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## A STUDY ON MOTIVATING KNOWLEDGE WORKERS BASED ON IT COMPANY

### Abstract:

This article aims to analyse motivators for knowledge workers according to different processes in an IT company. This case study investigates how we can define a knowledge worker in a IT company and explores how the use of motivators influences on the realized business processes. The construction of the model includes values of significant motivators for 20 identified knowledge workers from Polish IT companies. This is followed by a discussion of the results of the empirical studies and of the supporting literature. The summary indicates potential directions for further work.

**Key words:** knowledge workers, motivators, IT company.

### MOTYWOWANIE PRACOWNIKÓW WIEDZY W PRZEDSIĘBIORSTWACH IT – STUDIUM PRZYPADKU

#### Streszczenie:

W artykule zaproponowano proces motywowania pracowników wiedzy w przedsiębiorstwach informatycznych. Na podstawie analizy literatury przedmiotu oraz badań empirycznych zdefiniowano pracownika wiedzy. Następnie sformułowano procedurę motywowania w kontekście podniesienia efektywności realizowanych procesów biznesowych w przedsiębiorstwie. Weryfikację rozwiązania przeprowadzono na podstawie wyników badań 20 pracowników wiedzy w wybranych przedsiębiorstwach informatycznych. W podsumowaniu pokazano kierunki dalszych prac.

**Słowa kluczowe:** pracownicy wiedzy, czynniki motywacyjne, przedsiębiorstwo IT.

## Introduction

Companies that have achieved a certain level of knowledge growth are able to capitalize the knowledge to improve their results<sup>1</sup>. Enterprises can obtain their competitive advantages by acquiring the useful knowledge. Motivation process can take place both in the context of the internal knowledge transfer of the firms and of the external knowledge transfer with customers, suppliers and competitors.

Knowledge workers can play an increasingly important role in terms of increasing the efficiency of business processes realized in the enterprise. Liao et al.<sup>2</sup> stated, that knowledge

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<sup>1</sup> A. Tiwana, *The knowledge management tool kit: orchestrating IT, strategy, and knowledge platforms* (2nd ed.), Upper Saddle River, NJ: Prentice Hall 2002.

<sup>2</sup> S. H. Liao, W. C. Fei, C. C. Chen, Knowledge sharing, absorptive capacity, and innovation capacity: An empirical study of Taiwan's knowledge intensive industries, *Journal of Information Science* 2007, vol. 33, pp. 340–359.

sharing among workers enhances a firm's performance. Moreover Liu and Phillips<sup>3</sup> discovered, that company's competitive advantages can be improved by encouraging workers to transfer knowledge. Employees generally work better knowing that they are an important part of a company. Król and Ludwiczynski<sup>4</sup> distinguish the theories of motivation:

- Theory X and Y of McGregor.
- Herzberg's two-factor theory.
- Reinforcement Theory.
- Expectations Theory.
- Setting goals Theory.

Luthans states, that motivation is a process that activates employees to achieve their goals<sup>5</sup>. According to Sveiby<sup>6</sup> the organization should emphasize interaction among workers. Motivation can be one of the most important factors that influences an employee to share their knowledge.

In this study, the significant of the motivators for knowledge workers in IT companies is investigated and is based on a survey and data obtained from 20 knowledge workers from Polish IT companies. This study tries to ascertain what the effects are of the use of motivation factors on the output of a realized processes in an IT company.

The remainder of this paper is organized as follows. Section 2 presents the theoretical background of the study. Section 3 describes the procedure on Motivating Knowledge Workers in the context of the realized business processes based on IT Company. Section 4 explains the research methodology and examines the research results. Section 5 discusses the implications of the results, provides a conclusion and highlights the limitations of the research.

## Theoretical Background and research model

In this study the factors to determinate the knowledge worker in an IT company are defined based on the literature research.

