

**Linking performance appraisal to knowledge  
management activities in the management  
consultancy sector in the UK**

Hadi El-Farr

Leeds University Business School

[hadi.elfarr@gmail.com](mailto:hadi.elfarr@gmail.com)

## **Abstract**

Although many scholars have suggested a link between knowledge management and performance appraisal, little empirical evidence has supported this claim. This paper identifies the importance of knowledge management activities in the performance appraisal systems in the UK consultancy sector. The findings of this paper suggests that although less than half of the respondents have reported that they formally appraise participation in knowledge management, all of the knowledge management activities suggested by the literature are viewed as important in their performance appraisals at diverse weights. This might be because knowledge management is viewed as a set of activities rather than a separate function. Another explanation is that these activities might be appraised indirectly through the already specified working tasks which include such actions. The study focuses on the consultancy sector in the UK, because it is believed that such knowledge intensive organizations are adequate as a starting point to collect empirical evidence on this research subject.

The performance appraisal criteria that relate to knowledge management activities clustered into three components. The highest ranked component in importance represented individual performance. The knowledge management activities supporting individual performance are using individual knowledge for business productivity, enriching the depth of business knowledge, building core competencies and creativity & innovation. The second highest component corresponded to group performance where its supporting knowledge management activities are person-to-person knowledge sharing, protecting knowledge, acquiring knowledge from other employees and enriching the breadth of business knowledge. The third component in importance represents information technology which is relatively lower in importance than the first two components, yet still significantly important. The knowledge management activities supporting information technology are information technology usage, information technology knowledge and contributing to the information technology (databases). Knowledge management activities related to individual and group performances are positively correlated with each other; however, the activities related to information technology are viewed as a separate issue by organizations.

**Key words:** Human resources management, knowledge management, performance appraisal, management consultancy

## **Introduction**

There has been a developing interest in knowledge management within the management literature since the mid 1990s (McCuiston and Jamrog, 2004). Prior to this, knowledge management topics have been discussed principally within the information technology literature. Some scholars argued that knowledge management had reached a saturation level within the information technology literature and that the potential lies in developing knowledge management contained by the human resource management field (Smith, 2004). Other scholars emphasized the personal and tacit dimensions of knowledge, accordingly employees act as an essential part of knowledge management systems/initiatives (Zeleny, 2002, Yahya and Goh, 2002).

This study falls under the human resource approach in developing the knowledge management literature. One of the most utilized and formalized human resource management practices is the performance appraisal systems. The study aims to understand how various knowledge management activities are viewed within performance appraisal systems in the UK consultancy sector. First, the research explores briefly the performance appraisal systems. Then, the study focuses on knowledge management activities identified as important in the literature in enhancing performance.

The study is considered important due to several reasons. First, our understanding of human resources practices within the UK consultancy sector is limited, including performance appraisal. Second, there is little empirical work done on studying knowledge management activities in such context. Third, little was done empirically to understand the interaction between knowledge management activities and performance appraisal.

To begin with, the paper reviews the literature that relates knowledge management activities to performance appraisal. Next, the methodology and sample background are presented. Then, the main findings are reported and analyzed. Following that, the paper concludes with a suggested breakdown of knowledge management activities related to various performance appraisal components.

## **Literature review**

Performance appraisal is a method utilized to evaluate the overall performance of employees within an organization. When compared to other human resources management practices, performance appraisal is considered one of the most related to knowledge management. Hannula et al. (2003) added that performance appraisal has a vital use to measure various competencies; moreover, it tends to be a strong indicator in assessing knowledge management activities within a firm. Moreover, performance appraisal is perceived as an excellent tool that can be used to keep an organization on the right track. Yahya and Goh (2002) also emphasized its importance in changing employees' behavior towards knowledge management and in highlighting the knowing-doing gap. The outcome of such assessment should then act as an input to the knowledge management process (Hannula et al., 2003).

Therefore, there is a two way relationship between knowledge management and performance appraisal. On one hand, performance appraisal can be utilized to enforce behaviors and actions towards knowledge management initiatives, and it can act as a monitoring tool for the progress of such systems. On the other hand, knowledge management activities can be looked at as criteria to be assessed through performance appraisal, due to the belief that if these activities are tackled, then they can contribute positively to the overall firms' performance.

The study is interested in evaluating the importance of performance appraisal criteria related to knowledge management activities argued to be important in the organizations' performance.

One of the criteria is concerned with enriching the depth of business knowledge within a specific discipline or practice. This is argued to be vital for knowledge workers and/or professionals, such as the ones in the consultancy sector, where a specialized body of knowledge is required to accomplish work tasks (Fincham, 2006; Despres and Hiltrop, 1995; Smith, 2004). In addition, it is claimed that the knowledge/skills required are in need of constant replenishment, due to the changing working environment and market needs (Kinsey, 2007; Drucker, 1999). Moreover, new skills and bodies of knowledge might be added based on the work developments.

Another criterion is enriching the breadth of business knowledge within other disciplines or practices. This claim is based on the need of knowledge workers to interact with their external and internal environment to accomplish their tasks (Cross and Cummings, 2003), thus they require to be introduced to other bodies of knowledge within their environment (Narashima, 2000). This is argued to facilitate collaboration with other working groups and to create a strong general ability within employees (Smith, 2004).

