

Issues of Knowledge Management in the Public Sector

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Abstract: The new economy not only poses challenges, but also offers opportunities for both private and public sectors alike. To meet the challenges and take the opportunities, government must take active initiatives to adopt new management tools, techniques and philosophies of the private sector and adapt to its circumstance. Knowledge management (KM) is such an area that needs to be further explored and exploited for its full benefits to be reaped. Key issues, challenges, and opportunities of KM in the public sector need to be addressed and better understood

Keywords: knowledge sharing, NPM, public sector, strategy

1. Introduction

We are living in a world of rapid change driven by globalisation, the knowledge-based economy coupled by ever-fast development of information, communication and technology (ICT). This change, however, not only poses some challenges, but also offers opportunities for both private and public sectors alike.

In order to gain competitive advantage for their survival and competence against discontinuous environmental change, most of the large companies in the private sector have been actively taking initiatives to adopt new management tool, techniques and philosophies. Governments always follow suit. History shows that most of the management philosophies were first practiced in the large company (McAdam and Reid 2000). Once they gained foot in the field, then become adopted in the other sectors. Examples include; enterprise resource planning (ERM), business process re-engineering (BPR), and total quality management (TQM). Now comes the turn of KM. KM is no exception. However, decade of practicing in the private companies attests that KM is not just another management fad as some critics claimed. It has passed the fad stage and is here to stay. Therefore it is opportune time for KM to devolve into the public sector.

KM has for sometime been at the core of government tasks – inseparable from strategy, planning, consultation and implementation (OECD 2001). However, evidence drawn from the existing literature suggests that public sector is falling behind in these practices. Governments are now realising the importance of KM to its policy-making and service delivery to the public and some of the government departments are beginning to put KM high on its agenda. However, it is not easy to implement, as it seems. The benefits to be reaped from KM will not be handed to

governments on a plate, nor will the challenges be met without adjustment. Strategies and plans for implementing KM must be carefully thought-out in advance in order to succeed in the attempt and effort. There are concrete issues for government to consider and address. While there are many issues that need to be addressed in the public sector, this paper concentrates on three key issues currently relating to KM.

1.1 Awareness of KM in the public sector

A major component of successful KM practice is raising its awareness not only to managers at all levels, but also to frontline personnel. The concept of KM need to be better understood and benefits much talked about by everyone in the organisation in order for the organisation to be conducive to the KM practices.

The concept of KM is nothing new (Hansen et al 1999). Organisations have always used KM practices (in various disguises) to make decisions, and to produce goods and services, though not in a deliberate and systematic manner. Essentially, what is new about KM is the act of being conscious about the existence of a KM process (Sarvary 1999). Organisations that use the KM practices without knowledge and awareness of it will not reap the benefits to its full, if any at all. Deliberately managing knowledge in a systematic and holistic way can increase awareness of benefits to both individuals and organisations. However, it is considered by the authors of this paper that there seems lack of awareness of KM in the public sector. This can be severely hinder to the effective implementation of KM initiatives in organisations in search of increased performance. Therefore, it is vital for an organisation to understand the concept of KM when starting a KM initiative in order to succeed.

1.2 Knowledge management

The concept of KM has been in practice for a long time, and mostly in an informal manner. The lack of consensus in defining what is meant by the term has led to major confusion reflected in various studies in the field. Therefore, to understand KM concept, distinctions have to be made first between data, information, and knowledge to clear up confusion on the differences and relationships in this continuum. However, there has been much discussion of the topic in the literature, only simple and concise concepts have been given here.

The term “knowledge” is one of the more confusing aspects of KM. The terms “information” and “data” are often used interchangeably with the term “knowledge”. In fact they have different meanings. And understanding the differences is essential to doing knowledge work successfully.