McDermot<sup>7</sup> stated that company culture can facilitate knowledge sharing among employees. Troubleshooting<sup>8</sup> and work experience<sup>9</sup> are identified as the key factors for describing knowledge in a company. It is also argued that customers' demands are served by employees who meet their preferences<sup>10</sup>. Organizational commitment describes the extent to which an

<sup>3</sup> Y. Liu, J.S. Phillips, Examining the antecedents of knowledge sharing in facilitating team innovativeness from a multilevel perspective, *International Journal of Information Management* 2011, vol. 31, pp. 44–52.

<sup>4</sup> H. Król, A. Ludwiczynski (red.), *Zarządzanie Zasobami Ludzkimi – Tworzenie kapitału ludzkiego organizacji*, PWN Warszawa 2008.

<sup>5</sup> F. Luthans, *Organizational Behavior*, New York: McGraw - Hill Companies Inc 2008.

<sup>6</sup> K. E. Sveiby, Dziesięć sposobów oddziaływania wiedzy na tworzenie wartości, *E-mentor* 2005, vol. 2(9).

<sup>7</sup> R. McDermott, Learning across teams, *Knowledge Management Review* 1999, vol. 8(3), pp. 32–36.

<sup>8</sup> M. Vomlelová, J. Vomlel J., Troubleshooting: NP-hardness and solution methods, *Soft Computing* 2003, vol. 7 (5), pp. 357–368.

<sup>9</sup> R. Bennet, Employers' demands for personal transferable skills in graduates: A content analysis of 1000 job advertisements and an associated empirical study, *Journal of Vocational Education & Training* 2002, vol. 54(4), pp. 457–476.

<sup>10</sup> P. Sharma, J.L.M. Tam, N. Kim, Demystifying intercultural service encounters. Toward a comprehensive conceptual model, *Journal of Service Research* 2009, vol. 12, pp. 227–242.

employee wants to be a part of an organization<sup>11</sup>. The internal communication concept relates to whether or not senior managers and all employees communicate with each other<sup>12</sup>. It is also argued that training may improve employees' work attitudes<sup>13</sup>. According to Evers et al.<sup>14</sup> it is observed that providing coaching enhances outcome expectancies and self-efficacy. So, in this research the following criteria<sup>15</sup> of a knowledge worker in an IT company<sup>16</sup> are defined:

- I have a general knowledge about the work tasks.
- I have an expertise on the tasks carried out by me.
- I have skills on the tasks carried out by me.
- I have a formal education for the tasks performed by me.
- I know English language.
- I know foreign language .....
- I have qualified for the tasks performed by me confirmed by certificates.
- I have contacts with customers regarding the tasks carried out by me.
- I am engaged in carrying out my tasks.
- I have manners
- I am available.
- I have contacts with other employees.
- I have problem-solving skills.
- I am creative.
- I have the ability to organize work.
- I am independent in carrying out the tasks.
- I'm timely execution of tasks.
- I am communicative execution of tasks.
- I have work experience (up to 2 years – 1 point, 2-4 years – 2 points, 5-7 – 3 points; 8-12 – 4 points, above – 5 points)

Each worker in a company should evaluate himself with five-point scale (5- excellent, 4 – very good, 3 – good, 2 – sufficient, 1 – not sufficient).

According to those characteristics were selected the knowledge workers in IT companies to the further research. The expected results for defining a knowledge worker in a company has been at least 70% achieved by the use of the five-point scale survey items.

<sup>11</sup> N. J. Allen, J. P. Meyer, The measurement of antecedents of affective, continuance, and normative commitment to the organization, *Journal of Occupational Psychology* 1990, vol. 63, pp. 1–18.

<sup>12</sup> M. Welch, P.R. Jackson, Rethinking internal communication: A stakeholder approach, *Corporate Communications: An International Journal* 2007, vol. 12(2), pp. 177–198.

<sup>13</sup> E. Chang, Employees' overall perception of HRM effectiveness, *Human Relations* 2005, vol. 58(4), pp. 523–544.

<sup>14</sup> W. Evers, A. Brouwers, W. Tomic, A quasi-experimental study on management coaching effectiveness, *Consulting Psychology Journal: Practice and Research* 2006, vol. 58(3), pp. 174–182.