Also, creativity and innovation is considered as vital for producing unique, customized and competitive solutions (example, Hansen et al., 1999). Brelade and Harman (2000) have even named creativity as one of the skills required for efficient knowledge management. For many scholars creativity and innovation are vital for knowledge work, for creating knowledge and marketizing it into applicable business solutions is what provides a competitive edge for firms in the knowledge economy era (Drucker, 1999; Noon and Blyton, 2007; Fincham, 2006). Along similar lines, Narashima (2000) looked at the performance appraisal process as measurement of innovation level and how an employee has sought to develop knowledge.

Moreover, person to person knowledge sharing within teams or networks is viewed by some scholars as an important ability in current working environment (Drucker; 1999; Drucker, 2002; Kinsey, 2007). Furthermore, Currie and Kerrin (2003) have recognized that performance management seems to have the strongest impact on the activity of knowledge sharing within an organization. Olomolaiye and Egbu (2006) went one step further by stating that performance appraisal should measure its outcome in terms of knowledge sharing and not simply through inputs and processes.

Additionally, acquiring knowledge from other employees is argued to be essential to enrich personal knowledge and to strengthen individual and organizational performance (Brelade and Harman, 2003; Olomolaiye and Egbu, 2006; Smith, 2004). The nature of knowledge work requires networking and social structures to facilitate locating and acquiring knowledge in order to solve problems (Depres and Hiltrop, 1995; Cross and Cummings, 2003) and to enrich the body of knowledge needed for accomplishing the required tasks (Kinsey, 2007).

Furthermore, using individual knowledge for business productivity is considered by scholars as vital, because it is not enough to enrich individual knowledge, but operationalizing (applying) this knowledge into action is even more important (Alavi and Leinder, 2001). Hislop (2006) highlighted that human resources practices such as performance appraisal can support knowledge management activities such as knowledge usage. Applicable knowledge is claimed to be an asset with increasing returns as opposed to traditional assets which are characterized with diminishing returns (Stewart, 2001).

In addition, protecting knowledge is viewed by some scholars as important, for knowledge is valued by some authors as an asset and as any asset it needs protection (Stewart, 2001). Actually, knowledge protection is defined by some scholars as one of the goals of knowledge management systems in order to minimize knowledge loss (Hedlund, 1994). However, some scholars argue that the speed of knowledge generation and the dynamic labor market make protection volatile and the only solution to survive is by continuous knowledge generation (Leadbeater, 2000). On the other hand, motivating employees to protect organizational knowledge through codifying their personal knowledge or to share it with others, so their personal knowledge is maintained within the organization if they leave, must take into consideration the power relations within the organization (Schultze and Stabell, 2004).

Additionally, building core competencies is considered as a goal for knowledge management especially when knowledge is recognized as a capability for influencing action (Alavi and Leinder, 2001). For Blackler (1995), core competencies are especially important for expert-dependent organizations. Such competencies help in building a common organizational culture which could value various knowledge management activities such as knowledge sharing (Hislop, 2006; Edwards et al., 2003).

To add to the criteria mentioned earlier, information technology plays a role in preserving and disseminating knowledge within an organization (Hansen et al, 1999; Scarbrough and Swan, 2001; Hauschild et al., 2001; Schultze and Leinder, 2002). Three criterions may be considered at this point, the knowledge of information technology, the usage of available information technology such as databases to retrieve information and the contribution to the information technology within organizations.

In the literature there is a debate concerning individual and group performance appraisals and the role of various knowledge management activities in reinforcing each. Moreover, depending on which kind of performance is stressed, certain knowledge management activities will be promoted and flourished as opposed to the others.

As for measuring individual performance, it is viewed as important especially when carrying personal tasks (Laursen and Mahnke, 2001). Siemsen et al. (2007) have found that appreciating individual performance is highly relevant when the employees are outcome-linked.

As for group performance, it is viewed as most relevant when tasks are interrelated, especially when standardization is low and the output process is complex (Laursen and Mahnke, 2001). Siemsen et al. (2007) have added that group performance is most effective when employees are help-linked. It is claimed that if group performance is stressed, it enforces knowledge sharing and cooperation and minimize the atmosphere of secrecy (Taylor, 2006; Quigley et al., 2007). When rewarded, individual performance is claimed to enforce personal and short-term goals, while group performance imposes knowledge creation and long-term objectives (Laursen and Mahnke, 2001).

