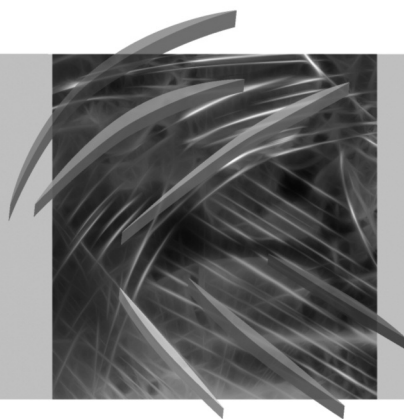


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Iwona Chomiak-Orsa

Wrocław University of Economics

SELECTED INSTRUMENTS OF CONTROLLING USED IN THE AREA OF KNOWLEDGE MANAGEMENT

Summary: In the contemporary enterprises the significance of material resources is decreasing in favour of intangible assets such as the knowledge of employees. Hence, modern economic tools that enable an efficient analysis and the intangible assets of an organisation are sought after. The article discusses the basic groups of tools of personal controlling that are used to manage the human resources both in quantitative as well as qualitative terms.

Keywords: knowledge management, personal controlling, instruments of controlling.

1. Introduction

Contemporary societies aspire to the transformation from a traditional economy based on material changes and the management of financial capital to an economy in which organisations consciously use the competence of employed workers and apply the tools that enable the effective management of intangible assets. Also in Poland the basic priority is aspiring to the development of the so-called information society based on knowledge.¹

The directions of social transformation determine the manner in which an organisation functions. Among information societies a greater number of organisations become knowledge organisations, that is, the organisations that obtain the value added through the better use of human resources and the intellectual capital of an organisation.

Increasing the significance of intangible assets, that is, intellectual capital and stores of knowledge, entails an increase in interest in the tools that enable to analyse and assess the intangible assets and their correlation with company's outcomes. Hence, the tools for personal controlling that enable to improve the competence management in an organisation enjoy greater popularity.

¹ The basic directions of the development of Polish economy were formalised in the document prepared by the Ministry of Economy as part of the accomplishment of the decisions made by the Council of Ministers of 28 November 2000. This document was accepted by the Council of Ministers on 11 September 2001 under the title "ePoland. The action plan for the benefit of the development of information society in Poland for years 2001-2006".

The purpose of this article is to indicate and discuss the significance of competence in an organisation and the groups of controlling instruments used in the process of managing knowledge and intellectual capital.

2. The significance of knowledge in an organisation

Competence, right next to information, has become a key resource of contemporary organisations. Unfortunately, in the literature it is difficult to find an unambiguous definition of this resource of an organisation. In most cases competence is defined in a colloquial manner as the whole of convictions on a specific subject.

When the information society came into existence, the number of organisations based on knowledge, that is, organisations acting and generating the economic turnover through the use of competence and skills of their employees, has increased. The basic features of this type of enterprises are:

- producing goods rich in competence, i.e., products in which competence constitutes over 50% of manufacturing value, e.g., computer programmes or services based on the use of workers' competence;
- employing first-class specialists, constituting the manufacturing hard core of all workers, e.g., consulting firms;
- determining the market value by the intellectual capital in possession, that is, the ratio of the market value to the book value bigger than two [Grudzewski, Hejduk 2003, pp. 178-180].

In an organisation that functions according to the rules of competence management usually four levels of knowledge are enumerated:

- individual competence: the one that a worker has in possession;
- the competence of a group: formed during the accomplishment of team tasks through discussions, exchange of views;
- the competence of an organisation: considered as a systemic presentation of competence of all employees and working groups;
- interorganisational competence: as a system of mutual connections between the organisations cooperating and sharing their information resources with each other [Nonaka, Takeuchi 2000, pp. 48-67].

In this four-level structure of competence in an organisation, a human being constitutes the basic element that can produce and process competence. Only a man performs actions that are competence-creative. The remaining levels of competence in an organisation are personifications [Gołuchowski 2007, pp. 35-36]. That is why managing the knowledge of workers through an appropriate management of human resources constitutes the basic problem of contemporary organisations.

