

**ASSESSING THE USE OF KNOWLEDGE MANAGEMENT TOOLS
IN A SME BASED ON THE REAL CASE STUDY****Patalas-Maliszewska J., Klos S.***

Abstract: Small and medium sized enterprises (SMEs) still treat expenditure on the purchase of the knowledge management (KM) tools as an expense and not in the category of investment. It seems that in order to motivate an SME to implement a KM tool to support it should be shown the advantages and disadvantages benefits of such activities. In this paper, the authors provide a practical approach for measuring the contributions and impacts of the use of a KM tool in a SME.

Keywords: Knowledge management tools; SMEs; locating and capturing knowledge

Introduction

Managing SMEs and building their competitiveness is not an easy task. Such enterprises not only differ in their organizational potential (managerial, intellectual, financial), but also in their operational power in relation to their surroundings, their susceptibility to external influences and their reactions to the needs of the market etc. Knowledge management is aimed at providing the right information for the appropriate personnel at the right time [2, 3, 8, 10, 11, 12, 14]. The knowledge management is promoted as an important and necessary factor for organisational survival and maintenance of competitive strength in SME. Therefore this study focuses on understanding the role of the knowledge management tools using in SMEs.

The proposed approach, which is related to the assessment of the implementation KM tools in the SMEs, allows to solve the following problem. On the one hand there is the business model of the SME with defined functional areas, the sets of business processes, the sets of benefits of implementing the KM Tools for Locating & Capturing Knowledge (see Figure 1) and on the other hand there is the set of KM Tools for Locating & Capturing Knowledge (see Table 1). Allowing responding to the following question: whether the implementation of the KM Tool for Locating & Capturing Knowledge will guarantee the enterprise to obtain the defined benefits during a specified period? So, the aim of this work is to present the benefits of implementing the KM Tools for Locating & Capturing Knowledge in the SME.

Knowledge management tools for locating and assessment knowledge

Taylor [13] suggests that the true value of knowledge and knowledge management can only be assessed on application. So answering the research question: What are

* **Justyna Patalas-Maliszewska Phd., Slawomir Klos Prof. Phd.**, Faculty of Logistics and Information System, University of Zielona Gora,
✉ corresponding author: j.patalas@iizp.uz.zgora.pl

the potential KM tools for SMEs, we should start with the description of these KM tools, that allow you to identify the knowledge in the enterprise. In the literature [16, 17] we can find such groups of the knowledge management (KM) tools: (1) KM Tools for Locating & Capturing Knowledge, (2) KM Tools for Transferring & Sharing Knowledge and (3) KM Tools for Creating Knowledge. The purpose of this paper is to explore the first group of KM tools. By identifying knowledge small and medium sized enterprises can improve innovativeness, service quality and response time. Balanced scorecard, Business information systems, Data mining, Knowledge audits, Knowledge mapping are useful KM tools for locating and capturing knowledge [16, 17].

So, which is the best KM tool of the group: KM Tools for Locating & Capturing Knowledge? The following objectives of knowledge management in companies are defined [6]:

- Codification, Locating and Sharing knowledge using the tools,
- Knowledge engineering, artificial intelligence and expert systems development.

Table 1 presents the defined benefits of implementing the KM Tools for Locating & Capturing Knowledge for the SME, for its functional area: „sale”:

Table 1. The defined benefits of implementing the KM Tools or Locating & Capturing Knowledge for a SME

KM Tools for Locating and Capturing Knowledge	Objectives for its functional area: “sale”	Measures for the objectives
Balanced Scorecard	Improve the customer responsiveness Increase the market share Maximizing the customer satisfaction Internal controlling of customer relationships Increase the product innovation	Premium Brand Market share Customer satisfaction (survey) Customer loyalty (the re-purchase by customers) Number of new products in the sale Number of new products in relation to competition
Business Information Systems	Increase the efficiency of labor Increase the productivity of labor Increase the added value of human capital Increase the economic value of human capital Increase the profitability of investment in human capital Availability of information resources	Efficiency of labor Productivity of labor Added value of human capital Economic value of human capital Return on investment in human capital
Data mining	Creating the sales forecast for products Creating the sales forecast for customers	Value of the error of the sales forecast for products Value of the error of the sales forecast for customers

