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STIMULATING THE PRODUCTIVITY OF THE KNOWLEDGE WORKERS

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Abstract:

The growing importance of creative knowledge workers as a resource of particular significance for the growth of organizations is becoming one of the greatest challenges of the knowledge-based economy. An organization that employs knowledge workers, is an organization that can develop itself. One characteristic of knowledge workers is that they are creative and always driven by a desire for change. Therefore, wherever they see an opportunity to develop or a problem that can be solved implicating a lower cost it represents an opportunity for the organization. In the end, if the organization knows how to cherish its knowledge workers, will have an advantage on the market that it activates, but also, will be easier for it to attract more knowledge workers. The purpose of the paper is to familiarized the readers with all these concepts, how can be influenced and stimulated knowledge worker productivity, for better understanding of their importance for modern organizations. We are aware that only the presentation of the theory of a complex economic concept is not enough, that s why we realized and present in the paper a case study about how much employees know about knowledge worker, employee satisfaction and employee productivity, constructed using information gathered from people around the globe throughout a survey.

Key words: *knowledge worker, productivity, knowledge economy, knowledge society, learning organization*

1. Introduction

A knowledge worker represents a concept that was approached by many eminent authors over the time. In its essence, it is not a simple element and it requires deep knowledge in order to comprehend its functions and successfully apply it afterwards. A company that has knowledge workers and recognizes their high value has a strong competitive advantage on the market. Along with this concept, knowledge economy and knowledge society need to be understood in order to value the importance of knowledge worker.

In order for an organization to function, it is not enough to employ knowledge workers. In today's world, people have more job opportunities. Therefore, the possibility of leaving the company is higher. Regarding employee retention, the organization should focus not only on hiring knowledge workers, but also on their productivity and satisfaction.

Numerous organizations have accepted the idea that being a knowledge-based company is important to succeed in today's economy, and this fact led to an increased demand for employees who use their skills and talents to perform complex and non-repetitive work presents both challenges and opportunities. On one hand, we have the challenges, which include attainment or/and maintenance of a well-educated, highly skilled, and efficient workforce. Education of a properly skilled workforce will take special effort. Also, it is also challenging for the organizations to find more effective ways to hire and retain these individuals. On the other hand, we have the opportunities, which 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 repetitive tasks or how well they conform to pre-established work standards. These new knowledge workers will have greater job mobility. Organizations will respect them as individuals who bring unique talents and abilities to their jobs as opposed to workers who perform repetitive tasks.

2. Theoretical Framework

Knowledge worker

It can be thought that "knowledge worker" is a relative new term in the literature. In fact, it was mentioned by Peter Drucker in his book, "The Landmarks of Tomorrow" in 1959. His definition of the term was that they are high-level workers that acquire theoretical and analytical knowledge through training and apply it in order to develop products and services (Drucker, 1959). He also noted that, by being creative and productive, they will represent the most valuable asset of 21st century. Some examples of knowledge workers are financial analysts, lawyers or architects. The difference between a manual laborer and a knowledge worker is that they are used to solve complex problems instead of repetitive physical tasks (corporporatefinanceinstitute.com). After 14 years, Drucker reinforced his statement in his book "Management: Tasks and Responsibilities and Practices" saying that: "The manual worker is yesterday. The basic capital resource, the fundamental investment, but also the cost center for a developed economy is the knowledge worker who puts to work what he has learned in systematic education, that is, concepts, ideas and theories, rather than the man who puts to work manual skill or muscle" (Drucker, P. F., 1973, p. 111).

Knowledge society

After discussing about knowledge worker, the environment in which he is acting should be analyzed. According to UNESCO, knowledge societies are about capabilities to identify, produce, process, transform, disseminate and use information to build and apply knowledge for human development. They require an empowering social vision that encompasses plurality, inclusion, solidarity and participation (Source: UNESCO 2005b).

The need for continuous learning is a general characteristic of the knowledge society and the capacity for everyone to learn throughout life is crucial. Moreover, in the book "The knowledge society: the growing impact of scientific knowledge on social relations" it is said that "knowledge society does not occur suddenly. It represents a gradual process in which the characteristics of the 6 society are changing and others are emerging" (G Böhme and N. Stehr, 1986, p.7). It was also stated that knowledge represents a significant role in the modern societies and its importance is growing by day (G Böhme and N. Stehr, 1986).

