Knowledge workers – drivers to organizational performance in a knowledge-based economy

Muscalu Emanoil, Stanit Alexandra, Constantinescu Liliana Mihaela

Abstract— This paper illuminates significant relationships between knowledge workers and organizational performance and the perceived ability of today’s organizations to discover and retain their knowledge workers. Knowledge workers are a critical challenge for today’s organizations as they face increasing global competition with its demands for even more such workers. Knowledge management designs initiatives that accelerate knowledge creation, acquisition, and particularly knowledge capture, sharing and retention, are receiving unprecedented levels of investment as a result. While many factors impact organization financial performance, this research indicates that successful knowledge workers retention is significantly related with higher reported organizational performance in a knowledge-based economy.

Keywords—knowledge, knowledge worker, performance, knowledge-based economy.

I. INTRODUCTION

Retaining employees whose knowledge has high competitive value is becoming a critical and well-recognized challenge[1]. Such employees are known as knowledge workers in that they “have high degrees of expertise, education, or experience, and the primary purpose of their jobs involves the creation, distribution or application of knowledge” [2].

This study investigates if in today’s global knowledge economy the impact of an organization’s strategic orientation toward knowledge management, the learning culture of an organization, and specific human resource practices have an impact in knowledge worker development or retention and achieving organizational performance.

II. DEFINITION OF KNOWLEDGE

One of the central problems in defining knowledge work has been the difficulty of defining knowledge itself and distinguishing knowledge from information. Indeed, the terms ‘information worker’ and ‘knowledge worker’ can be used interchangeably. There is a vast literature in which the concept of management of knowledge is hard to distinguish from the management of information. What distinguishes knowledge from information is the way in which knowledge empowers actors with the capacity for intellectual or physical activity. Knowledge is a matter of cognitive capability and enables actors to do and reflect. Information, by contrast, is passive and meaningless to those without suitable knowledge. Knowledge provides the means by which information is interpreted and brought to life.

Nonaka described knowledge as the fuel for innovation, but was concerned that many managers failed to understand how knowledge could be leveraged. Companies are more like living organisms than machines, he argued, and most viewed knowledge as a static input to the corporate machine. Nonaka advocated a view of knowledge as renewable and changing, and that knowledge workers were the agents for that change. Knowledge-creating companies, he believed, should be focused primarily on the task of innovation.

Davenport[3] says that the rise of knowledge work has actually been foreseen for years. He points to the fact that Fritz Machlup did a lot of the early work on both knowledge as well as knowledge work roles and as early as 1958 stated that the sector was growing much faster than the rest of the economy with knowledge workers making up almost a third of the workforce in the United States [3].

III. WHAT IS A KNOWLEDGE WORKER?

Several experts have outlined conceptual definitions of knowledge work. For example, Peter Drucker focused on the differences between ‘manual worker productivity’ and ‘knowledge worker productivity.’ The key enablers of the latter include abstractly defined tasks, flexible application of knowledge, workers’ autonomy, continuous innovation and learning into job roles, assessment based on quality of output and perceiving workers as organisational assets.

In Drucker’s opinion Knowledge worker productivity is the biggest of the 21st century management challenges. In the developed countries it is their first survival requirement. In no other way can the developed countries hope to maintain themselves, let alone to maintain their leadership and their standards of living.”

Knowledge work is mostly unseen, and therefore difficult to measure. You can't watch knowledge being created in the same way as a physical, tangible product. With knowledge work, it's the final output that matters, and the steps along the way are often less important.

Knowledge workers are those employees who have responsibility for exploring and generating ideas and concepts rather than concentrating solely on implementing or managing existing processes or operations. Generally speaking, knowledge workers have high degrees of expertise, education,
or experience and the primary purpose of their jobs involves the creation, distribution or application of knowledge. Knowledge workers differ from manual workers because:
• knowledge work is less standardized and structured
• knowledge workers are used to a certain level of autonomy
• before certain ends result it may be difficult to know whether knowledge workers are working or not
• knowledge workers basically own their key production mean – brains knowledge workers need to be committed to and enjoy their jobs.