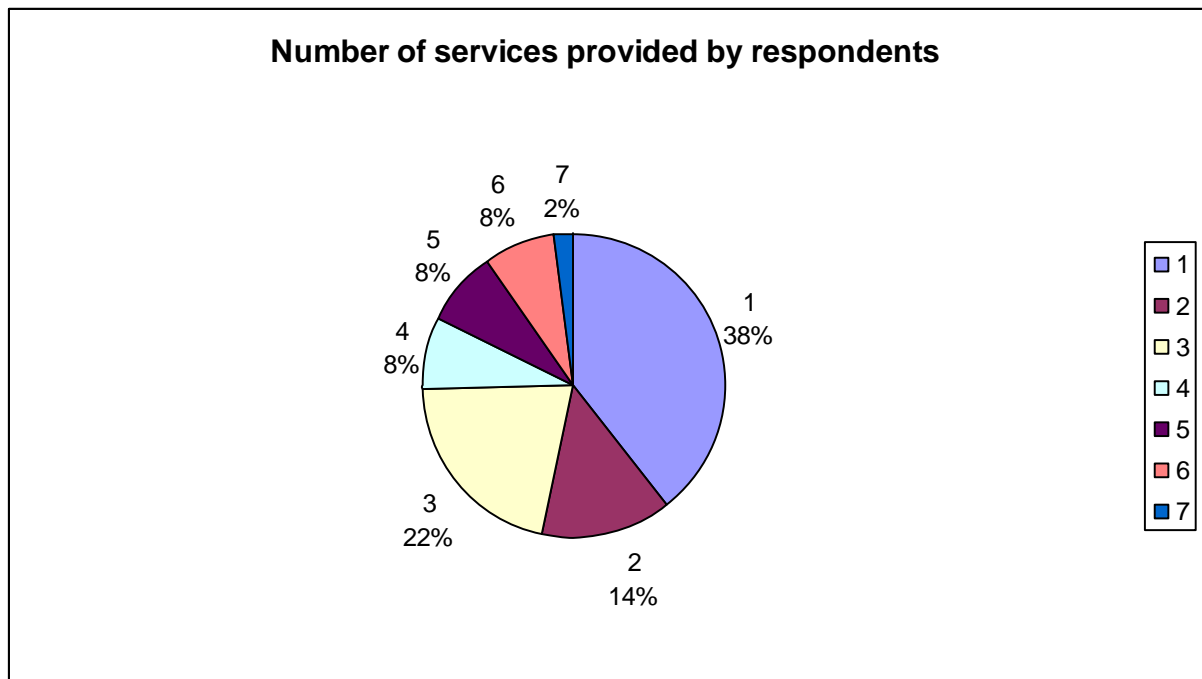
### **Methodology and sample background**

The study focuses on the consultancy sector in the United Kingdom. It utilizes a questionnaire as a tool that targeted the managers responsible for human resources in these organizations. The questions are close ended and their goal is to achieve a basic understanding of the performance appraisal system and the knowledge management activities that are included in such appraisals. The survey has been distributed to 323 organizations, 52 have replied, thus achieving a response rate of 16.1%.

Based on the number of employees and the European Union classification of institutes, the participants' organizations are large, medium and small representing 29%, 35% and 36% of the sample respectively. The total number of employees employed by the firms in the sample is around 21,695 (full time equivalent).

The top six consulting services provided by the participants are: human resources management (44%), change management (31%), strategy (29%), information technology (25%), administrative and general management (23%) and engineering and/or design (19%). Further breakdown of the services is provided by Table1. 38% of the firms provide only one service and 74% offer 3 or less consultancy services. Thus, most organizations focus on one or few specialized services. Further breakdown on the number of services is provided by Figure1.

<b>Table1: Consulting services provided in the survey's sample.</b>		
	<b>Frequency</b>	<b>Percent (Respondents)</b>
Human resource (including executive search)	23	44%
Change management	16	31%
Strategy	15	29%
Information technology	13	25%
Administrative and general management	12	23%
Engineering and/or design	10	19%
Other	9	17%
Operations management	8	15%
Outsourcing	7	13%
Supply chain and procurement management	7	13%
Finance	5	10%
Environmental management	5	10%
Marketing	4	8%
Scientific and technical	3	6%



**Figure1**

As for the human resources management assessment in these organizations, 65% of them have a formal written human resources strategy, and 85% have a senior manager responsible for human resources. The majority of these managers either sit on the main executive board, or they report directly to the highest level of the organization's management team. Moreover, 71% of the organizations have a human resources or personnel department.

As for the knowledge management assessment in these firms, only 19% of them have a formal written knowledge management strategy, and 55% have a senior manager responsible for knowledge management. The majority of these managers sit on the main executive board. Furthermore, only 10% of the participants have a knowledge management department.

It is noticed that the managers responsible for human resources mostly hold a title that indicates the functional role of human resources, such as a human resources manager. However, none of the responsible managers for knowledge management hold a title that indicates this function. This shows that knowledge management is usually added as a task for an already existing occupation within organizations, and rarely an individual is dedicated totally to such a function. Also, the preceding assessments of both functions show that the human resource management practice is more formal and strategic than the knowledge management one. This might be due to the perception of top management at these organizations that knowledge management is a set of activities rather than a separate function.

## **Findings**

The aim of the survey is to draw a picture of the performance appraisal in this sample. More specifically, it targets evaluating the interaction between knowledge management as a set of activities and performance appraisal.

A total of 94% of the organizations in the sample have a formal performance appraisal system. Most of these organizations conduct their performance appraisal once or twice a year, 31% and 47% of the respondents respectively. Only 16% of the firms conduct the performance appraisal quarterly and 6% of them perform it monthly. Some of the respondents have quoted that the process might be applied more frequently than what it has been initially planned depending on current needs.