Knowledge economy

It is interesting that in 2002, the concept of "knowledge economy" had a big gap as Keith Smith is mentioning in her paper: "The weakness or even complete absence, of definition, is pervasive in the literature… this is one of the many imprecisions that make the notion of "knowledge economy" so rhetorical rather than analytically useful" (Keith Smith, 2002 in Ian Brinkley, 2006, p.3). In order to help filling this gap, the Book: "Defining the knowledge economy" by Ian Brinkley comes with several definitions adopted by different authors. As Charles Leadbeater states in his paper: "the idea of the knowledge driven economy is not just a description of high-tech industries. It describes a set of new sources of competitive advantage which can apply to all sectors, all companies and all regions, from agriculture and retailing to software and biotechnology" (Charles Leadbeater 1999, in Ian Briekley, 2006, p. 4). Another definition that brings us closer to what knowledge economy is and what is its importance is provided by the Economic and Research Council "economic success is increasingly based on upon the effective utilization of intangible assets such as knowledge, skills and innovative potential as the key resource for competitive advantage. The term "knowledge economy" is used to describe this emerging economic structure" (ESRC, 2005, p.1).

The importance and the role of knowledge workers in the modern organizations

It can be stated that economy needs both manual workers as well as knowledge workers in order to develop. According to Hendarman et. al., information and knowledge are replacing capital and energy, becoming the primary wealth-creating assets. The physically-based work was transformed in knowledge-based work, the key factors of production shifting to innovation, knowledge and technology (Hendarman, et.al., 2012). This recognition was brought in 1996 also by The Organization of Economic Co-Operation and Development stating that: "Knowledge is now recognized as the driver of productivity and economic growth, leading to a new focus on the role of information, technology and learning in economic performance" (OECD, 1996, p.3). In a knowledge-based economy, the knowledge is created, evaluated and traded (Hendarman, et.al., 2012). In order to create knowledge, the society needs welleducated and skilled people. After creating it, there is no use if you do not share and disseminate it. After going through these stages, people can finally use knowledge effectively. For instance, if someone has a good idea, but it is not shared, that idea cannot be improved or applied in order to solve the problem. In the 21st century, besides the preexistent knowledge that people should have, there are some others that need to be added, such as: effective communication, groups skills analytical skills and problemsolving skills (Hendarman, et. al., 2012). Nowadays, maybe

people find it annoying that every time a project or task needs to be done in groups or pairs. But, in fact, it is just helping them shape their knowledge and skills. What it is following, is to develop the interpersonal and communication skills, which will lead to a faster problem-solving.

A knowledge worker is formed by bringing together the hard skills as well as the soft skills. Hard skills, represent the person's ability to perform a certain task whereas the second ones represent personal attributes that emphasis the interaction and the job performance, being interpersonal and broadly applicable (Hendarman et. al., 2012). A company that wants to have an advantage on the market must differentiate itself somehow. Besides workers with hard skills, the knowledge workers are very valuable for a company in a knowledge-based economy. According to Aneta Sokol, "Most often, knowledge workers are defined through the prism of their characteristics, level of education, actions taken, knowledge, experience, etc., as well as through the prism of the requirements placed on them by the organization" (Sokol and Figurska, p.5, 2021). For a company to reach the best, it needs to work on the innovation, to be competitive and to perform better as an organization. Having knowledge workers is not necessarily enough, there is a strong need for creativity. Taking the example of two companies that are in direct competition, both having knowledge workers inside the company.

The key factor that differentiates themselves on the market is represented by the abundance of creativity that their knowledge workers have. It is very hard to differentiate the knowledge workers from the other employees, because in knowledge-based economy, there is a limited scope in order to make a clear distinction (Sokol and Fugurska, 2021). According to the article, the importance of knowledge workers to the knowledge economy is that they raise the standards. For instance, they have higher expectation from themselves, from others and from the organization they are working for. Therefore, they will not settle with less, they will always want to do more, but they will also demand more. Some categories that they have expectations from are: working conditions (technical, financial), organizational culture (trainings, communication, trust) and management of people (they will always look for feedback, good or bad, they need recognition for their work and to be always challenged) (Sokol and Figurska, 2021). There is a two-way street, indeed. If they have expectations from these categories, they will need to perform exemplarily in their field.