In general, data are raw facts. For data to be of value, however, they must be processed (put in a given context) to obtain information, which decision can be made. Knowledge is perceived as meaningful information. The relationship between data, information and knowledge is recursive and depends on the degree of “organisation” and “interpretation”. Data and information are distinguished by their “organisation”, and information and knowledge are differentiated by “interpretation” (Bhatt 2001). So knowledge is neither data nor information. Knowledge is an understanding, and one gains knowledge through experience, reasoning, intuition and learning. Individuals expand their knowledge when others share their knowledge, and one’s knowledge is combined with the knowledge of others to create new knowledge (CIO Council, 2001).

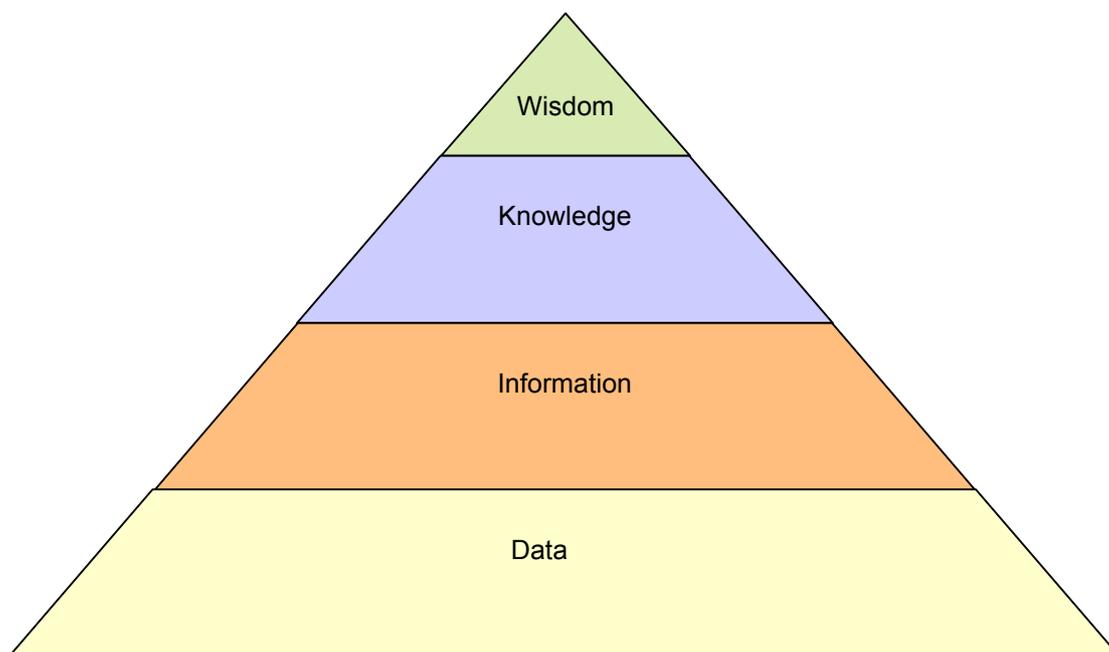


Figure 1: Continuum from data to wisdom.

Knowledge is derived from information. It results from making comparisons, identifying consequences, and making connections. Some experts include wisdom and insight in their definitions of knowledge. Wisdom is the utilisation of accumulated knowledge. Knowledge also includes judgement and “rules of thumb” developed over time through trial and error.

Davenport and Prusak (1998) defined knowledge as a fluid mix of framed experience,

values, contextual information, expert insight and grounded intuition that provides an environment of and framework for evaluating and incorporating new experience and information. It originates and is applied in the minds of knowers. In organisations, it is often embedded not only in documents or repositories but also in organisational routines, processes, practices and norms.

Many formal definition of KM abound in the literature. The definition used by the authors of this paper is:

“An ability of an organisation to use its collective knowledge through a process of knowledge generation, sharing and exploitation enabled by technology to achieve its objectives”.

1.3 Types of knowledge: Explicit and tacit

Knowledge in organisations is often classified into two types: explicit and tacit.