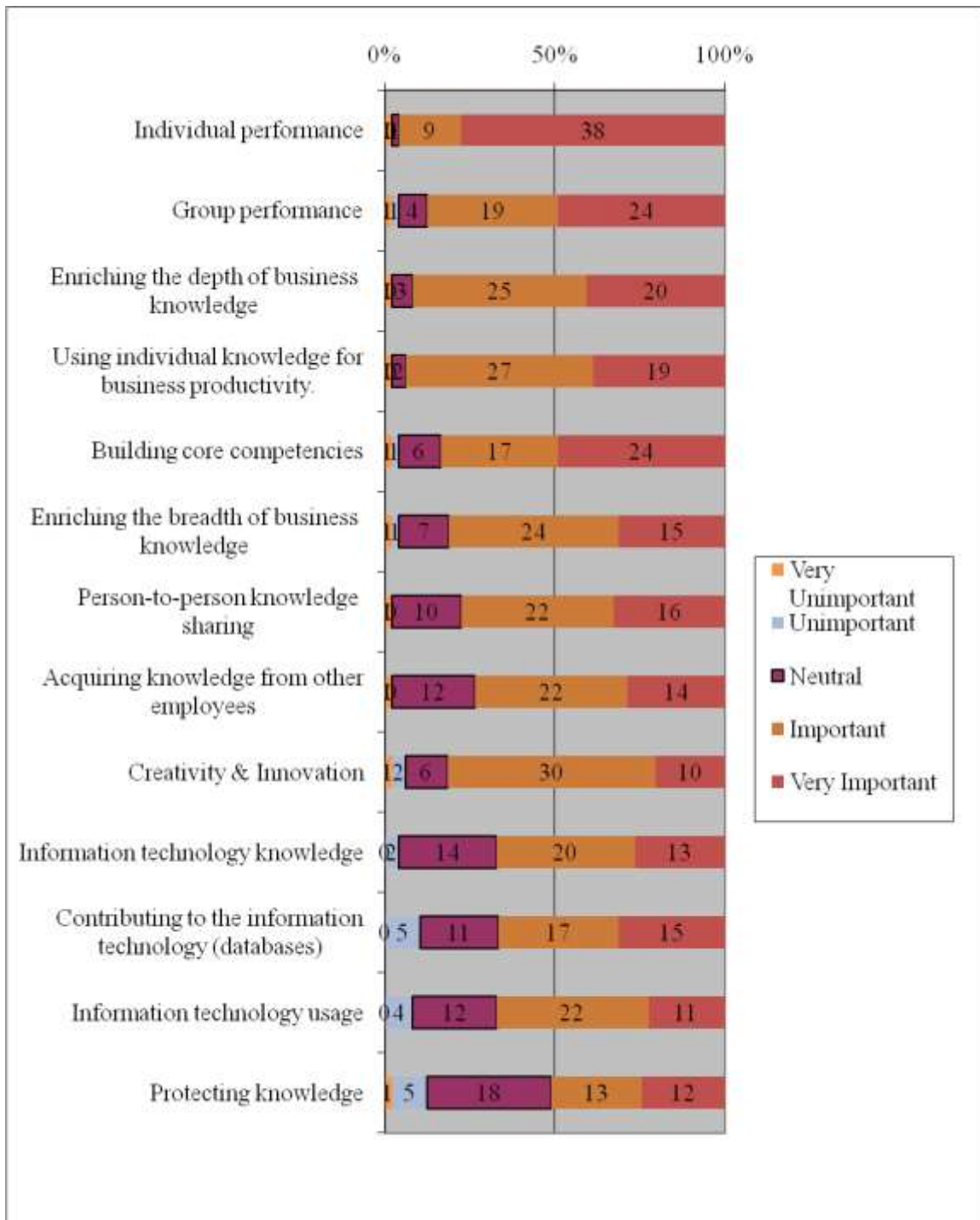
As for the groups that are involved in the performance appraisal process for a typical employee, the top three ones are line managers, senior managers and the human resource department that are engaged at 85%, 63% and 48% of the surveyed firms respectively. Also, 37%, 33% and 25% of the organizations reported that peers, subordinate employees and customers are involved in their performance appraisal process respectively. Moreover, 12% have stated that their performance appraisal process included the feedback of departments within the firm, other than the one of which the employee works at.

Just 44% of the firms formally appraise the participation in knowledge management activities. When asked to assess the importance of 13 criteria of their organizations' performance appraisal, the ones discussed in the literature review, firms have perceived their importance at various weights. The findings will be reported at a descending order based on the calculated average importance of each (see Table2 & Figure2).



**Table2: Average importance of the performance appraisal criteria based on a 5 points scale (1=Very Unimportant, 2=Unimportant, 3=Neutral, 4=Important, 5=Very Important) / % of respondents that reported the criterion as important or very important.**

	Mean	% of respondents that have reported the criterion as important or very important
Individual performance	4.69	96%
Group performance	4.31	88%
Enriching the depth of business knowledge	4.29	92%
Using individual knowledge for business productivity.	4.29	94%
Building core competencies	4.27	84%
Enriching the breadth of business knowledge	4.06	81%
Person-to-person knowledge sharing	4.06	78%
Acquiring knowledge from other employees	3.98	73%
Creativity & innovation	3.94	82%
Information technology knowledge	3.9	67%
Contributing to the information technology (databases)	3.88	67%
Information technology usage	3.82	67%
Protecting knowledge	3.61	51%



**Figure 2**

Overall, all the criteria have been perceived as important scoring above 3, yet at various intensities. However, by revising the average importance of each performance appraisal criterion, interestingly we can observe the significant difference between the three information technology criteria, information technology knowledge; information technology usage and contributing to information technology, and the other criteria.

Excluding knowledge protection, the information technology criteria scored significantly lower than others in importance. The top two important criteria were individual and group performances; moreover, they are positively and significantly correlated with each other. The results are reported in Table3.

<b>Table3: Correlations/ between both criteria: individual performance and group performance</b>			
		Individual performance	Group performance
Individual performance	Pearson Correlation	1.00	0.59
	Sig. (2-tailed)		0.00
Group performance	Pearson Correlation	0.59	1.00
	Sig. (2-tailed)	0.00	
Correlation is significant at the 0.01 level (2-tailed).			