<sup>15</sup> J. Patalas-Maliszewska, J., *Knowledge Worker Management: Value Assessment, Methods, and Application Tools*. Springer, Heidelberg Germany 2013.

<sup>16</sup> J. Patalas-Maliszewska J., I. Krebs, Model of innovation transfer in small and medium enterprises (SME). In: *Advances in Production Engineering APE 2010: proceedings of the 5th international conference*. Warsaw University of Technology.

*A Procedure on Motivating Knowledge Workers in the context of the realized business processes based on IT Company*

In this study the following procedure on Motivating Knowledge Workers in the context of the realized business processes in an IT company is proposed:

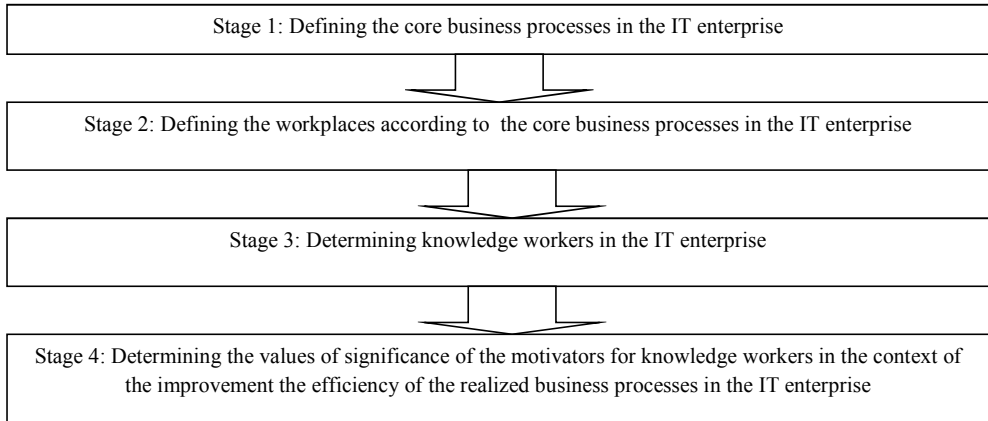


Fig. 1. A Procedure on Motivating Knowledge Workers in the context of the realized business processes based on IT Company (MKW-IT)

Source: Own elaboration

This study posits that the implementation of the procedure MKW-IT in the IT company can influence on the efficiency of the realized business processes within a company.

## Research results

Before the survey was carried out, it was assumed that those employees from IT companies which took part in the research realize the core business processes according to the Figure 2.

The list of factors for the significance of the use of motivators for knowledge workers in IT companies was based on feedback surveys and its sources are listed here:

The factors described a knowledge worker: The degree to which an employee believes that he or she is a knowledge worker by the use of t five-point scale survey items.

The significance of the use of motivators in the context of the improvement the efficiency of the realized business processes in the IT enterprise: The degree to which an employee believes that this motivator influence on an efficiency of realized business process in an IT Company by the use of t five-point scale survey items.

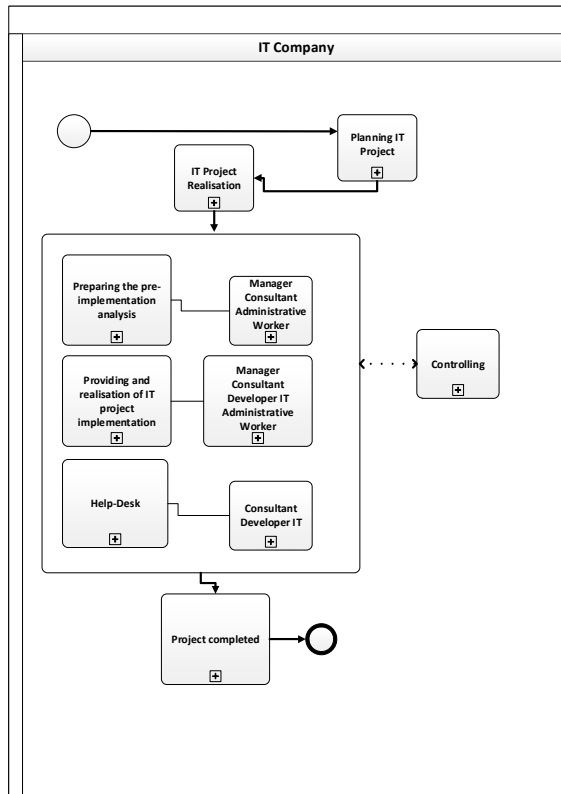


Fig. 2. The core business processes in the IT enterprise

Source: Own elaboration

The data for this study were collected from 20 knowledge workers form Polish IT companies between April-Mai 2015.