Explicit knowledge is knowledge that can be captured and written down in documents or databases. Explicit knowledge is formal and systematic, which can be easily communicated and shared (Nonaka 1991). This type of knowledge includes patents, instruction manuals, written procedures, best practices, lessons learned and research findings. It is shared with a high degree of accuracy. Explicit knowledge can be categorised as either structured or unstructured. Structured knowledge is the data or information organised in a particular way for future retrieval. This includes documents, databases, and spreadsheets, etc. In contrast, e-mails, images, training courses, and audio and video selections are examples of unstructured knowledge because the information they contain is not referenced for retrieval.

Tacit knowledge is the knowledge that people have in their minds. It is much less 'concrete' than explicit knowledge. It is more of an 'unspoken understanding' about something, knowledge that is more difficult to write down. Tacit knowledge can be difficult to access as it is often not known to others. In fact, most people are not aware of the knowledge they themselves possess or of its value to others. Tacit knowledge is considered more valuable because it provides context for people, places, ideas and experiences. It generally requires extensive personal contact and trust to share effectively. Tacit knowledge is highly personal, hard to formalise, and therefore, difficult to communicate to others. As Michael Polanyi (Nonaka 1991) expressed, “We can know more than we can tell”.

To give an example, Highway Code provides the explicit knowledge for the driver, but who uses his/her tacit to drive different cars, on different roads, in different countries, and with steering wheel on other side.

1.4 Managing organisational knowledge

The essence of managing knowledge is concerned with deciding with whom to share, what is to be shared, how it is to be shared, and ultimately sharing and using it. Managing knowledge produces value when shared knowledge is used and reused. Consistent value occurs when there is an atmosphere of trust and motivation for people to share and use knowledge, when there are systematic processes to find and create knowledge, and, when needed, there is technology to store and make knowledge relatively simple to find and share. (CIO Council, 2001)

KM involves systematic approaches to find, understand, and use knowledge to achieve organisational objectives. Managing knowledge creates value by reducing the time and expense of trial and error or the reinvention of the wheel (CIO Council, 2001).

1.5 Benefits of KM

There are many benefits to be reaped from KM. For example, foundation knowledge lists 44 generic benefits of KM on its website (Foundation Knowledge 2003). However, only key benefits of KM are addressed in this paper.

In an organisational setting, benefits can occur at two level; Individual and organisational. At the individual level, KM provides employees opportunities to enhance skills and experience by working together and sharing other people's knowledge and learn from each other, thereby improving personal performance, thereby leading to better career development.

At the organisational level, KM provides two major benefits for an organisation:

1. Improving the organisation's performance through increased efficiency, productivity, quality, and innovation.
2. Organisations that manage knowledge claim higher rates of productivity. By having greater access to their employees' knowledge, organisations make better decisions, streamline processes, reduce re-work, increase innovation, have higher data integrity and greater collaboration (CIO Council, 2001). In other words, for public sector, managing knowledge could reduce the cost of operations and improves customer service
3. Increasing the financial value of the organisation by treating people's knowledge as an asset similar to

traditional assets like inventory and capital facilities (U.S. Department of Navy 2001)

4. As knowledge transfer is increasingly recognised as a source of value creation, organisations have come to identify KM initiatives as strategic facilitators of competitive advantages.

According to a survey (KM magazine, 2001), an organisation's main implementation challenge stems from the absence of a "sharing" culture and employees' lack of understanding KM and the benefits it offers. Organisations can address these challenges by making; training, change management and process redesign primary components of KM initiatives.

2. Comparison of KM in the public and private sector

While literature on KM has been addressing issues, challenges and opportunities for the private sector, little has been discussed for the public sector. Programs such as those associated with New Public Management (NPM) suggest that the public organisations should import managerial processes from the private sector, emulating their successful techniques. However, critics of NPM argue that the differences between public and private sectors are so great that business practices cannot be transferred across. Significant differences in human resource management policies and practices, the management of ethical issues and decision processes still exist between the two sectors. However, there is no established body knowledge on successful management strategies in the private sector that can be drawn upon by public agency either (Boyne 2002). Consequently, it is proposed that there is a need of strategy designed especially for the public sector to be developed to fill the gaps and for cross learning.