Keeping that in mind, it might be useful to conduct a factor analysis, where we group related factors that strongly correlate with each other under components. The automatic result will generate two components; the three information technology criteria will form the second component, while the other criteria will form the first. The first component includes most of the knowledge management activities that are argued in the literature to flourish individual and group performances. The results are reported in Table4 at a descending order (only variables with loadings of 0.7 or more are included).

The performance appraisal criteria/variables of each of the two components are:

Component1: enriching the depth of business knowledge (the employees specialized knowledge in a discipline or practice), enriching the breadth of business knowledge (the employee knowledge in other disciplines or practices), person-to-person knowledge sharing (within teams or networks), acquiring knowledge from other employees, group performance, building core competencies, using individual knowledge for business productivity, creativity & innovation, protecting knowledge and individual performance.

Components2: information technology usage, information technology knowledge and contributing to the information technology (databases)

**Table4: Rotated Component matrix(a)/ Performance appraisal criteria – two components.**

	Component	
	1	2
Enriching the depth of business knowledge	0.9	
Enriching the breadth of business knowledge	0.8	
Person-to-person knowledge sharing	0.8	
Acquiring knowledge from other employees	0.8	
Group performance	0.8	
Building core competencies	0.8	
Using individual knowledge for business productivity	0.7	
Creativity & Innovation	0.7	
Protecting knowledge	0.7	
Individual performance	0.7	
Information technology usage		0.9
Information technology knowledge		0.8
Contributing to the information technology (databases)		0.8
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 3 iterations.		

More interestingly are the results of the factor analysis if we restrict it to three components. The results are reported in Table5 at a descending order (only variables with loadings of 0.7 or more are included). The first and second components seem to include criteria that support each of the group and individual performances respectively. The third component includes the three information technology criteria.

The performance appraisal criteria/variables of each of the three components are:

Component1: person-to-person knowledge sharing (within teams or networks), protecting knowledge, acquiring knowledge from other employees, group performance and enriching the breadth of business knowledge (the employee knowledge in other disciplines or practices).

Components2: using individual knowledge for business productivity, individual performance, enriching the depth of business knowledge (the employees' specialized knowledge in a discipline or practice), building core competencies and creativity & innovation.

Component3: information technology usage, information technology knowledge and contributing to the information technology (databases).

<b>Table5: Rotated component matrix(a) / performance appraisal criteria – three components.</b>			
	<b>Component</b>		
	1	2	3
Person-to-person knowledge sharing	0.8		
Protecting knowledge	0.8		
Acquiring knowledge from other employees	0.8		
Group performance	0.7		
Enriching the breadth of business knowledge	0.7		
<b> </b>			
Using individual knowledge for business productivity.		0.8	
Individual performance		0.8	
Enriching the depth of business knowledge		0.7	
Building core competencies		0.7	
Creativity & Innovation		0.7	
<b> </b>			
Information technology usage			0.9
Information technology knowledge			0.8
Contributing to the information technology (databases)			0.8
<b> </b>			
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			

At this point it might be useful to discuss the usefulness and reliability of the factor analysis test in this research. This method is usually utilized in order to reduce data. Although the sample size is 52, there are arguments that enforce the reliability of utilizing this method.

First, the factor analysis test is exploratory in nature, aiming at discovering the factor/component structure of the performance appraisal constructs, and it is data driven. Second, strict rules concerning exploratory factor analysis is considerably being reduced (Costello and Osborne, 2005). This is because some scholars have lately argued in favour of small samples when the data is well conditioned, that is high levels of loadings, low number of factors and high number of variables (Winter et al., 2009). In this case, the loadings are relatively high, the factors are three and the number of variables is 13 (11 of which are knowledge management activities, in addition to the individual and group performances criteria). Third, the response rate is 16.1% which is considered in social sciences as significantly representative. Due to the nature of the sector selected for the study, the number of businesses which can be considered in the sampling process is limited. Fourth, the results of the factor analysis are consistent with the indications of the theoretical and empirical research in the field. This point will be stressed later on in the analysis section.

Although some scholars argued that for exploratory factor analysis identifying significant factor loadings based on sample size is of less importance, only the loadings of

approximate value of 0.7 and above are selected, which is considered significant for a sample size of 50 (Stevens, 1992).

## **Analysis**

Although only 43% of the participants have reported that they formally appraise the participation in knowledge management activities, all of the performance appraisal criteria related to knowledge management which were suggested in the literature to play a role in supporting organizational performance were significantly important at various intensities. Consequently, organizations measure these activities, because they believe they are relevant in increasing and strengthening their performance. However, the level of formality in distinctively and separately measuring these criteria is questionable, as they might be considered as inclusive in other criteria such as teamwork, collaboration and networking. Moreover, if knowledge management is perceived more as a set of activities than a separate function, then it might be that these activities are looked at informally within the performance appraisal systems, as they are necessary in everyday work and indirectly affect the output of employees. Therefore, simply for some organizations by measuring performance in terms of task accomplishments, achievements, results, sales...etc, they are indirectly measuring the extent of which employees are performing these knowledge management activities.

It must be marked that information technology and its activities were relatively lower in importance than most of the other criteria. Although for some organizations information technology plays a bigger role in the work processes than other, such as recruitment agencies, it might be that information technology is provided as a supporting tool and the activities related to it may well be not of formal interest. This could be because it is expected that employees feed and use databases as part of their job. Thus, if they do not perform information technology related activities, they cannot achieve their tasks, and consequently their overall performance appraisal will be negatively affected.