According to the following criteria of a knowledge worker in an IT company were selected the knowledge workers in Polish IT companies to the further research. This classification was based on self-assessment of employees. In further studies will be carried out questionnaires describing each of the following characteristics to verify the assessment of knowledge workers.

So this study includes a statement of the significance of the use of the motivators for knowledge workers in the context of the improvement of efficiency of business processes based on an empirical analysis of the 20 knowledge workers from Polish IT companies.

The following motivators for knowledge workers for the improvement of efficiency of business processes in an IT company were identified:

- New salary offer for knowledge sharing.
- Threat of job loss.
- Opportunities for promotion.
- Sharing of company goals and objectives.
- Systematic feedback.

- Control over the job.
- Incentives like as tickets to the movies.
- The use of regular employee reviews to discuss improvements for a company.
- Have opportunities for self-development.
- Medical coverage.
- Training.
- Incentives like as extra insurance.

So, as a result of the research, the significance of the use of the motivators for knowledge workers in the context of the improvement of efficiency of business processes was discovered (see Fig. 3 and Fig. 4).

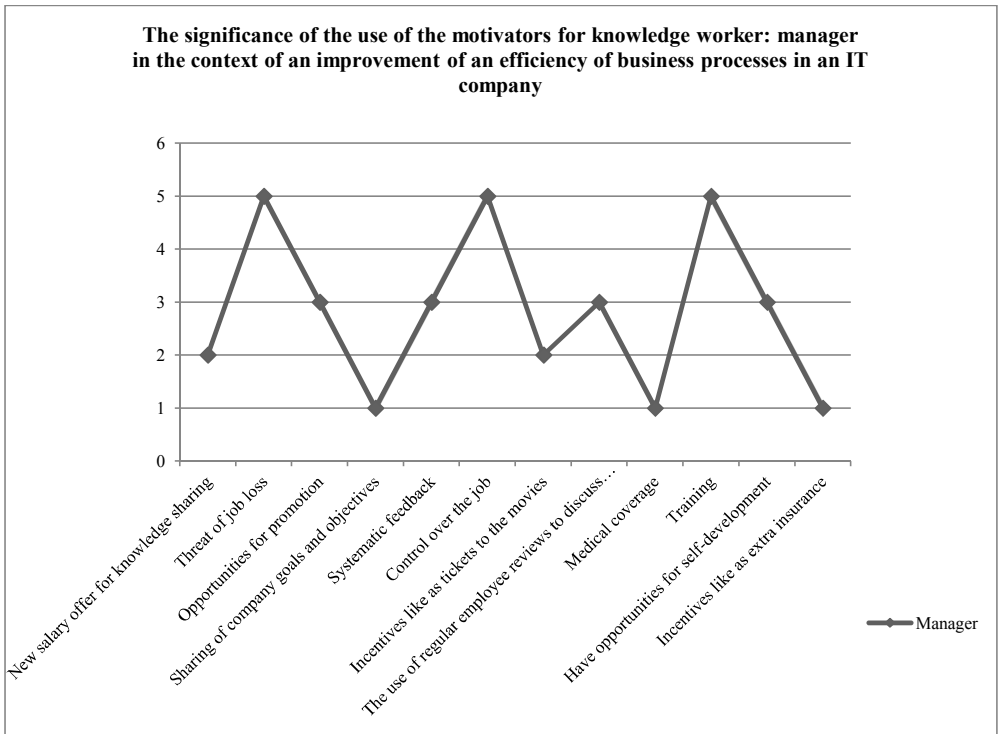


Fig. 3. The significance of the use of the motivators for knowledge worker: manager in the context of an improvement of an efficiency of business processes in an IT company