2.1 NPM and KM in the public sector

More than decades of development of NPM both theoretically and practically in the western world and its tendency to spread to the developing countries has paved the way and laid a solid foundation for KM initiatives to be implemented in the public sector. To better understand the relevance between NPM and KM, a brief introduction of NPM is discussed.

NPM offers a set of new ideas and tools for government to run the public sector. Its key idea is the employment of private law contracts in order to provide public services. NPM started in the UK with Premier Thatcher in the

early 1980s and since spread around the globe in countries like Australia, New Zealand, Finland, Sweden, France and Germany. In the USA another term 'reinventing' government is used, but the principles of NPM are applied (Lane 2000).

According to Lane (2000), NPM is a general theory about how government can get things done; how government can get services organised and offered to citizens. NPM is not about politics, but about what happens after parliament has decided on the objectives. Its basic claims are that public administration is old fashioned and can be replaced by NPM. What NPM claims is twofold. First, bureaucracy is not the most efficient way to steer the public sector. Second, NPM states that 'contractualism' is the answer to the question of what is to be used instead of administrative law and budgetary appropriation. Contracting out by means of tendering/bidding, auction and leasing as new tools of governance for government to reduce costs and increase efficiency is the main characteristic of NPM. Among the advantages are efficiency, more services produced lower costs, and higher contractual transparency. This, at least in part, is in line with benefits offered by KM. But its disadvantages cannot be overlooked. One major disadvantage is that trust has decreased. Political democracy may be negatively affected and transactions costs may increase. This may run counter to KM in which trust is crucial factor in the culture of sharing knowledge. Nonetheless, the NPM experience of different countries, though varied, indicates that the advantages prevail over the disadvantages.

The practice of NPM and its increasing acceptance by countries around the globe show that the concept and practice of KM stemming from the private companies can be adopted in the public sector. However, its success or failure will depend on how KM is adapted to the context of the public sector. There are some differences indeed existing between the two sectors as alluded above.

2.2 Importance and need of KM for government

The management of knowledge is of increasing importance for governments in dealing with the challenges created by the knowledge economy. These challenges are addressed in the following aspects (OECD 2003):

1. Knowledge has become a critical determinant of competitiveness for the

public sector. Service delivery and policy making are the main tasks for government. In a knowledge economy, governments are increasingly facing competition in these areas at both international level and national level. At the international level, for example (OECD 2003), NGOs and governments are in competition with foreign organisations delivering similar service. Research institutes compete to attract the best researchers and funding while universities are increasingly in competition to attract the most investments, the best students and the best professors. At the national level, competition among public bodies is also increased following the decentralisation processes. In the public sector, goods and capital is not as important as in the private sector, but knowledge is. Knowledge is an important element of competition and is a central resource of the government. Effective functioning of government rests on effective acquisition and dissemination of knowledge.

2. Private firms produce goods and services that are increasingly intensive in intangible capital, directly competing with the public sector for the delivery of goods and services such as education, science, security and knowledge. For example (OECD 2001), through distance learning, coaching, information and courses on the Internet, private firm have increasing influence on the public education and training of citizens, which was traditionally offered by the public sector. As customers demand and receive more customisation from knowledge-oriented private firms, they would also expect similar benefits from the public sector.
3. Retirement of civil servants and frequent transfer of knowledge workers across government departments also create new challenges for the retention of knowledge and preservation of institutional memory and the training of new staff. There is also competition for talent with an ability to share knowledge.
4. According to a report (GAO 2001), approximately 71 % of U.S. government's current employees will be eligible for retirement by 2005. This is not confined to the U.S alone. Most governments are facing the similar problems. It is estimated in Finland, for example, that until 2012 about 85% of the senior civil servants will leave and that nearly half of the civil servants will be leaving in 2001-2011

(Jussilaninen, 2001). Public organisations need to tweak their KM initiatives now to start retaining the knowledge currently in the heads of these employees. Unless this is done, services to the public will suffer. Thus capturing tacit knowledge and then training the staff is important so that it can be passed on to new staff.