In order for creating the best environment for the knowledge workers to work in, the human resource management, knowledge management processes and the organizational culture itself need to work together (Sokol and Figurska, 2021). All the surrounding elements, from technology to the organizational structure, participate to shaping the environment and the working conditions. Creative organizations take outside resources, apply their activities and create improved or new products and services (Sokol and Figurska, 2021).

3. Knowledge-worker productivity: The biggest challenge of the company's management

How can knowledge worker productivity be measured? In the article "Measuring knowledge worker productivity" it is stated that around 1920 the ration between manual workers and knowledge workers was 2:1, whereas by 1980, it was 1:2. It is believed that the midpoint was somewhere in 1956, when "white-collar workers" outnumbered the "blue-collar workers" (Ramirez and Nembhard, 2004). Gordon stated that due to their importance, knowledge workers, they started to be included in the organizational strategic plans in order to have a better productivity (Gordon, 1997; Berglind and Scales, 1987). A company that faces rises in costs of raw materials or of labor cannot just rise prices; therefore, they need to focus on something else. "...The challenge today is not to increase manual worker's productivity but to measure and increase KW's productivity" (Drucker, 1999 in Berglind and Ramirez, p.602). It represents a challenge to measure the productivity of a knowledge worker, based on the fact that the tasks are not fixed, they do not have the standards form production and each one of them can perform the task differently (Davenport and Prusak, 2000). The most different part is that there is not a direct link between the units of labor and units of output. There are different tasks that need a different amount of time and depends on the capacity and the creativity of the knowledge worker (Gordon, 1997). Pepitone affirmed that there is a mistake to apply work design techniques to Knowledge worker, because they are not machines (Pepitone, 2002).
In accordance with Dove, the Knowledge work can be divided into three classes:

- **Creation of knowledge work:** For example, engineers and inventors create tools that other workers will use. Their work depends on innovation;
- **Portable knowledge work:** They use the knowledge that they already have applied in previously established tasks;
- **Specialty knowledge work:** In this case, there are the workers that are specialized in a narrow area and are considered experts in what they do. One example can be a surgeon that can perform a complicate surgery, based on his experience and technique. (Pepitone, 2002).

According to Nickols, the knowledge worker's job is to convert knowledge, not materials (Nickols, 2000). In that sense, it is hard to measure the productivity, since it is less tangible that manual work (Nickols, 2000). In the following, it will be discussed how to apply the potential measurements and which is the benefit.

- The knowledge workers are monitored in order to see unusual patterns in solving problems;
- It will be analyzed the capacity of KW if they are working at 100%;
- The strategic planning will be taken into consideration in order to assess the right tasks to the right people;
- The results are compared between individuals, teams, companies, divisions also in accordance with work bonuses and rewards;
- The subjectivity will be reduced from evaluation. (Pepitone, 2000);
- Mundel stated that in order to measure the KW productivity, there are certain questions that need to be answered by the measurement system (Mundel, 1975);

- What is to be achieved with the task?
- What are the outputs? • Have can the outputs be counted?
- What are the resources and how much it is needed in order to produce the outputs?
- What is the optimal operating plan?
- Can the measurements be standardized and replicated (Mundel, 1975)? Since the knowledge workers can be found in many domains, performing different tasks, there were different methodologies offered by the literature that can be applied on costs, quality and outcome. Some of them have been applied across the industries and others remained only as theories. (Pepitone, 2000).

In the following, some of these methods will be discussed, but not detailed for lack of space.

1. **Operation function analysis**

Proposed by Bumbarger in 1984, OFA takes into consideration the demand of the product that KW is offering. The ratio is obtained by dividing the orders processed in a given period of time to the number of working hours. The productivity increases as the number of orders increase and the working hours decrease (Bumbarger, 1984).

2. **Administrative productivity indicator and multiple output productivity indicator**

In 1989, Ray and Sahu discussed a method that combines many measures of productivity for operations that generates single and many outputs (Pepitone, 2000). If there is only one output, Christopher (1984) suggests to use administrative productivity indicator (API) resulting from work output/ hours of works. This in not working all the time. For example, engineers must do multiple tasks, from trainings to projects and supervision. In this case the multiple output productivity indicator (MOPI) is used. The quality together with the quantity is measured and they are aggregated by using a rating scale technique (Christopher, 1984).