Also, knowledge protection scored the lowest in importance. This support the literature which argued that protecting knowledge nowadays is rather less important than knowledge exchange and generation. This is due to the rapid obsolescence of knowledge and the difficulty of preserving it especially when it exists in the human mind, tacit in nature, and thus it is lost whenever an employee exit. Considerably, organizations might be looking at knowledge codification and/or knowledge exchange between colleagues as a method to preserve knowledge within the organization, rather than putting effort in protecting knowledge through placing high constraints on their information technology or/and maintaining high retention rates.

When conducting the factor analysis, two components were automatically generated. The first included most of the knowledge management activities that scholars argued to support individual and group performances, while the second contained the ones related to information technology. It is surprising that information technology is more viewed as a separate component by organizations. To further analyze the situation another factor analysis was conducted, restricted to three components. We can deduce from the

literature a logical explanation of why each of these components contained its specific variables.

As for the first component, it could be claimed that its performance appraisal criteria supports group performance. Person to person knowledge exchange, knowledge acquisition from other employees and the breadth of business knowledge, all contribute to better communication and collaboration between employees and thus better group performance. Although, protecting knowledge falls under component one, it is not clear why this activity relates more with group performance. One explanation might be that losing organizational knowledge will negatively impact the overall performance of the firm. Therefore, preserving knowledge through codification or/and person to person knowledge exchange decrease the effect of knowledge loss caused by employee exits. Another explanation is that some organizations intensify their interest in knowledge protection side by side while flourishing knowledge sharing. Thus, organizations might tend to achieve increasing benefits of knowledge sharing while minimizing some of its negative impacts such as the risks of knowledge outflow and/or loss.

As for the second component, it could be argued that its criteria strengthen individual performance. Individual knowledge usage, the depth of specialized knowledge, acquiring the organization core competencies and being creative and innovative all contribute to formulate a high productive employee.

It can be recognized from the criteria ratings that the importance of individual performance is significantly higher than group performance. Correspondingly, the variables of the first component scored relatively less in importance than the variables in the second component. To compare, the knowledge management activities supporting group performance which are person to person knowledge sharing (within teams or networks), protecting knowledge, acquiring knowledge from other employees and enriching the breadth of business knowledge (the employee knowledge in other disciplines or practices) have been ranked as important or very important by 78%, 51%, 73% and 81% of the participants respectively. On the other hand, the knowledge management activities supporting individual performance which are using individual knowledge for business productivity, enriching the depth of business knowledge (the employees specialized knowledge in a discipline or practice), building core competencies and creativity & innovation have been perceived as important or very important by 94%, 92%, 84% and 82% of the respondents respectively. Therefore, although both are viewed as important, individual performance is still stressed more than group performance in performance appraisal systems in this sample, and this reflects on their supporting knowledge management activities.

As for the third component, it could be identified as the information technology one. It is significantly important, yet at a lesser intensity than the other two components. It is recognized that the knowledge management activities that forms the individual performance and group performance components are significantly and positively correlated; however, the information technology component does not significantly correlate with any of the other components. The results are reported in Table. This

enforces the claim that that information technology is viewed as separate issue in organizations.

**Table6: Correlations/ between the knowledge management activities of each of the three components: individual performance, group performance and information technology.**

		Individual performance activities	Group performance activities	Information technology activities
Individual performance activities	Pearson Correlation	1.00	0.75	0.17
	Sig. (2-tailed)		0.00	0.26
Group performance activities	Pearson Correlation	0.75	1.00	0.25
	Sig. (2-tailed)	0.00		0.09
Information technology activities	Pearson Correlation	0.17	0.25	1.00
	Sig. (2-tailed)	0.26	0.09	
**. Correlation is significant at the 0.01 level (2-tailed).				

### Conclusion, limitation and future research

Based on the literature review, the research has focused on measuring the importance of 13 performance appraisal criteria. The results indicate that all of these criteria are significantly important, yet at various intensities.

When analyzing the results, it is noticed that individual performance is supported by the following knowledge management activities: using individual knowledge for business productivity, enriching the depth of business knowledge (the employees' specialized knowledge in a discipline or practice), building core competencies and creativity & innovation. As for group performance, the knowledge management activities that support it are: person-to-person knowledge sharing (within teams or networks), protecting knowledge, acquiring knowledge from other employees and enriching the breadth of business knowledge (the employee knowledge in other disciplines or practices).

These two preceding sets of activities are highly correlated with each other. As for the performance appraisal criteria that dealt with information technology, they are not related to individual or group performance; rather they are viewed as a separate component. The information technology component was represented in three knowledge management activities: information technology usage, information technology knowledge and