Increasingly knowledgeable citizens require governments to be on top of newly created knowledge, as it is increasingly rapidly produced by more differentiated actors.

KM is based on the idea that an organisation's most valuable resource is the knowledge of its people. This focus is being driven by the accelerated rate of change in today's organisations and in society as a whole. KM recognises that today nearly all jobs involve 'knowledge work' and so all staff are 'knowledge workers' (Drucker 1993) to some degree or another - meaning that their job depends more on their knowledge than their manual skills. This means that creating, sharing and using knowledge are among the most important activities of nearly every person in every organisation.

One of the proper solutions to meet the challenges is to take proactive attitude towards KM practices prevalent in the private sector and adopt and adapt them to the public setting. KM has some potential to actually strengthen government effectiveness and competitiveness in the changing environment. Public sectors and NGOs have to face these challenges and make good use of opportunities offered by globalisation, the knowledge-based economy, and new development of ICT. If it does not, it will mean missing out on opportunities KM offers.

3. Generic KM framework in the public sector

3.1 Need for a generic KM framework for the public sector

Many researchers have proposed a variety of KM frameworks, models, and perspectives to help understand the concept of and conduct KM. Holsapple and Joshi (1999) have made a comparative analysis of key KM frameworks available in the literature and argued that none of these researchers appeared to subsume all of the others as each of them addressed certain KM elements. The authors of this paper leads to propose that there is a need for a more comprehensive and unified framework describing the nature of KM.

While these frameworks are designed for the private sector, there are few, which are distinctive, for public sector. The public sector is widely accepted as being different from the private sector and has some unique features of its own. A framework for the public sector is different for two reasons: the public sector is 'stakeholder' dependent while the private sector is 'shareholder' dependent. Stakeholder approach involves multiple parties in the process and it is much more complex to deal with. In the public sector, the stakeholder can be citizens, state and local government, private firms, users, and lobby groups, just to name a few. When governments have to make policy decision and deliver services care and considerations must be taken of the interest of the stakeholders. In the private sector, firms are mainly responsible for their shareholder. Firms must provide shareholders for their returns on investment. Secondly, the private sector is competition based, while the public sector is dependent more on factors such as service delivery, information provision, and knowledge identification, sharing and, utilisation. Due to the survival issue, private firms are in constant vigilance to gain competitive advantage against discontinuous environmental change by adopting new management tool, techniques and philosophies such as KM. There is, however, no such threat in the public sector. In the core public service, organisational change has not traditionally been motivated by product competitiveness. However, traditional public service monopolies, to some extent, are increasingly challenged with the globalisation of information and increased people and capital. Even so, the public sector should focus more on identification, sharing and, utilisation of knowledge.

These two main reasons have seriously altered the implementation of KM strategy. Therefore, it is considered that there is a need to develop a generic KM framework for the public sector, by understanding and implementing KM practices.

3.2 Elements to be considered for public sector KM framework

People, processes, and technology are the three key elements of the environment. KM focuses on people and organisational culture to stimulate and nurture the sharing and use of knowledge; on processes or methods to locate, create, capture and share knowledge; and on technology to store and make knowledge accessible and to allow people to work together without being together. People

are the most important component, because managing knowledge depends upon people's willingness to share and reuse knowledge. (CIO Council, 2001).

3.2.1 People

Getting an organisation's culture (including values and behaviours) 'right' for KM is typically the most important and yet often the most difficult challenge. KM is first and foremost a people issue. The success of KM initiatives depends upon people's motivation, their willingness, and their ability to share knowledge and use the knowledge of others.