3. **Achievement method: completion of goals**

Another simple method that deals with the quantity of the tasks is offered by Ray and Sahu (1989). In this method, the ratio is given by dividing the number of assigned tasks to the number of accomplished ones (Ray and Sahu, 1989).

4. **Macro, micro and mid-KW productivity models**

Last but not least, in 1986, Coates offers to the literature three methods to measure KW's productivity. The Macro model is focused on the plant level, the mid model, on the department and the micro one, on the individual. (Coates, 1986). The models are based on seven measurable categories: quality, schedule, cost, absenteeism, overtime, lost time and cost reduction. The percentage change is calculating and for each category a weight is assigned in accordance with the importance for each model. In the end, the weight of each category is multiplied with the percentage and they are summed up (Coates, 1986). As it was noticed before, these represent only few of the procedures that the productivity of a knowledge worker can be measured. If it is to make a ranking based on the frequency of their usage in the organizations, the first one is taking into consideration the quantity, the second one is represented by the const and profitability and finally, the third one is timeliness. (Pepitone, 2000). In the end, the organization can choose one of these methods or develop a new one based on its necessities.

Improving knowledge worker productivity

In general, in order to improve something, it is needed to know what stays at it base and what the driven factors are. Based on that, in order to establish how to improve the KW's productivity, organizations must find out what makes them productive. Even though it was in mid-90's, the challenges of satisfying a knowledge worker emerged. There were identified some major factors that determined their productivity:

- The productivity of knowledge workers requires the answer to the question, "What is the task?"; • It requires the placement the burden for their output on the shoulders of individual knowledge workers. Knowledge workers must control their own time. They need to be able to make decisions on their own;
- Knowledge workers must continue to innovate as part of their work, duty, and responsibility; knowledge work involves continual learning on the side of the knowledge worker, as well as ongoing teaching;
- The quantity of output is not—at least not solely—a factor in knowledge worker productivity. Quality is just as crucial as quantity;
- Finally, for knowledge workers to be productive, they must be regarded and treated as a "asset" rather than a "cost." It requires that knowledge employees desire to work for the company over all other options (Drucker, 1999).

It can be seen that they are several factors that can influence knowledge workers' productivity. In order for a company to succeed and to have profit, its employees need to have high productivity. There is a strong relationship between the productivity and the job satisfaction of an employee. When an employee is satisfied with what he is doing, he is going to be more productive. Therefore, the organizations need to value this factor.

According to entrepreneur.com, there are several **ways in which companies can improve productivity of the employees:**

- **Being transparent and offering feedback:** if the manager is transparent with the employee, he gained his trust and the employee knows that his work is valued. Moreover, receiving feedback from the superior is always helping increasing the productivity. Even though the negative feedback is not always received well by the employee, can be more helpful in correcting mistakes; • **Know each employee:** It may sound hard, but when the employee feels that he is more a person than a number for the company, his productivity will increase, realizing that his work matters;
- **Offering recognition:** Even though bad feedback helps, also recognition increases employee's self-esteem and he realizes that he is doing a good job;
- **Technology:** Nowadays, this term is very common. For the knowledge workers this represents a key factor that increases the productivity. If they have the necessary equipment and technology, they can perform their job better and faster. An example could be the internet speed: Most of the knowledge workers need internet in order to perform their tasks. If the internet speed is low, they will get frustrated and their productivity will be low;

- **Encourage risk taking:** If a project one employee may take on has a 40% probability of failing and a 60% chance of succeeding, the choice to undertake the project will be primarily based on their estimation of the risk of failure. These 60/40 decisions, which might benefit a firm in the long run, will not be implemented in a culture where failure is faced with severe criticism and the threat of being fired. Employees must make judgments like this on a regular basis about whether or not to do something a little more ambitious than usual. Encouragement of risk-taking will not only make employees more self-assured and independent, but it will also result in increased productivity in an innovative culture;
- **Inspire the knowledge workers:** One of the most difficult tasks for a firm, especially as it expands, is to keep each person engaged in their work. People's production increases enormously when they are working genuinely and believe that the task, they are doing is the finest possible way for them to spend their time right now. If they base part of their self-concept on the work they perform and care profoundly about it, they will show up to work every day with the enthusiasm to give it everything they have;
- **Autonomy:** People will be less happy and productive if they feel compelled to do their work in a specific way, must dress in certain ways at the office, and are unable to be themselves. Having open and honest conversations with employees about the type of work they want to do, encouraging them to pursue a goal or idea, and allowing them to organize their work around their preferred lifestyle can generate momentum in the office, encouraging employees to work harder on what they enjoy the most;
- **Guidance:** Even if autonomy is important, there is also the need of guidance. Sometime employees can get lost in what they are doing without realizing that they are capable of performing also other tasks (www.entrepreneur.com).