Knowledge audit and knowledge mapping	Improve speed of business interactions Reduce errors in business interactions Increase the product innovation	Premium Brand Value of the errors in business interactions Number of new products in the sale Number of new products in relation to competition
Balanced Scorecard	Improve the customer responsiveness Increase the market share Maximizing the customer satisfaction Internal controlling of customer relationships Increase the product innovation	Premium Brand Market share Customer satisfaction (survey) Customer loyalty (the re-purchase by customers) Number of new products in the sale Number of new products in relation to competition
Business Information Systems	Increase the efficiency of labor Increase the productivity of labor Increase the added value of human capital Increase the economic value of human capital Increase the profitability of investment in human capital Availability of information resources	Efficiency of labor Productivity of labor Added value of human capital Economic value of human capital Return on investment in human capital
Data mining	Creating the sales forecast for products Creating the sales forecast for customers	Value of the error of the sales forecast for products Value of the error of the sales forecast for customers
Knowledge audit and knowledge mapping	Improve speed of business interactions Reduce errors in business interactions Increase the product innovation	Premium Brand Value of the errors in business interactions Number of new products in the sale Number of new products in relation to competition

Above prior studies indicated that knowledge management plays an important role in performance outcomes [1, 4, 5, 7]. The authors attempt to answer one of the fundamental research questions: “ whether the implementation of the KM Tool for Locating & Capturing Knowledge will guarantee the enterprise to obtain the defined benefits during a specified period ”. In order to analyze the selected benefits of the implementation of a KM tool, a real case study is presented.

Assessing the impact of a KM tool in a SME

In order to present the possibility of assessing the impact of the implementation of a KM tool of a SME, let us consider a SME that deals with providing services, in the form of projects for both organizations and individual customers.