People in organisation, processes and technology will at all times be acting as either enablers of, or barriers to, effective KM practices. Barriers need to be identified and removed. Existing enablers also need to be enhanced and additional ones created. This is often where the greatest KM challenges lie

The structure of the public sector organisations has traditionally been compartmentalised. 'Silo' is probably the best word to describe it. 'Need to know' basis is part of public sector culture. 'Knowledge is power', 'what's in it for me', and 'not invented here' syndrome are typical mindsets of the manager and staff in organisations. In such an environment, information and knowledge are hardly ever shared across different units and different organisational levels. However, people do share knowledge for some reasons such as reciprocity, reputation and prestige, or sometimes just for altruistic reasons. This suggests that knowledge sharing is not a natural act in organisations. It needs a mental model change. To change the attitude and behaviour of the people and reduce barriers, a knowledge sharing culture need to be created. The proposed framework suggests following to bring about necessary change:

1. Raise awareness of benefits of KM. Staff and managers should be aware of the changes and advantages that KM can bring to them and organisation. While they believe that knowledge is power, they must understand that sharing knowledge is power.
2. Build an environment of trust. People tend to share knowledge when they know each other. The level of trust has direct bearing on knowledge sharing. The more trust that exists, the more people are willing to share.
3. Develop leaders who foster sharing, as role model. A champion is needed to KM implementation.

4. Establish a formal rewards and recognition system for knowledge sharing. Employees must be rewarded and recognised, not only for sharing their knowledge with others, but also for being willing to use others' knowledge. This can be done by:
 - 4.1. Acknowledging the contributor of ideas, knowledge, and time by linking this to their semi and annual performance evaluation, promotion, and pay.
 - 4.2. Providing special recognition to volunteers, change agents, and role model and rewarding them.
 - 4.3. Celebrating success stories and propagating tales of savings and contributions in order to gain acceptance among employees and engage them in further participation.
 - 4.4. Making knowledge sharing a job requirement.
 - 4.5. Hiring people with an ability to share knowledge
5. Develop and nurture communities of practice (CoPs). CoPs are knowledge centres of an organisation wherein a group of individuals with similar work responsibilities but who are not part of a formally constituted work team; create, share and use knowledge. CoPs can be a broader means of sharing tacit knowledge. They can be effective in the public sector activities, either on generic or specific basis. To reap rewards from CoPs and sustain them over time, organisations need to nurture them by making resources available to them and by allowing members the opportunity to participate.

3.2.2 Process

Drawing KM methodologies from the existing literature, the framework proposes to address issues in relation to the processes and techniques for managing knowledge, the following stages of KM:

1. *Identify*. Determine core competencies, recognise strategic capabilities and knowledge domains, assess the expertise level for each knowledge domain, and focus on bridging the gap between the existing and needed knowledge.
2. *Capture*. Attempt to obtain needed knowledge from both inside and outside sources and to formalise and document the obtained knowledge.

3. *Select*. Assess the value of the captured and formalised knowledge and filter it to obtain knowledge that seems appropriate.
4. *Store*. Classify the filtered knowledge, get it organised in a standard format, add it to the organisational memory, and review and update it periodically.
5. *Share*. Classify and retrieve knowledge from organisational memory, and make it available for the knowledge users.
6. *Apply*. Utilise the knowledge in performing the tasks such as solving problems, making decisions, researching ideas, and learning.
7. *Create*. Discover new knowledge through a variety of processes such as surveys, best practices, research, pilot studies, and data mining.

3.2.3 Technology

Technology is employed in all the processes of KM and various technological solutions are already available in the market. The problem is actually a matter of selecting an appropriate technology (Asoh, et al 2002). However, one must bear in mind that technology is just a crucial enabler. It can help connect people with information, and people with each other, but it is not the solution. Along the technology dimension, the framework proposes the following tasks:

1. Identify the appropriate hardware and software for conducting KM and make sure any technology used must fit the organisation's people and processes.
2. Build a technological infrastructure as identified by employees' needs in knowledge resources and right for the processes.
3. Establish an organisation wide intranet with extensive communicating and collaboration capabilities to share explicit knowledge.
4. Build a knowledge portal, virtual knowledge platform, that is accessible via the organisation wide intranet to share tacit knowledge without being face to face through means such as email, discussion groups, chat rooms, audio and videoconference.
5. Organ and store the knowledge assets in an electronic medium so as to enable efficient and faster access and retrieval.
6. Provide customised access to knowledge resources by pull or push technology to facilitate interaction with citizens, customers, suppliers, partners and others.