The significance of workers in organisations based on knowledge is substantially greater than the significance of other resources. It arises from the fact that the structure of organisations based on knowledge is aimed at forming value added through the effective use of the workers' competence [Onak-Szczepanik 2004, pp. 121-123]. Correlation between levels of knowledge in an enterprise is presented in Figure 1.

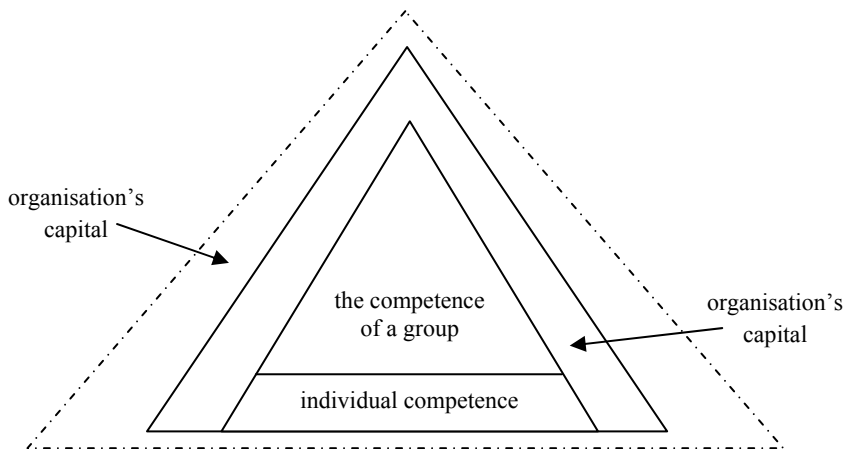


Figure 1. Correlation between levels of knowledge in enterprise

Source: personal study based on Warner, Witzel [2005, pp. 85-92].

In the organisations aspiring to achieve the competitive advantage through managing the knowledge potential, a worker has to not only use the competence he or she possesses, but he or she should, first of all, contribute to and generate new competence.

Workers as a resource of an enterprise may constitute the main source of forming the competitive advantage. However, in order to create such a situation, managing human resources requires the use of modern techniques and the tools of management, which, on the one hand, form multidimensional motivating system and, on the other hand, contribute to the attachment of a worker to an organisation on the basis of goodwill and not the economic compulsion.

In an organisation run by competence, workers should have the following traits of character [Gierszewska 2003, pp. 70-74]:

- independence: a worker forming organisational competence should perform tasks using his or her own competence and applying individual solutions;
- responsibility: resulting from the awareness of consequences for the undertaken decisions, actions and achieved results;
- pragmatism: consisting in an objective assessment of a situation and one's role in business processes as well as the skills to separate professional actions from subjective individual assessments and workers' sympathies;
- identification of oneself with performed tasks as well as a workplace;
- rationalism: resulting from directing oneself by the possessed competence in the process of performing professional activities;
- aspiration to professional development: forming the paths of professional development through raising professional qualifications as well as the attitude towards individual development.

Applying appropriate methods of managing human resources causes workers to understand, by identifying themselves with an organisation, its strategic targets aspiring at the same time to their accomplishment; they see the sense of action in a specific organisational structure; they feel the sense of security and, because of that, they constitute a strong chain link of creating the values for an enterprise.

Proper management of human resources contributes to better generating of individual competence and this constitutes the basic determinant of the growth of organisation's intellectual capital. Hence, the methods and tools enabling the efficient analysis and assessment of this key resource gain special significance in managing organisations based on workers' competence.

3. The planes of knowledge management supported by controlling tools

Knowledge management is strongly connected with the methods used in the area of human resources management. Forming competence resources through the stimulation of workers' skills and inventions in modern enterprises constitutes the basis for forming the competitive advantage. On the other hand, the actions of a worker directed at the accomplishment of individual targets should be coincident with the targets of an enterprise. Such a correlation is to be realised by the instruments of personal controlling that can also be applied in the area of competence management [Pietrzak 2003, p. 122; Poczowski 2003, pp. 32-67; Sekuła 2000, p. 9]. In this area the particular merit of controlling instruments is the improvement of rationality of using the knowledge resources of workers in the process of the accomplishment of organisation's strategic targets, which can be obtained by:

- supervision of the management system of human resources;
- constant control of the efficiency of the management system of human resources;
- search and implementation of solutions contributing to the improvement of the management system of human resources.

