Knowledge Sharing	Knowledge Donating (KS 1)
III		Willingness to Knowledge Sharing (KS 2)
IV	Organizational Citizenship Behavior	Altruism (OCB 1)
V		Participation (OCB 2)
VI		Sense of Duty (OCB 3)

5. Main Results

- Factor analysis provided support for the evidence that, in our sample, composed by respondents from three different portuguese public organizations, workers effectively exhibit affective organizational commitment, knowledge sharing and organizational citizenship behavior.

- The examination of Pearson correlations between the study variables indicates that those hypothetical constructs were significantly correlated, supporting Hypotheses 1, 2 and 3.

5. Main Results

Correlation Coefficients for the Study Variables

Variables	I	II	III	IV	V	VI	1	2	3	4
I – Affective Organizational Commitment (AOC)	1.00									
II – Knowledge Donating (KS 1)	.35**	1.00								
III - Willingness to Knowledge Sharing (KS 2)	.28**	.65**	1.00							
IV - Altruism (OCB 1)	.21*	.36**	.44**	1.00						
V - Participation (OCB 2)	.66**	.42**	.33**	.35**	1.00					
VI - Sense of Duty (OCB 3)	.51**	.23*	.25**	.23*	.43**	1.00				
1. Age	-.03	-.06	-.12	.01	.04	-.05	1.00			
2. Type of employment relationship	.04	.05	.06	-.03	-.02	-.09	-.33**	1.00		
3. Years in public administration	-.03	-.15	-.20	-.03	.11	-.15	.73**	-.37**	1.00	
4. Years in present organization	.01	-.02	-.15	-.11	-.00	-.06	.61**	-.30**	.71**	1.00

5. Main Results

- Pearson correlations also indicate that affective organizational commitment wasn't significantly related with seniority in public administration and in present organization (no empirical support to both Hypotheses 4 and 5)

- With Student's test results, we aren't able to assume statistical differences between types of employment relationship groups - 'Nomination' and 'Contract' - in affective organizational commitment component (no empirical support to Hypothesis 6)

6. Discussion Points

- Linking Human Resource Management and Knowledge Management

- Organizational commitment and knowledge sharing and organizational citizenship behaviors: One-way relations?

- The influence of Organizational Culture: Cultural barriers to knowledge sharing

6. Discussion Points

- The influence of a Learning Organization: The key to promoting organizational citizenship behaviors and knowledge sharing

- The challenges of new employment relationship

- Knowledge Management in action: Can knowledge be effectively managed?

7. Limitations

- Limited empirical data
- The study did not consider all consequences and determinants of the variables
- Statistical bias (v.g. halo error, mono-method bias and the effect of common method variance)
- Generalizability of results across organizations, sectors and countries remain to be explored

8. Implications

-   Managers should modify organizational frameworks in order to improve organizational effectiveness
-   Managers must consider that knowledge donating can only occur when individuals are willing to share their existing knowledge
-   Managers should create a positive social interaction climate
-   Managers must select and retain those employees who identify with the organization's mission, goals and objectives
-   Managers must exhibit those behaviors and attitudes themselves
-   Specifically, public sector managers must promote a major cultural change

9. Further Research

- The influence of Human Resource Management strategies and practices
- The impact of contemporary changes in the employment relationship in the psychological contract
- The public administration specific context

10. Main Conclusion

- Despite the lack of a knowledge-sharing culture in portuguese public organization management strategies, public sector workers are willing to exhibit affective commitment and organizational citizenship behaviors, required attitudes for successful knowledge sharing

- Proving that public administration workers exhibit those related behaviors and attitudes should be the starting point to transforming relatively uncompetitive public sector organizations into dynamic and knowledge-intensive learning organizations

Exploring the Links Between Human Resource Management and Knowledge Management:

Organizational commitment, organizational citizenship behavior and knowledge sharing in portuguese public organizations

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