4. Conclusions and further research

KM as a discipline is still in its infancy, especially in the public sector, evidenced by little discussion in the current literature. Hence there are still many issues, which are not known. However, governments are realising its importance for running the public sector and starting to practice it. Issues, challenges, and opportunities exist in the process. Public sectors have to face these by taking a proactive attitude and make it happen in order to reap the benefits. To succeed in the attempt, special considerations to lack of awareness, public and private sector difference, and the need for a generic KM framework to be developed must be taken into account.

This paper proposes the key issues and initial stages for development of a conceptual KM framework for public sector. A pilot study of KM in the public sector is currently being undertaken, based on which an in-depth research and result will follow. It is considered that this paper will be of interest to the researchers, academics and practitioners of KM, and especially to everyone in public sector.

References

- Asoh, D., Belardo, B., and Neilson, R. (2002), "KM: Challenges and Opportunities for Government in the New Economy", Proceedings of the 35th International Conference on System Science.
- Bhatt, G.D. (2001), "KM in organisations: Examining the Interaction between Technologies, Techniques, and People", *Journal of Knowledge Management*, Vol. 5, No.1, pp. 68-75.
- Boyne, G.A (2002), "Public and Private Management: What's the Difference?" *Journal of Management Studies* 39:1 January, pp 97-122.
- CIO Council, (2001), "Managing Knowledge @ Work, An Overview of Knowledge Management", Knowledge Management Working Group of the Federal Chief Information Officers Council, August.
- Davenport, T.H. and Prusak, L. (1998), *Working knowledge: How Organisations Manage What They Know*. Harvard Business School Press, Boston, Massachusetts, pp 5.
- Drucker, P. F. (1993), *Post Capitalist Society*, HarperBusiness, pp 6.
- GAO (2001), "Major Management Challenges and Programm Risks: A Governmentwide Perspective," General Accounting Officer Report GAO-01-241 of January1.
- Hansen, M. T., Nohria, N. and Tierney, T. (1999) "What's Your Strategy for Managing Knowledge", *Harvard Business Review*, March-April, pp106-116.
- Holsapple, C.W., and Joshi, K.D. (1999), "Description and Analysis of Existing Knowledge Management Frameworks", Proceeding of the 32nd Hawaii International Conference on System Science.
- Jussilaninen, M. (2001), "Knowledge Management at the Finnish Government", OECD.
- Lane, J. E. (2000), *The Public Sector Concepts, Models and approaches*, Third Edition, Sage Publications, pp 304-305, 315-317.
- McAdam, R and Reid, R. (2000), "A Comparison of Public and Private Sector Perceptions and Use of Knowledge Management", *Journal of European Industrial Training* 24/6, pp 317-329.
- Nonaka, I (1991), "The Knowledge-Creating Company", *Harvard Business Review*, November-December, pp 96-104.
- Nonaka, I. and Takeuchi, H. (1995) *The Knowledge-Creating Company*, Oxford University Press, Oxford, pp vi, 225.
- OECD, (2001), "Knowledge Management: Learning-by-Comparing Experiences from Private Firms and Public Organisations", Summary Record of the High Level Forum held in Copenhagen, 8-9 Feb. 2001, PUMA/HRM (2001) 3, CERI/CD (2001)2.
- OECD, (2003) "Conclusions from the Results of the Survey of Knowledge Management Practices for Ministries/Departments/Agencies of Central Government in OECD Member Countries", February 3-4,2003, GOV/PUMA/HRM(2003)2
- Sarvary, M. (1999), "Knowledge Management and Competition in the Consulting Industry", *California Management Review*, Vol. 41, No.2, pp 95-107.
- The State of Knowledge Management, KM Magazine, May 2001.
- U.S. Department of the Navy, (2001), "Metrics Guide for KM Initiatives", Version 1.0, Draft 9 May 2001.