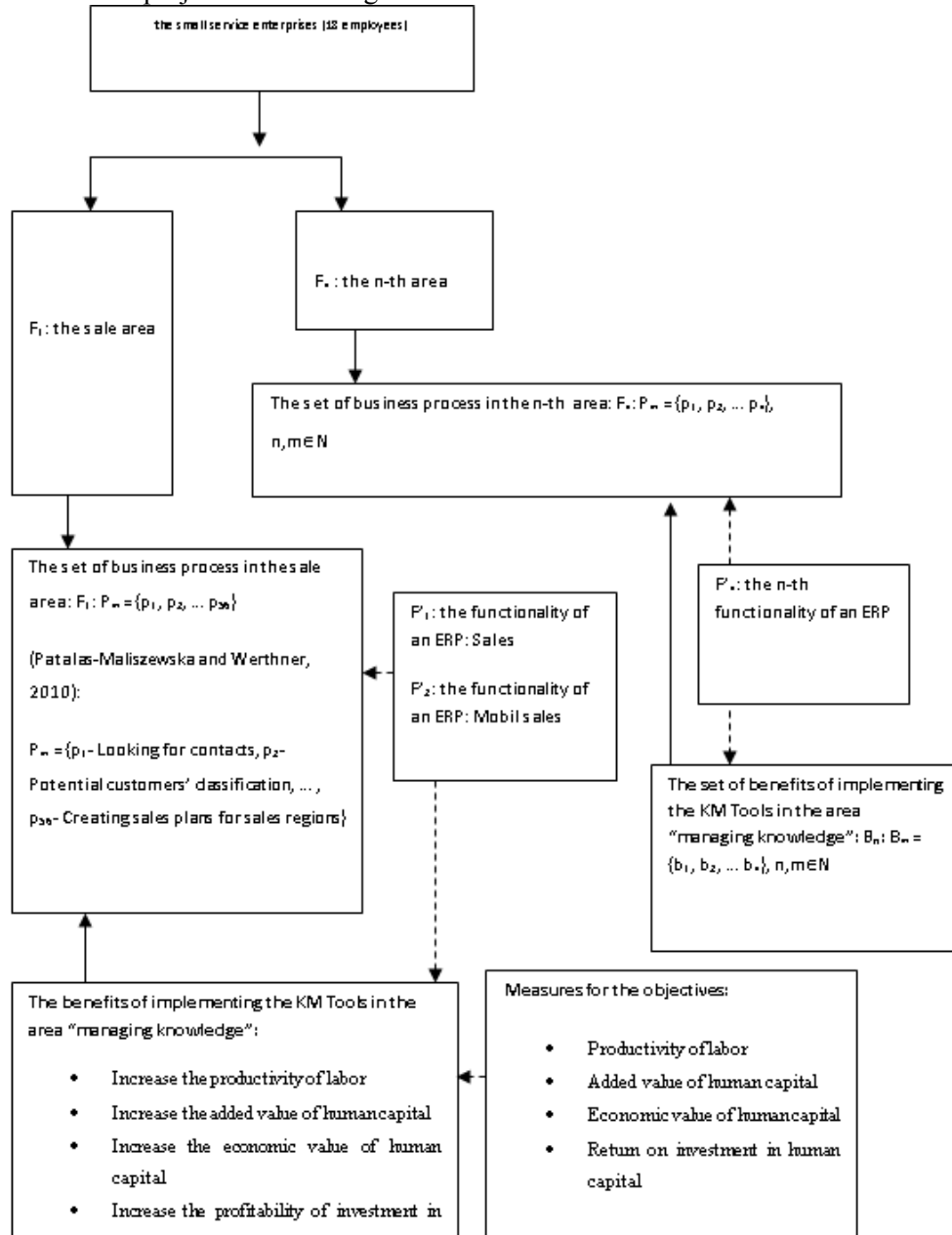


Figure 1. A model for a small service enterprise

The main areas of the company correspond to the following functions: the sale, the supply, the order scheduling, the service, the accounting, human resources management, export/import transactions. This company completed, in 2008, a project to implement an ERP system and the following modules were implemented: Contracts, Sales, Accounting, Admin, Mobile sales. In Figure 1 a fragment of the model for a small enterprise, especially for its functional area: “the sale” is presented [9].

For this company the authors analyze the selected benefits of implementing the KM Tools for Locating & Capturing Knowledge (the ERP system) in the context of knowledge management (see Table 1). So, let us consider the measures for a small enterprises concerning with the benefits of introduction of the ERP system.

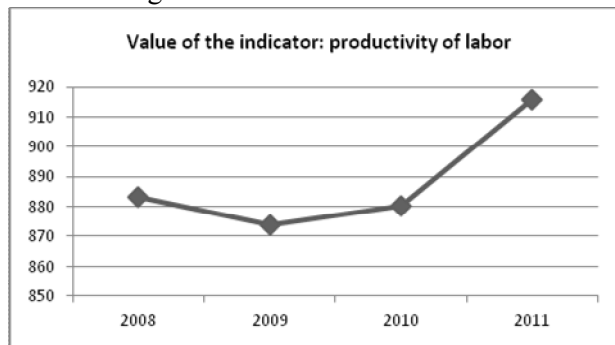


Figure 2. Value of the indicator “Productivity of labor” in the service small enterprise since the implementation of a KM tool

Productivity of labor - this indicator represents the extent of utilization of employees, indicating the amount of sales revenue attributable to one employee. Figure 2 shows the change of the value of this indicator in the service small enterprise since the implementation of an ERP system - since 2008.

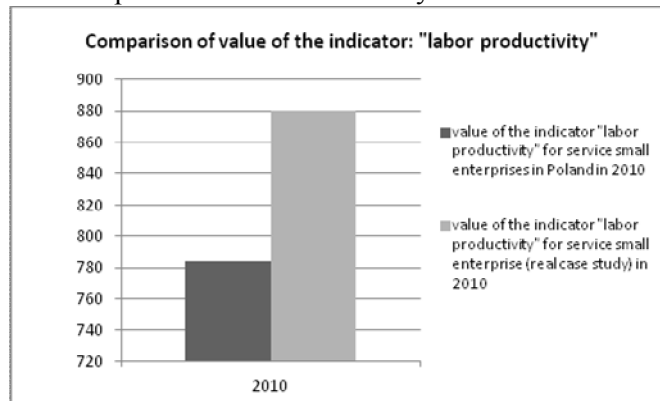
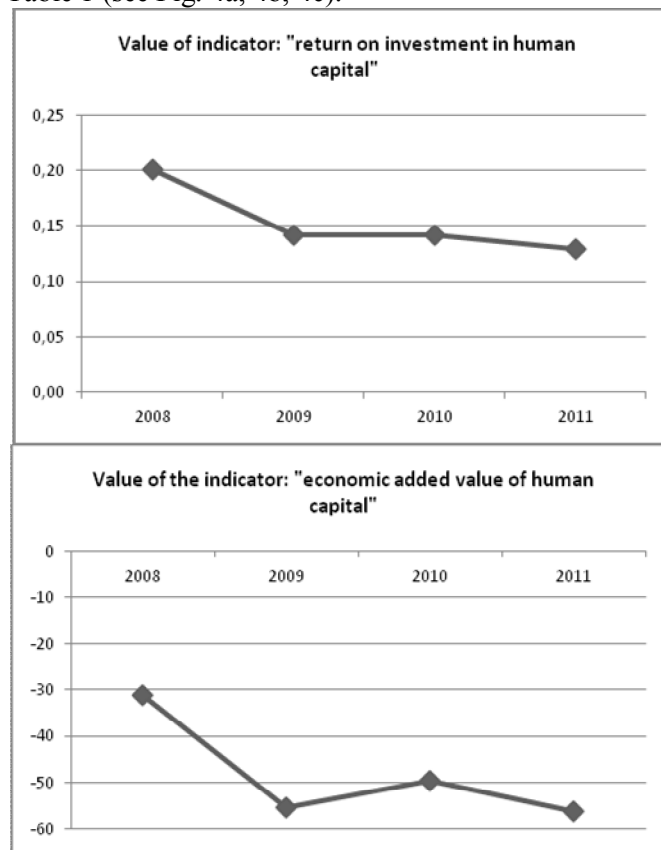


