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KNOWLEDGE MANAGEMENT IN MICRO, SMALL AND MEDIUM-SIZED ENTERPRISES. CASE STUDIES FROM POZNAN COUNTY

The publication presents the results of research about the level of knowledge management in micro, small and medium-sized enterprises from Poznan county and the awareness of entrepreneurs of how important it is for the proper functioning of their enterprises. After an initial introduction to knowledge management and division of knowledge into different types, the results of a survey conducted among twenty enterprises are presented. Businesses had the opportunity to select multiple choices in asked questions, but very often added their own comments based on their long-term experience. What is more, in the future research will include more enterprises also from other cities of the Greater Poland province.

Keywords: knowledge management, micro, small and medium-sized enterprises, research method, organization.

1. INTRODUCTION

Contemporary enterprises in their daily activities use the resources of their own knowledge, but also the knowledge of their customers and business partners.

Knowledge is a crucial component of making important decisions for the enterprises, solving existing problems, creating innovative solutions and holding good relationships with customers. Furthermore, it has a significant impact on the future development of the enterprise. It is worth mentioning that nowadays gaining, but also keeping, a competitive advance is becoming more and more difficult. Therefore, it is commonly known that the future belongs to learners, smart organizations which try to use their new, unique competencies in daily activities as much as it is

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possible, which are being built based on the knowledge of the organization. To leave the competitors behind, the organization must learn faster than other competitors, which means that management should look for optimal methods of learning through knowledge management. The market demand for new products requires new competences both from entrepreneurs and co-workers; this is why there is not only a need to analyze the skills but also to effectively evaluate the lack of competency among co-workers at the workplace and to broaden the knowledge [14, p. 233].

The main purpose of the article is to investigate the attitude of Polish entrepreneurs from micro, small and medium-sized enterprises to knowledge management. Additionally, the second aim of the research was to check the level of implementation and awareness of the advantages which are brought by the concept of knowledge management to the enterprises' development. The survey also gives a possibility to find the barriers and threats appearing during the implementation of knowledge management strategy.

The pilot survey was conducted among 20 small and medium-sized enterprises from towns in Poznan county. The enterprises were selected randomly and came from various business areas. However, the common value for them is the fact that they are family businesses, where very often several generations have worked together. What is more, the management in such enterprises is very often passed from one generation to another. Thus, to keep the enterprises in a good condition and enable their further development, the owners should take care of knowledge transfer between generations and creation of a knowledge base. Additionally, the research will include more enterprises in the future, from other regions of Greater Poland.

It is worth mentioning that in Poland – like in other countries of central and eastern Europe – the development of small and medium-sized enterprises has gone hand in hand with the process of economic transformation [7, p. 27]. Therefore, they play a very important role in the domestic economy. What is more, they represent 99.8% of all enterprises in Poland. Approximately 70% of employees work in small or medium-sized enterprises [12, p. 53]. Nevertheless, the share of these entities in GDP is still lower than the average of the European Union countries and amounts to 46.9% [2, p. 113].

The article has been divided into two parts. The first part focuses on the division of knowledge management due to the classifications. In the second part, the results of research about the level and awareness of knowledge management in micro, small and medium-sized enterprises have been presented.

2. CLASSIFICATION OF KNOWLEDGE

Analyzing the situation where an enterprise offers its employees permanent access to resources of knowledge, it is needed to initially consider what kind of in-

formation is the most important for different groups of employees. It is necessary to define the level of risk of rejection of knowledge, as well as to outline the conditions of using the available information and the area of the organized knowledge management [17, p. 245].

It is important to focus on different types of knowledge, because in all enterprises it is possible to define at least five types, which include:

- key skills, generally speaking, the knowledge of products, processes and technologies used by the enterprise,
- social knowledge, which shows how the enterprise is perceived by society and what are the expectations concerning the enterprise,
- knowledge about management, which describes how to lead the organization in terms of the structure and existing division of responsibilities and duties in an enterprise,
- expert knowledge, which is shaped in the enterprise and is associated with its rank and influence on the environment where it acts. This kind of knowledge can be developed by external consultants but also by dedicated units in the enterprise,
- environmental knowledge, explains how processes run in the enterprise. It also contains information on how many requirements the enterprise has relative to the employees. Additionally, it monitors all ventures and projects within the organization, those which in most cases are finished successfully but also others that may fail.