Selected instruments of personal controlling allows managing the knowledge in a passive or active manner (see Figure 2).

Knowledge management in a passive manner lies, first of all, in assessing and monitoring the size and structure of employment. The following aspects are most often subject to assessment:

- development of the productivity of workers;
- changes of the size and structure of labour costs;
- changes of the size and structure of employment;
- changes of the structure of workers' qualifications;
- trends in the volume of working time losses;
- trends in the system of employee assessment and compensation.

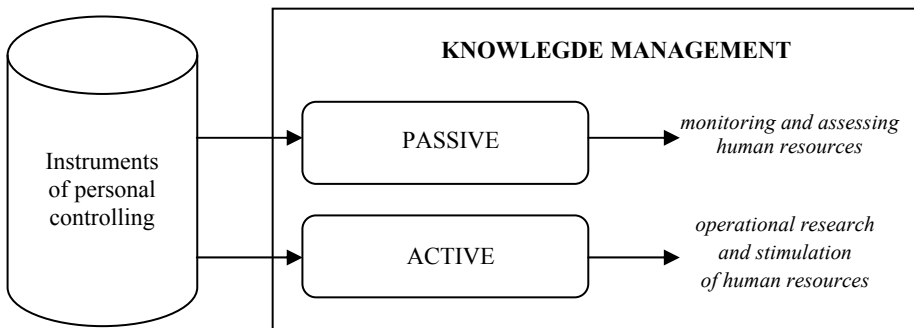


Figure 2. Directions for the use of the instruments of personal controlling in knowledge management

Source: personal study based on Sierpińska, Niedbała [2003, p. 352]; Nieplowicz [2004, pp. 176-178].

Passive management is to protect an organisation against the adverse changes happening among human resources; on the other hand, it is to allow taking advantage of appearing chances. In this area personal controlling possesses a number of indicators and tools that are to facilitate the assessment of human resources management in a historical manner [Nieplowicz 2004, pp. 176-178].

The passive system of knowledge management, which uses the instrument of personal controlling, is directed at the assessment of human resources from the angle of assessing its structure and the direct relation with company's outcomes through the assessment of shaping labour costs. However, in the passive system there are no ways or indicators assessing the aspects connected with simulation and optimisation of shaping workers' competence as a resource that can be managed in an organisation.

More possibilities in the area of managing workers' competence are created by the active system, the essence of which is the optimal use of the possibilities of human resources through the stimulation of benefits and the development in such a way that they would facilitate the achievement of success by an enterprise.

Active knowledge management determines shaping human resources from two perspectives. The first one is based on forming significant relations between personal strategies and the strategy of functioning of an enterprise. In this area the instruments of controlling are to allow [Pietrzak 2003, p. 125; Nieplowicz 2004, p. 179]:

- correlating the strategies of enterprise's development with the employment strategy;
- examining the relation between the accomplishment of enterprise's strategies and the structure, the condition as well as the costs of human resources;
- forming personal strategies connected with specific actions of an enterprise;
- forming the system enabling to identify and react to the changes of the enterprise's strategies that entail changes in human resources.

The second perspective is closely related to the development of an individual and the methods of the use of knowledge possessed by workers treated as the resource of

an organisation. The fundamental approach to a worker, his or her knowledge, motivation, and importance for the whole enterprise constitutes the basic context of competence management, since a man is the only element of an organisation producing competence in real terms [Gołuchowski 2007, pp. 35-36]. In the scope of managing an individual employee, the controlling instruments should enable the accomplishment of such tasks as [Sikorski 2001, pp. 52-53; Nieplowicz 2004, pp. 179-180]:

- caring about flexible shaping and the use of labour resources;
- correlating the strategies of the actions of an enterprise with the qualifications of workers and motivating them;
- assessing and raising the quality of human resources through individual development and adapting the motivation system;
- controlling the relation between the system of motivating workers, the costs of employment, the incomes and outcomes of an organisation;
- caring about the culture of an organisation and its relation to workers' engagement in the tasks that they perform.

The level of the use of the applied controlling instruments allows forming such a system of knowledge management that allows not only monitoring and assessing personal resources in a historical manner, but also facilitating the optimisation and simulation of workers' actions – which is the most important aspect of competence management.