Figure 3. Comparison of the value of the indicator: „ Productivity of labor” in the service small enterprise (from a real case study) with the value of the indicator: „labor productivity” in the service small enterprises in Poland in 2010

To assess the value of this parameter author compares the results with the values of this parameter for companies in the same industry. Based on data of Central Statistical Office in Poland, it is given the value of the indicator value of "Productivity of labor" for service small enterprises in Poland in 2010: 784.30 (see Fig.2), (retrieved from:

http://www.stat.gov.pl/cps/rde/xbcr/gus/PUBL_pgw_wyn_fin_podm_gosp_I-VI_2011.xls):

It seems that the service small enterprise has the satisfactory value of the indicator: „labor productivity” and thus achieved the expected benefits since the implementation of a KM tool. An additional author presents the another expected benefits since the implementation of a KM tool for the service small enterprise based on the Table 1 (see Fig. 4a, 4b, 4c):



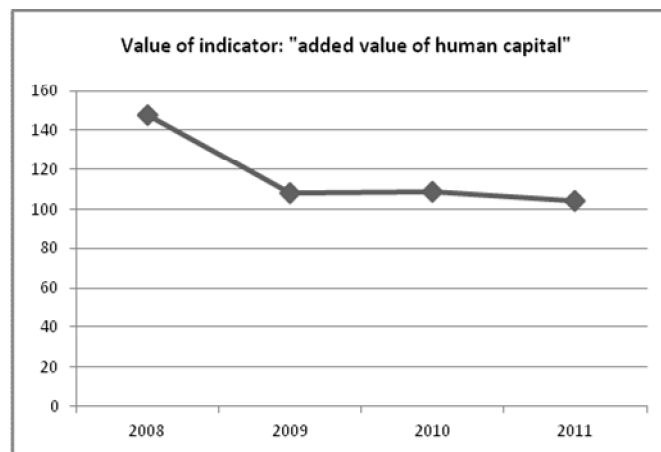


Figure 4a,4b,4c. The expected benefits for the service small enterprise since the implementation of the KM tool

Unfortunately, the values of the other indicators describing the expected benefits for the service small enterprise since the implementation of a KM tool are not satisfactory. Clearly there is a decrease of these indicators. So, this company failed to achieve its defined benefits of the implementation of the KM Tool for Locating & Capturing Knowledge. It seems that the described service small enterprise (from a real case study) was not ready for the new KM tool implementing.

Summary

SME owners need to find out how information and communication technologies as well as KM tools can assist them. But it is not an easy decision for them buying knowledge management tools. And it really is just the first step to building a knowledge management system in the company. SMEs, unlike large companies, do not have the capital to purchase such tools, as well as full implementation of knowledge management system. According to the report: "Information Society in Poland. Statistical results from the years 2006-2010", published in November 2010, in a group of small companies in Poland with ERP software had in 2010: 6.6% of enterprises (5.4% in 2009), and medium 22% (20.1% in 2009). In that context arises the another research question: whether a model for the assessment the effectiveness of KM tools implementations for SMEs, especially for the small enterprises, which the use will motivate these companies to purchase special KM tools? It is hoped that the study will help to identify some of the benefits of KM tools implementation for the service small enterprise and to establish what it could take to improve firm performance through KM tools.

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OCENA ZASTOSOWANIA WYBRANYCH NARZĘDZI ZARZĄDZANIA WIEDZĄ NA PRZYKŁADZIE PRZEDSIĘBIORSTWA SEKTORA MSP

Streszczenie: Małe i średnie przedsiębiorstwa (MSP) ciągle postrzegają zakup narzędzi wspomagających zarządzanie wiedzą w kategorii wydatków, a nie inwestycji. W artykule autorzy podjęli próbę pomiaru korzyści wynikających z wdrożenia takich narzędzi na przykładzie przedsiębiorstwa sektora MSP. Zaproponowano wskaźniki pomiaru tych korzyści oraz pokazano wyniki przeprowadzonych analiz.

中小企業的知識管理工具的評估使用基於真實的案例研究

抽象: 中小型企業 (SMEs) 仍然把知識管理 (KM) 的費用, 而不是在類的投資工具, 購買支出。似乎是為了激勵中小企業實施KM的工具, 以支持它應該顯示的優點和缺點這種活動的好處。在本文中, 作者提供了一個實用的方法測量使用的KM工具在中小企業的貢獻和影響。