Source: Own elaboration

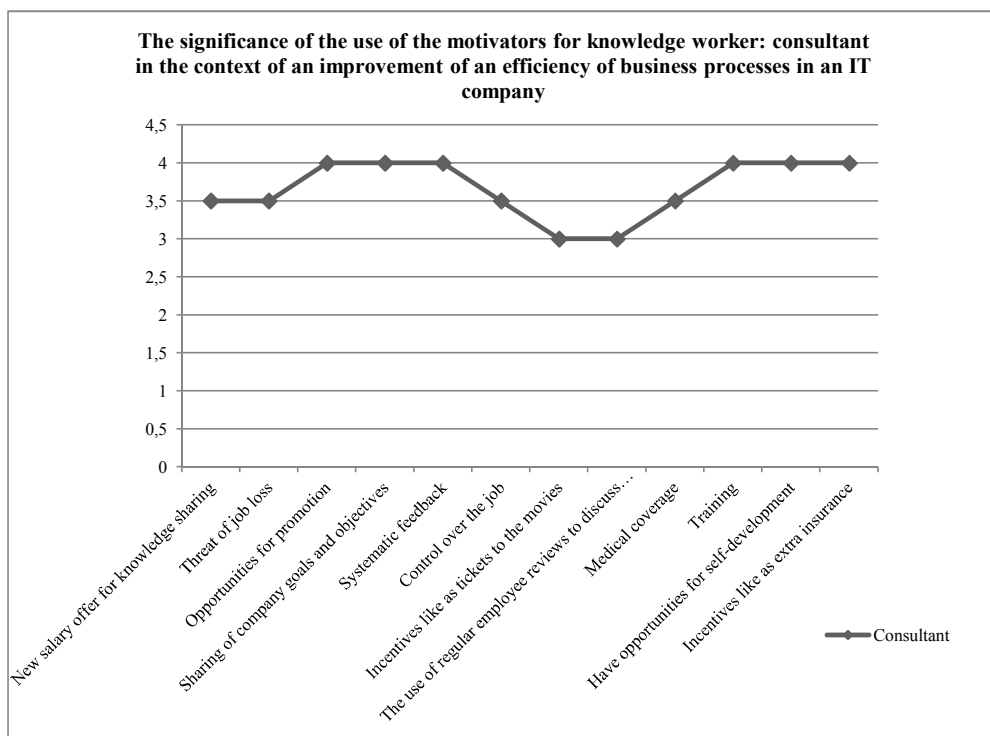


Fig.4. The significance of the use of the motivators for knowledge worker: consultant in the context of an improvement of an efficiency of business processes in an IT company

Source: Own elaboration

According to the procedure MKW-IT (see Fig. 1) and to the core business processes in an IT company (see Fig. 2) the workers on the workplaces: developer and administrative worker were not identified as the knowledge workers in an IT company.

So, the most important motivators for knowledge worker: manager in the context of the improvement of the efficiency of business processes are:

- Threat of job loss .
- Control over the job.
- Training.

Unfortunately the significance of the use of the motivators for knowledge worker: consultant in the context of the improvement of the efficiency of business processes in an IT company is not discovered.

So, it would be useful to provide such research over a longer time period for more knowledge workers identified in IT companies, not only Polish but also i.a. in German IT companies.

## Conclusions

The results of this study demonstrate the clear and measurable existence of a significance of the use of the motivators for knowledge workers in the context of the improvement of efficiency of business processes based on research results from 20 knowledge workers from Polish IT companies. Specifically, the results reveal these effects for the workplaces of knowledge workers as manager in an IT company.

By proposing a procedure MKW-IT which addresses the influence of an efficiency of business processes using the motivators for knowledge workers, this study contributes to a filling of the deficiency which exists in the literature. We hope, that the findings will be valuable for future research on the subject of Motivating Knowledge Workers.

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