In all organizations knowledge workers are a large category of workers that continues to grow. They are also the most expensive workers in organizations and they are essential to realizing the business strategies of the organization. Knowledge workers are usually responsible for exploring and creating ideas, rather than implementing and managing existing processes. New products, new designs, new models for doing business – these are typical outputs of knowledge work.

Because knowledge workers are expected to produce results that are different from traditional workers, you should also manage them and measure their performance differently. Have an open mind, and recognize the different needs and motivations of knowledge workers. This will make it much easier to find creative and effective ways to keep their productivity high.

What differentiates knowledge work from other forms of work is its primary task of "non-routine" problem solving that requires a combination of convergent, divergent, and creative thinking [4]. Also, despite the amount of research and literature on knowledge work there is yet to be a succinct definition of the term [5].

Knowledge workers are employees who have a deep background in education and experience and are considered people who "think for a living." [6].

Tapscott sees a strong, on-going linkage between knowledge workers and innovation, but the pace and manner of interaction have become more advanced. He describes social media tools on the internet that now drive more powerful forms of collaboration. Knowledge workers engage in "peer-to-peer" knowledge sharing across organizational and company boundaries, forming networks of expertise. Some of these are open to the public. While he echoes concern over copyright and intellectual property law being challenged in the marketplace, he feels strongly that businesses must engage in collaboration to survive. [7].

IV. TYPOLOGY OF KNOWLEDGE WORKERS ROLES

Knowledge workers can be grouped into various categories, based on the amount of time spent on individual tasks or on the type of information or skills possessed. The fact that knowledge workers can be classified in different ways is indicative of the variety of jobs they hold.

Knowledge workers can be categorized according to the amount of time engaged in routine versus innovative behaviors. On one end of the scale, workers perform tasks that are primarily repetitive and routine in nature but occasionally use complex information to make independent decisions, often with regard to customer service issues. Employees at the spectrum's opposite end spend most of their time accessing information and making independent decisions with regard to that information.

A second way to categorize those whose work focuses on information and ideas is as follows: specialty knowledge workers, portable knowledge workers, and creation of knowledge workers. Specialty knowledge workers possess a significant amount of knowledge related to a specific company's products or services. These individuals can be thought of as housing vital corporate assets in their heads. Portable knowledge workers possess information of wide and immediate utility. They are familiar with knowledge that is in demand by a variety of organizations. Software programmers, librarians, and persons with business degrees are examples of portable knowledge workers. Creation of knowledge workers focuses the majority of their efforts on innovative behaviors, such as product design and development. Examples of creation of knowledge workers include scientists and information systems designers.

Knowledge workers bring benefits to organizations in a variety of important ways. These include:
• analyzing data to establish relationships
• assessing input in order to evaluate complex or conflicting priorities
• identifying and understanding trends
• making connections
• understanding cause and effect

These knowledge worker contributions are in contrast with activities that they would typically not be asked to perform, including:
• transaction processing
• routine tasks
• simple prioritization of work

There is a set of transitional tasks includes roles that are seemingly routine, but that require deep technology, product, or customer knowledge to fulfill the function. These include:
• providing technical or customer support
• handling unique customer issues
• addressing open-ended inquiries

Generally, if the knowledge can be retained, knowledge worker contributions will serve to expand the knowledge assets of a company. While it can be difficult to measure, this increases the overall value of its intellectual capital. In cases where the knowledge assets have commercial or monetary value, companies may create patents around their assets, at which point the material becomes restricted intellectual property. In these knowledge-intensive situations, knowledge workers play a direct, vital role in increasing the financial
value of a company. They can do this by finding solutions on how they can find new ways to make profits this can also be related with market and research. Davenport, (2005) says that even if knowledge workers are not a majority of all workers, they do have the most influence on their economies. He adds that companies with a high volume of knowledge workers are the most successful and fastest growing in leading economies including the United States.