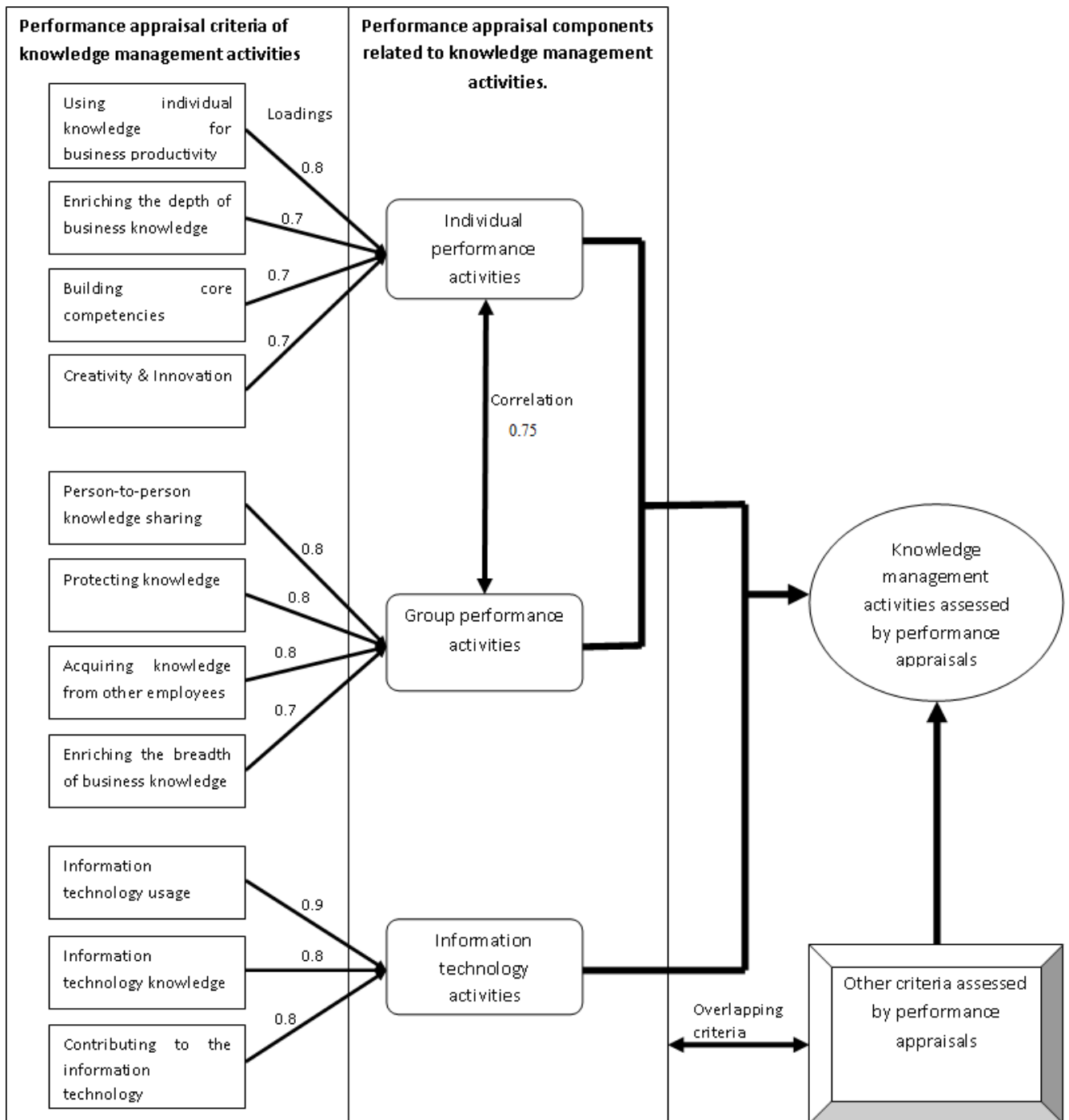


contributing to the information technology (databases). Finally the order of the three components in terms of importance is as follows: individual performance, group performance and information technology. Findings are summed in Figure 3 at a descending order based on the importance of various components.

The study is exploratory by nature and tried to look at empirical support to theoretical suggestions induced from the literature about potential links between knowledge management activities and performance appraisal. However, the research is restricted to the consultancy sector in the UK. More sectors and contexts must be considered to generalize such findings. Also, given the limited number of “real and operational” firms registered in the UK under the management consultancy sector, the sample size is relatively small. In addition, this study was extensive by nature, so a more intensive research to deepen our understanding is of a great value.

This study has only focused on the knowledge management activities. Other criteria affect performance appraisal, where some are mentioned in the literature such as productivity and profitability, and others might not be formally identified yet. Moreover, there are some criteria that organizations assess in their performance appraisal that might overlap (partially inclusive) with some knowledge management activities such as teamwork, collaboration, skills development and cultural fit. Furthermore, the study has not assured the formality of assessing those knowledge management activities, for some organizations might consider these activities as part of an overall identified performance output.

Future contributions can be made through duplicating this study within different sectors and contexts. Furthermore, human resources practices, such as recruitment and selection and compensation management, are argued to have an influence on knowledge management within firms. As the case with performance appraisal, a lot of theoretical work has been done on these practices, yet till date very few empirical studies supported these claims.