There are also other several informal channels that are extremely beneficial to increasing an individual's knowledge worker productivity.

In conclusion, in order for companies to perform at their best, they need to invest in employees, especially in the knowledge workers. They represent a scarce on the market and ideally, there is a need of finding the best people for the appropriate jobs. There will be cases in which knowledge workers will not be so productive, because they will be not satisfied at their job. In order for preventing this, companies need to be open-minded and to discuss the matters before the knowledge worker will leave the company.

4. Cases Study

The topic of knowledge worker is a complex and important one, being discussed in all economic fields. For some people it may seem new, but in fact, it was an aspect discussed since the 60s'. In order for a business to fully function and for the employees to be a pleasure to go to work, several elements should be taken into consideration in order to satisfy both upper statements. This research seeks to identify whether employees, as

well as employers know about knowledge worker and if they understand his importance. Moreover, the research goes further and analyzes the productivity and satisfaction of a knowledge worker.

The purpose of the present research is to identify to what extend the concept of knowledge worker, respectively the productivity at work and how can the productivity of a knowledge worker be improved? It may be the case that in the same company, not all the departments apply these elements. Following the standard steps of the marketing research process, the objectives and hypothesis will be defined in the following part.

Objective 1: To determine the relation between the type of department and the amount of information people have about knowledge worker.

Hypothesis H1: There is a positive relation between the type of department the employee is working in and the amount of information he has about knowledge worker.

Objective 2: To determine whether people think that they are knowledge workers and if it depends on the department that they are working in.

Hypothesis H2.1: All the surveyed people are knowledge workers.

Hypothesis H2.2: The belonging to a specific department influence whether people think they are knowledge workers.

Objective 3: To identify the importance of the characteristics of a knowledge worker for the society

Hypothesis H3: All the surveyed people think that the knowledge worker is important for the society.

Objective 4: To determine whether people are familiar with the concept of learning organization

Hypothesis H4: All the surveyed people knew the concept of learning organization

Objective 5: To determine whether the companies are taking into consideration the elements through which the productivity can be stimulated

Hypothesis H5: Not all the companies are applying the methods of stimulating the productivity of the workers

Within the design phase of the research, the information sources were established, as well as the methods of using the data, the timing of the research and the systematization of the existing data.

The research started with constructing the questionnaire form in English language. The questionnaire comprises 17 items, of which 6 with sub-items and 10 classification questions, developed on the Google Forms platform, which was distributed to respondents from April to May 2022. The questionnaire targeted 70 people from different domains and countries. The survey was successfully completed by 52 people, counting for 74,2 % out of the total initial target, these responses being further taken into consideration for analysis. In this Article we will present only some of the results of the research.

Research limits

The performance of this analysis was limited by several factors. The main constraints encountered were related to the relatively small size of the target group, which makes it difficult to identify statistically significant correlations between different variables. Thus, the statistics presented in this report are predominantly descriptive. The involvement of respondents when filling out questionnaires is varied, and among the causes we

mention: the large number of questions, the time of year when the data was collected, the level of stress of the respondents, the low level of knowledge about knowledge worker, knowledge society and learning organization held.

Results

In the beginning of the analysis of the questionnaire, we presented three questions of the survey that gathered general information about the companies that respondents are working for will be presented in order for creating a general frame of the questionnaire.

In this regard, the information sources, in terms of sources origin 32 in relation with the researcher, are external, representing companies from different countries.

- In what domain does your company activate?

At this question, people chose 7 domains which will be showed in the following table:

Table 1. Domain of the company

Industry of the company	How many companies
Services	24
Production	12
Automotive	5
IT	4
Commerce	2
Accounting	1
Healthcare	2

From the upper table, it can be seen that the industries that the companies activate in are quite different. The majority of the questioned people said that their company is in the services domain, followed by the production one.