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
<th>Typical knowledge actions (expected)</th>
<th>Existence of the role in literature</th>
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</thead>
<tbody>
<tr>
<td>Controller</td>
<td>People who monitor the organizational performance based on raw information.</td>
<td>Analyze, dissemination, information organization, monitoring</td>
<td>(Moore and Rugullies, 2005) (Geisler, 2007)</td>
</tr>
<tr>
<td>Helper</td>
<td>People who transfer information to teach others, once they passed a problem.</td>
<td>Authoring, analyze, dissemination, feedback, information search, learning, networking</td>
<td>(Davenport and Prusak, 1998)</td>
</tr>
<tr>
<td>Learner</td>
<td>People use information and practices to improve personal skills and competence.</td>
<td>Acquisition, analyze, expert search, information search, learning, service search</td>
<td></td>
</tr>
<tr>
<td>Linker</td>
<td>People who associate and</td>
<td>Analyze, dissemination,</td>
<td>(Davenport and</td>
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<tr>
<td>Organizer</td>
<td>People who are involved in personal or organizational planning of activities, e.g. to-do lists and scheduling.</td>
<td>Analyze, information organization, monitoring, networking</td>
<td>(Moore and Rugullies, 2005)</td>
</tr>
<tr>
<td>Retriever</td>
<td>People who search and</td>
<td>Acquisition, analyze,</td>
<td>(Snyder-Halpern et</td>
</tr>
</tbody>
</table>
### Sharer
- People who disseminate information in a community.
- Authoring, co-authoring, dissemination, networking
- (Davenport and Prusak, 1998)
- (Brown et al., 2002)
- (Geisler, 2007)

### Solver
- People who find or provide a way to deal with a problem.
- Acquisition, analyze, dissemination, information search, learning, service search
- (Davenport and Prusak, 1998)
- (Nonaka and Takeushi, 1995)
- (Moore and Rugullies, 2005)

### Tracker
- People who monitor and react on personal and organizational actions that may become problems.
- Analyze, information search, monitoring, networking
- (Moore and Rugullies, 2005)

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**V. RETAINING THE KNOWLEDGE WORKER**

The shortage of knowledge workers makes employers concerned with attracting and retaining these employees. In order to hire and retain knowledge workers, employers may offer higher salaries, attractive work environments, and continuing educational opportunities. Employers take actions designed to attract and retain knowledge workers by creating a free-agent community, respecting knowledge workers as new bosses, and providing growth opportunities. In a free-agent community, employees have the freedom to choose their work methods and work in the environments in which they function best. Treating knowledge workers as the new bosses means that management operates as a facilitator rather than as a controller of work. This gives knowledge workers the autonomy they need to complete their work as they see fit. Employers make work attractive and rewarding by providing growth opportunities, such as those that are associated with ongoing training and development, special assignments, and rotation of jobs and job responsibilities. In such ways, employers attempt to address the knowledge worker shortage.

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**VI. THE KNOWLEDGE WORKER AND ORGANIZATIONAL PERFORMANCE**

Knowledge worker work performance influences success in today's competitive work economy, and businesses are focusing on increasing this performance. Management facilitates the knowledge worker's job performance by providing access to relevant information; environments that promote this information's desired use, continuing educational opportunities, and a balance between guidance and autonomy. Employers use costly technologies to facilitate access to and manipulation of information.

The term information technology refers to computer equipment and programs used to access, process, store, and disseminate information. Examples of information technologies include word processing, spreadsheet, and electronic mail programs, and a variety of other software programs designed to process information in specific ways. Information technologies are designed to reduce the amount of time employees spend on information access, management and manipulation and to increase the accuracy of these processes. Information technology is important because it helps make information accessible and manageable in a time when accessibility and manipulation of information are crucial to the world economy.
VII. CONCLUSION

The increasing demand for employees who use their skills and talents to perform complex and non-repetitive work presents both challenges and opportunities. The challenges include attainment and maintenance of a well educated, highly skilled, and efficient workforce. Opportunities include chances for greater numbers of working age people to hold more rewarding jobs than previously possible and for employees to be judged according to their unique talents and abilities rather with regard to how quickly they complete repetitious tasks or how well they conform to pre-established work standards.

Hiring, retention, and performance of knowledge workers will remain important issues. As the shortage of persons qualified to perform knowledge work increases, employers will be challenged to find more effective ways to hire and retain these individuals. In order to improve productivity, employers will try to figure out how to promote teamwork among knowledge workers, how to best design the workplace, and how to keep knowledge workers from becoming overwhelmed with the information they need to do their jobs.

REFERENCES