4. Groups of instruments of personal controlling

Forming the passive or active system of knowledge management requires the selection of appropriate instruments of controlling. One of more significant aspects of selecting appropriate instruments of controlling is the possibility of the economic assessment of actions connected with the management of human resources. Controlling instruments applied in the area of the assessment of human resources enable the economic assessment of the influence of human resources on such parameters of an organisation as incomes, costs, or flow of funds. Whereas, a substantial problem is quantifying such values as, for instance, the impact of the motivation system on the level of use and creation of labour competence. In the enterprises whose activity is, first of all, based on rendering services arising from workers' competence, the issue concerning the assessment of the system managing human resources becomes a priority problem, which can determine an organisation's economic situation [Barabasz 2003, p. 24; Pietrzak 2003, pp. 123-125; Poczowski 1996, p. 157; Nieplowicz 2004, pp. 180-181].

Hence, the possibility of quantitative as well as qualitative assessment of human resources and knowledge resources is so essential. The instruments of personal controlling applied in organisations can be divided into two fundamental groups. The former allows assessing quantitative aspects, while the latter enables the assessment of qualitative aspects (see Figure 3).

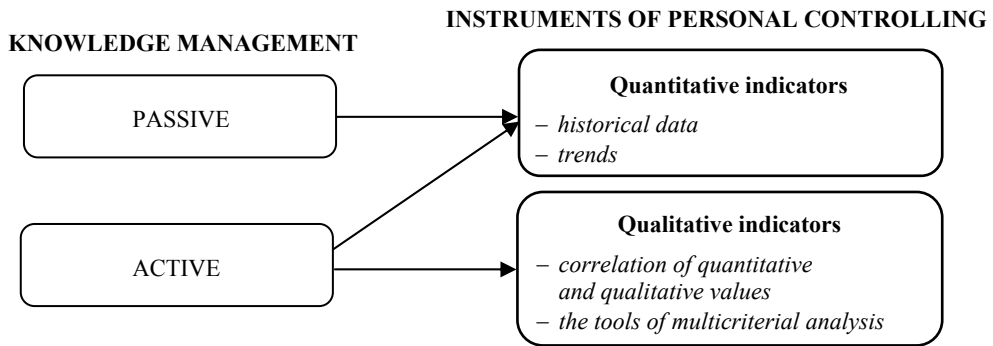


Figure 3. Selection of personal controlling instruments in knowledge management

Source: author's own study.

The former concerns the tools used for analysis and assessment based on quantitative values. In this group of instruments one may include:

- typical quantitative indicators assessing, first of all, the costs: using costs and incomes calculation;
- calculation of resources: arising from the more often used method of calculation of activity based costing/management (ABC/M);
- statistics of employment: based on the analysis of shaping the trends and directions of the development of employment according to various groups both from the angle of the business in which an organisation acts as well as the analysis conducted in relation to the statistics of human resources inside an organisation;
- methods of an investment account: performed in the area of the assessment of development and investment in human resources. It constitutes the element of economic account kept in the enterprises that run efficient economy;
- budgeting human resources: directly connected with the assessment and the level of costs resulting from ordering and managing current human resources in relation to the considered values.

The second group of instruments applied in the area of personal controlling – these are tools that enable to obtain the evaluations resulting from the combination of quantitative and qualitative features, which undergo assessment. Indicators used in this group allow relating not only to such quantitative values as the number of the employed or the costs, but also allow assessing a lot of qualitative aspects, such as intellectual resources, the relation between the quality of human resources and the assessment of clients, etc. In the group of tools for personal controlling that allow a multicriterion and multifaceted assessment, as the following tools used to be usually enumerated:

- value analysis: which in relation to human resources is based on the assessment of the possibilities to reduce the costs of human resources parallel to maintaining the quality level of rendered services suitable for clients. In recent years this

method has been particularly readily applied in information companies where the quality of human resources and the knowledge that they possess is of a particular significance for the whole process of designing, implementing, and applying information technologies [Hatch 2003, p. 75];