- How many employees does your company currently have?

At this question, 4 options were given. The one with the company with over 250 employees was chosen by 27 people, the one with between 50 and 250, by 6 people, the one with 10-50 people, by 10 people and the last one, with a company with 10 people, was chosen by 9 respondents. It can be seen from the numbers that the range of the employees in a company can differ significantly.

- Where is your company situated?

This question aimed to see where the companies are from. From the questionnaire, it resulted that out of 52 respondents, the majority were from Romania, counting for 44 answers. Other companies were from Croatia, Finland, Denmark, Spain, Greece and Belgium.

Objective 1:

To determine the relation between the type of department and the amount of information people have about knowledge worker. This objective incorporated two questions regarding the department that the surveyed people are working in and the

amount of information they know about the term. Further on, it will be analyzed whether there is a linkage between these two elements.

1.1. In what department of your company do you work?

This question was found relevant for the questionnaire to see whether there is a link between the information held by the people about the knowledge management topic and the departments. There are 14 different departments in which people are working.

Table 2. Department of the company

Department	Number of people
IT	19
HR	6
Sales	5
Quality	3
Customer support	3
Management	3
Accounting	3
Production	2
Logistics	2
Medicine	2
Delivery	1
Purchasing	1
Marketing	1
Education	1

It can be observed that the majority of the interviewed people work in the IT department, followed by HR and sales. In the next objectives will be analyzed whether there is a connection between the departments and the knowledge.

1.2. How much do you know about knowledge worker term?

This question was constructed based on a scale from one to 10 (one = very little information, 10 = very much information). Further on, it will be presented how to what extend the term of knowledge worker is known be the people.

o 25 people answered from the middle point to very little information

o 27 people answered from the middle point to very much information

From the upper statements, it can be seen that from the all-surveyed people, more than half of them know about the term of knowledge worker. It is to be mentioned that no information about the concept of knowledge worker was given prior or if the questionnaire. In the following, connecting the responses from the two questions, it will be analyzed whether there is a linkage between the amount of information about knowledge worker and the department that the employee is activating in. Before analyzing, it would be expected that the number of people who know the most about knowledge workers are the ones from IT, medicine and management, because they are normally departments in which knowledge workers are. Surprisingly the results show the opposite. There were people from IT department with the score of 10 and score of one. In the same manner, people

from sales departments scored 10, but also 2 and three on the scale. Taking into consideration the above responses, it is satisfactory that more than half of the respondents know about the concept of knowledge worker. In regards with the correlation with the departments, the **Hypothesis H1 cannot be validated,** because 35 there is not a positive relationship between the departments the respondents are working in and the degree of information about knowledge worker concept.

Objective 2:

To determine whether people think that they are knowledge workers and if it depends on the department that they are working in. Under this section, two questions were addressed to the sample members. Together with the data regarding the departments, and analysis was constructed.

2.1. ***Do you think that based on your work, are you a knowledge worker?***

At this question, people answered whether they think of themselves, based on their work, if they are knowledge workers or not. Out of 52 respondents, 6 answered that they do not consider themselves as knowledge workers. This number can have a small error, due to the fact that in the previous question, 8 people answered that they don't know the difference between manual worker and knowledge worker. It can be the case for these people that they are knowledge workers, but they do not know it.

2.2. ***If the previous answer was yes, what are the factors that make you a knowledge worker?***

To this question, there were gathered 39 responses, due to the fact that 6 of the questioned people did not consider themselves knowledge workers and the others did not know what factors makes them knowledge workers. From the gathered responses, there will be listed below the factors that are responsible for making people knowledge workers.

- *Working at computer all the time;*
- *Active thinking, studying;*
- *Finding solutions for the problems;*
- *Diploma in a specific domain;*
- *Working in IT;*
- *Investigating and taking decision.*

As Drucker stated, knowledge workers are the ones who develop projects and find solutions for other problems using their trainings and creativity (Drucker, 1959). As it can be seen, all of the above-mentioned elements are part of a knowledge worker's dayto-day life. Analyzing the above statements, **H2.1 is not validated, due to the fact that not all of the questioned people think of themselves as knowledge workers.**

In what will follow, in order for discussing H2.2 there is a need to associate the above answers with the departments that people are working in. From theoretical point of view, in order for a theory to be validated, all of the subject in question should be true. The questionnaire gathered people from 14 different departments. As the theory says, knowledge workers are the ones applying their information in order to produce something new and to revolutionize. In this regard, here were included the ones working in IT, medicine, teachers and so on. In our case all of the IT guys should have been knowledge workers. Out of the 19 IT people, one working in software considered that he is not a

knowledge worker. In the same manner, from 5 people from sales department, 2 of them considered that they are not knowledge workers.