**Figure3**

## References:

- Alavi, M. and D.E. Leidner, 2001. Review: knowledge management and knowledge management systems: conceptual foundations and research issues. *IS Quarterly*, 25(1), pp. 107-136.
- Blackler, F., 1995. Knowledge, knowledge work and organizations: an overview and interpretation. *Organization Studies*, 16(6), pp. 1021-1046.
- Brelade, S. and C. Harman, 2000. Using human resources to put knowledge to work. *Knowledge Management Review*, 3(1), pp. 26-29.
- Brelade, S. and C. Harman, 2003. Knowledge workers want to reap rewards. *Strategic HR Review*, 2(2), pp. 18-21.
- Costello, A.B. and J.W. Osborne, 2005. Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment Research & Evaluation*, 10(7), [online] Available at: < <http://pareonline.net/pdf/v10n7.pdf>> [Accessed 22 March 2010].
- Cross, R.O.B. and J.N. Cummings, 2003. Relational and structural network correlations of individual performance in knowledge intensive work. In *Academy of Management Proceedings: Academy of Management, MOC*: pp. F1-F6.
- Currie, G. and M. Kerrin, 2003. Human resource management and knowledge management: enhancing knowledge sharing in a pharmaceutical company. *International Journal of Human Resource Management*, 14(6), pp. 1027-1045.
- Despres, C. and J.M. Hiltrop, 1995. Human resource management in the knowledge age: current practice and perspectives on the future. *Employee Relations*, 17(1), pp. 9-23.
- Drucker, P., 2002. Knowledge work. *Executive Excellence*, 19(10), pp. 12.
- Drucker, P.F., 1999. Knowledge-worker productivity: the biggest challenge. *California Management Review*, 41(2), pp. 79-94.
- Edwards, J.S., M. Handzic, S. Carlsson and M. Nissen, 2003. Knowledge management research & practice: visions and directions. *Knowledge Management Research & Practice*, 1(1), pp. 49-60.
- Fincham, R., 2006. Knowledge work as occupational strategy: comparing IT and management consulting. *New Technology, Work & Employment*, 21(1), pp. 16-28.
- Hannula, M., M. Kukko and J. Okkonen, 2003. The fourth perspective – knowledge management in human resources context. *Business Excellence*, [online] Available at <<http://www.tut.fi/units/tuta/teta/mittaritiimi/julkaisut/4thperspective.pdf>> [Accessed 23 May 2010].
- Hansen, M.T., N. Nohria and T. Tierney, 1999. What's your strategy for managing knowledge? *Harvard Business Review*, 77(2), pp. 106–116.
- Hauschild, S., T. Licht and W. Stein, 2001. Creating a knowledge culture. *McKinsey Quarterly*, (1), pp. 74-81.
- Hedlund, G., 1994. A model of knowledge management and the N-form corporation. *Strategic Management Journal*, 15, pp. 73-90.
- Hislop, D., 2006. Knowledge management. In Redman, T. and A. Wilkinson (2006). *Contemporary human resources management texts and cases*. Essex, England: Pearson Education Limited.
- Kinsey, C., 2007. The hoarding/sharing instinct. *KM Review*, 9(6), pp. 6.

- Laursen, K. and V. Mahnke, 2001. Knowledge strategies, firm types, and complementarity in human-resource practices. *Journal of Management & Governance*, 5(1), pp. 1-27.
- Leaderbeater, C., 2000. *Living on thin air: the new economy*. 2<sup>nd</sup> ed. England: Penguin Books.
- Schultze, U. and D.E. Leidner, 2002. Studying knowledge management in information systems research: discourses and theoretical assumptions. *MIS Quarterly*, 26(3), pp. 213-242.
- Stevens, J.P., 1992. *Applied multivariate statistics for the social sciences*. 2<sup>nd</sup> ed. Hillsdale, NJ: Erlbaum.
- McCuiston, V.E. and J.J. Jamrog, 2005. Knowledge management implementation: HR executives speak out. *Journal of Applied Management and Entrepreneurship*, 10(1), pp. 20-39.
- Narasimha, S., 2000. Organizational knowledge, human resource management, and sustained competitive advantage: toward a framework. *Competitiveness Review*, 10(1), pp. 123-135.
- Noon, M. and P. Blyton, 2007. *The realities of work: experiencing work and employment in contemporary society*. 3<sup>rd</sup> ed. New York: Palgrave.
- Olomolaiye, A. and C. Egbu, 2006. Linking human resources management and knowledge management for performance improvements: a case study approach. In COBRA2006, Proceedings of the Annual Research Conference of the Royal Institution of Chartered Surveyors, E. Sivyer, University College London, The RICS.
- Quigley, N.R., P.E. Tesluk, E.A. Locke and K.M. Bartol, 2007. A multilevel investigation of the motivational mechanisms underlying knowledge sharing and performance. *Organization Science*, 18(1), pp. 71-88.
- Scarborough, H. and J. Swan, 2001. Explaining the diffusion of knowledge management: the role of fashion. *British Journal of Management*, 12(1), pp. 3-12.
- Schultze, U. and C. Stabell, 2004. Knowing what you don't know? Discourses and contradictions in knowledge management research. *Journal of Management Studies*, 41(4), pp. 549-572.
- Siemens, E., S. Balasubramanian and A.V. Roth, 2007. Incentives that induce task-related effort, helping, and knowledge sharing in workgroups. *Management Science*, 53(10), pp. 1533-1550.
- Smith, H., 2004. *The interface between knowledge management and human resources: a qualitative study*. Ph. D. Faculty of Economic and Management Sciences, Rand Afrikaans University.
- Stewart, T.A., 2001. *The wealth of knowledge: Intellectual capital and the twenty-first century organization*. United States of America: Utopia Limited.
- Taylor, E.Z., 2006. The effect of incentives on knowledge sharing in computer-mediated communication: an experimental investigation. *Journal of Information Systems*, 20(1), pp. 103-116.
- Winter, J.C.F., D. Dodou, and P.A. Wieringa, 2009. Exploratory factor analysis with small sample. *Multivariate Behavioral Research*, 44(2), pp. 147-181.
- Yahya, S. and W.K. Goh, 2002. Managing human resources toward achieving knowledge management. *Journal of Knowledge Management*, 6, pp. 457-468.

Zeleny, M., 2002. Knowledge of enterprise: knowledge management or knowledge technology? *International Journal of Information Technology & Decision Making*, 1(2), pp. 181-207.