- the system of test questions: as one of less complicated tools that enable the qualitative assessment of human resources. Its idea is based on self-assessment, that is, the workers assess the system of managing human resources. Thanks to the quality indicators, certain phenomena are identified, which then can be quantified and represented in a quantitative manner [Pocztowski 1996, p. 158];
- motivating compensation system: it is one of basic tools for personal controlling. Designing a suitable compensation system should take into consideration the strategies of an enterprise, which imply the strategy of managing human resources, the structure and culture of an organisation, workers' expectations as well as the expectations of clients in the context of the quality of rendered services [Borkowska 2001, p. 62];
- strategic business scorecard: enabling to use a multifaceted assessment of human resources through joining the quantitative and qualitative elements from four typical perspectives: financial, client's, internal processes, and the development of an organisation. The use of a strategic business scorecard as a tool of personal controlling situates the worker of an organisation as a motivator of all cause and effect events. This forces to greater care of an appropriate motivating system, which should include such elements of motivating workers as: the improvement of the quality of information and communication between workers, the availability of training courses, and the opportunity of development [Barabasz 2003, p. 11];
- Skandia Intellectual Capital Navigator method: this tool is a direct response to the needs connected with assessing the significance of human resources and intellectual capital as well as workers' competence for the value of a company. This method has been worked out by the team of Leif Edvinsson for the purposes of Skandia, an insurance company. It is modelled after the Strategic Business Scorecard [Edvinsson, Malone 2001, pp. 21-22], which constitutes a multidimensional tool enabling to measure the intellectual capital of an organisation and the management of workers' competence. The structure of Navigator is, however, more complicated and contains a bigger number of indicators. It enables the measurement of intellectual capital within five major areas: finance, clients, business processes, workers, and development. The model constructed in such a way enables fuller formation of the picture of an enterprise defining the basic relation of the past – the achieved results; with the presence – the picture and assessment of clients, accomplished processes, and human resources; with future plans – as the picture of development directions [Skuza 2003, pp. 146-147]. From the perspective of competence management, Skandia method is of a particular significance because the key element is increasing the engagement of workers through their direct participation in the assessment of enterprise's actions and enhancing workers' awareness related to their direct influence on organisation's outcomes.

Significant increase in the number of enterprises in which the market value considerably exceeded the book value was the determinant of looking for the tools enabling to assess and manage the intellectual capital and human resources. This difference constitutes the intellectual capital of enterprises. In modern economy the intellectual capital is the basic source of competitive advantage [Sopińska 2005, pp. 10-15].

5. Summing-up

The traditional elements of management accounting and controlling are concentrated on the analysis and assessment of material resources of an organisation. Such an approach towards managing an organisation nowadays is becoming insufficient. Organisations function and generate incomes based on the use of intangible assets, that is, first of all, workers' competence. The analysis and assessment of this resource is becoming extremely essential; however, it is still incredibly difficult on account of its immeasurable character. A lot of organisations contend with this problem, especially those geared towards the use of competence resources. Meanwhile, the transformation of an organisation resulting from changes of manufacture economy geared towards industrial products into the economy based on competence forces enterprises to absolutely measure and assess the intellectual capital and competence resources. The article described the basic tools of personal controlling, which can be used in the assessment of human resources and intellectual capital. Apart from numerous indicators, typically quantitative, all the methods and tools enabling to form nonfinancial assessment models acquire even greater significance. That is why modern controlling tools that enable multicriterion analysis and assessment not only of the indicators resulting from generated costs, but also of the indicators that allow assessing the intellectual capital and its significance for an organisation, acquire particular significance.

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WYBRANE INSTRUMENTY CONTROLLINGU WYKORZYSTYWANE W OBSZARZE ZARZĄDZANIA WIEDZĄ

Streszczenie: We współczesnych przedsiębiorstwach znaczenie zasobów materialnych maleje na rzecz wartości niematerialnych i prawnych, takich jak wiedza pracowników. Dlatego poszukiwane są nowoczesne instrumenty ekonomiczne, które umożliwiają skuteczną analizę wartości niematerialnych w organizacji. W artykule omówiono podstawowe grupy narzędzi służących do controllingu personalnego, które są wykorzystywane do zarządzania zasobami ludzkimi zarówno pod względem ilościowym, jak i jakościowym.

Słowa kluczowe: zarządzanie wiedzą, controlling personalny, instrumenty controllingowe.