Combining the answer from the two questions, it can be seen **that hypothesis H2.2 it is not validated,** because there are people from the same department that don not feel that they are knowledge workers.

Objective 3: To identify the importance of the characteristics of a knowledge worker for the society Within this section, people answered two questions that are listed below. Based on its answers, an analysis was constructed.

3.1. On a scale from 1 to 10, how important do you think a knowledge worker is for the society?

It was previously seen what a knowledge worker is, what are the characteristics of one and whether people think of themselves as knowledge worker. This question seeks to identify whether the knowledge worker is considered important in the society by the questioned people. One answered that he is not that important. The rest of them stated that his importance is very high in the society. The one that answered apart, it can be from the reason that apart knowledge workers also manual workers are important, but also because he did not know much of the term.

3.2. Please, name a few characteristics of a knowledge worker.

This question seeks to determine whether people can name some of the characteristics of a knowledge worker even though they are not one. Some of the examples provided by them will be stated in what will follow.

- *He is intelligent, focused, emphatic, capable, educated;*
- *Poses critical thinking, creativity, adaptability; o He has the capability to solve problems;*
- *He owns a diploma;*
- *He sees the Big-Picture;*
- *He has autonomy;*
- *He is curious and he is continuously learning.*

The above-mentioned examples are some of the characteristics possessed by a knowledge worker. These can differ based on the type of the work of each department. When combining the answers from the two questions, it can be seen that beside 5 people that did not provide any characteristics for the term, many know what a knowledge worker is. Therefore, it would have been expected that all of them will consider him an asset for the society, being very important. Due to the fact that, only 16 stated that, **H3, in which all of them consider the knowledge worker very important for the society, is not validated.**

Objective 4:

To determine whether people are familiar with the concept of learning organization As it was discussed in the paper, nowadays, the learning organization is very important for the society. This objective seeks to identify whether people know about this term and which characteristics they think that are important.

a. Are you familiar with the concept of a learning organization?

Even though the concept is very important, maybe due to its name, it is not so known by the people. 37 respondents stated that they are not familiar with the concept, whereas only 15 of them have hear about it before.

b. ***If your answer to the previous question was yes, please mention a few characteristics of a learning organization.***

Due to the fact that this question was linked with the previous one that have only 15 positive answers, there are only 13 people who characterized the concept of learning organization. The difference of to, may come from the fact that people may have heard about the term, but do not know exactly what it is doing. In what will follow the examples offered by the people will be listed.

o Two terms that were mentioned by many people were teambuilding and team learning. Both of them are very important. The teambuilding is about knowing the team and socializing, not necessarily by work, but by having a party or an outdoor activity. In that manner the connection and bounding between them will increase facilitating the team learning. People will collaborate and will learn thing from the colleagues instead of struggling to find the answer by themselves.

o Another element that was frequently mentioned was trainings. People are joining trainings, because like that they are broadening they horizons and even though they will not remain with the company forever, the knowledge stays with them;

o An organization should adapt to the circumstances, to accept mistakes and to be innovative.

These are some of the characteristics of the knowledge organization that people thought to be important. The accent was put on collective learning as also Garavan is stating that during time the emphasis was put on individual learning and now it is slowly shifting to group learning, including team project and team discussions (Garavan, 2007).

Analyzing the above statements, even though there were provided plenty of learning organization characteristics provided, **H4 is not validated, because there were many of the respondents that did not hear about the concept, let alone its characteristics**.

Objective 5:

To determine whether the companies are taking into consideration the elements through which the productivity can be stimulated It is well known that in order for a company to succeed, the people that are working there must be productive. This objective seeks to identify how the productivity can be stimulated and if the companies do so.

5.1. How can the productivity of a knowledge worker be improved?

This was a multiple-choice question with more than one possible answer. Bellow, there will be listed each of the term with its frequency.

- *Offering liberty to identify the tasks themselves …25 people*
- *Autonomy…31 people*
- *Innovation…34 people*
- *Continuous learning…46 people*
- *Continuous teaching…25 people*
- *Higher salary…35 people*
- *Bonuses…31 people*

- *Trainings…46 people*

It can be seen that the two terms that were considered the most important in regards with the productivity of the knowledge worker were trainings and continuous learning. It cannot be truer, because in order for a worker to remain productive, he needs support and teaching all the time. He wants to improve himself, therefore, he will need different trainings. The aspects that came next were salary innovation, bonuses and autonomy. In order for a knowledge worker to not get bored with what he is doing, he has to break, create and recreate things in order to understand and make things better. The team learning is most of the time good, but in some cases, the knowledge workers need autonomy to feel that they have power. Besides the needed help, from time to time, they need also bonuses so they do not feel that their work is in vain. The salary represents an important aspect for 35 of the surveyed people, because they will feel appreciated and their buying power will increase with a higher salary.

5.2. Do you consider that your company in which you are currently working for is taking action in stimulating worker's productivity?

After seeing how the productivity of a knowledge worker can be stimulated, it is helpful to see whether there is also put in practice by the companies that the questioned people are working for. Their answers will be further presented. Fortunately, out of 52 people, 38 answered that the productivity is stimulated in their companies. The other 14, may feel that they are not personally stimulated, but the company is implementing the stimulation in other departments of the company. Taking into consideration the upper answers and the methods of increasing productivity of a knowledge worker, it can be stated that **H5 is validated**, **because not all the companies are implementing methods of encouraging productivity.**

5. Conclusions

Peter Drucker and other management specialists have argued that organizations must learn to harness their potential as a “knowledge worker” to remain competitive in the new millennium. Certainly, most organizations have vast, untapped resources of human productivity, waiting for the right organizational culture to flourish in extraordinary innovation and leadership.

Organizations tend to appreciate knowledge workers for their diversity. The specific roles that knowledge workers play in organizations and how they behave also make them valuable assets. Indeed, knowledge workers are often highly valued by employers for their innovation and creativity, as they are considered important elements in an organization’s ability to survive and thrive in an increasingly competitive and rapidly changing environment.

Knowledge workers are often the core of all organizations. In organizations around the world, knowledge workers are one of the most important, costly and fastest-growing categories of employees.

The productivity of knowledge workers influences success in today’s competitive labor economy, and businesses focus on increasing this productivity. The employment,

retention and productivity of knowledge workers will remain important issues. As the shortage of skilled people to perform knowledge work increases, employers will be challenged to find more effective ways to hire and retain these people. Their productivity is essential for organization, innovation and sustainable development. In the context of highly knowledgeable businesses, the implementation of knowledge management is likely to increase the productivity of knowledge workers. Knowledge management practices should be implemented in order to increase the productivity of knowledge workers by encouraging the involvement of knowledge workers and their tendency to manage knowledge processes. Identifying and using knowledge workers in an efficient and cost-effective manner is a challenge for businesses and the economy today.

Cultivating a new generation of knowledge workers is one of the great challenges of the modern age. Today's knowledge workers are more global, work in multiple industries and are not always right at the office. Each of them has a different workflow depending on the workplace, with their own specific ways of harnessing their knowledge.

The major changes that organizations are facing are forcing them to change the way they approach human capital and knowledge workers. While the industrial society has focused on material and financial resources, the knowledge-based society is based on knowledge, and the employees who manage it are the most important intangible assets of organizations.

However, while most organizations are aware that human capital is their most important asset, this resource is still treated as a cost, rather than a debt, rather than an asset that creates value for the organization. Changing this attitude toward human capital must become an objective of all organizations. Managers, regardless of their hierarchical level, must understand the importance of these intangible assets and the importance of creating a culture that supports the development of human capital. Therefore, it is important for all to change their mentality and see knowledge workers as goods. This, in turn, will change what the company does to find, develop, nurture and retain those workers.

In conclusion, knowledge workers are important assets of the company because they have unique talents and skills, rather than other employees performing repetitive or routine tasks. Knowledge workers acquire leadership skills because they often work independently, with the freedom to perform new tasks every day.

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