Nevertheless, not all of these types may be involved in the process of knowledge management. However, some of them have significant influence on the successful implementation of knowledge management, or its failure.

What is important is the fact that the achievements of knowledge management in terms of typology of knowledge as it is today is based notably on the researches of Gilbert Ryle and Michael Polanyi, and the continuers of their concept: Ikujiro Nonaka and Hirotaki Takeuchi [16, p. 28].

Ryle defined knowledge considering the specified predispositions towards some behaviors and separating it from issues like character traits or habits. He claimed that skills and habits are consolidated tendencies towards some behaviors but skills are not habits – they are something that is more important. Unlike habits, which are automatic repeats of previous activities, skills are flexible enough to be adjustable with practice and experience growth. Moreover, to Ryle's mind habits are acquired as a result of 'behavioral training' and the skills can be learned.

One of the most important of Ryle's achievements is the division of knowledge between two main types: "know how" and "know what" [13, p. 14]. The first expression is related with intelligence. According to Ryle an ability to perform all kinds of tasks is closely linked with intelligence, which gains importance during the action. The second expression, "know what" is related with the storage of various types of information. According to Ryle, a person who is acting intelligently is able to do only one thing at a time.

One of Ryle's followers was M. Polanyi. In an experimental way he developed the above concept. As a starting point he adopted the existing division by Ryle and then based on it defined his two types of knowledge: tacit knowledge and explicit knowledge [11, p. 4]. He believed that these two types of knowledge are inseparable and mutually intertwined. Thus, to the explicit knowledge we can include something that can be encoded and shown graphically in any shape or form. Thanks to that, this type of knowledge can be easily transferred through various transmission channels or media. Additionally, explicit knowledge is delivered during the teaching process. According to M. Polanyi everyone is able to know more than s/he is able to express. This means that an individual has knowledge which can be verbalized. On the other hand, tacit knowledge is based on intuition and feelings.

According to I. Nonaka and H. Takeuchi, knowledge "is a function of particular stance, perspective, or intention. Second, knowledge, unlike information, is about action. It is always knowledge "to some end." And third, knowledge, like information is about meaning. It is context specific and relational." [10, p. 57].

Both I. Nonaka and H. Takeuchi have noted that "knowledge is created by individuals. The organization cannot create knowledge without individuals"[10, p. 59]. Later it is divided successively into three levels: group, organizational and inter-organizational. Individual knowledge always remains in the minds of individuals. In enterprises it remains in the minds of employees. An important feature of it is that it follows the employee, therefore sometimes it can be a threat for the organization, when a person would go to another employer [15, p. 33]. Individual knowledge is not sufficient, when huge projects are being implemented. That is why the knowledge of a bigger amount of employees is so important. In this way, the next level of knowledge is built – group knowledge. A characteristic feature for this kind of knowledge is the primer effect known as synergy. It is then no surprise that the knowledge and skills of more co-workers are so valuable.

Organizational knowledge is the whole knowledge which belongs to the enterprise and it contains the individual co-workers' knowledge but also group knowledge. What seems to be crucial is that organizational and functional structure is one of the most important elements having great impact on the final shape of knowledge in an enterprise.

The inter-organizational knowledge is considered as the highest level of knowledge. It is the level where intensive and dynamic changes between various organizations are made. Additionally, thanks to the growth of the Internet and modern technology it is possible today to get quick access to enormous resources of knowledge.

It is worth to point out that when the business world in the 1990's was implementing the theory of Peter Drucker, who announced the advent of a new era of knowledge, the Polish economy was going through a serious transformation process. The enterprises were slowly gathering experience in the new market reality. They were forced to quickly analyze the current economic situation and prepare enterprises to be more competitive on the market. Many management strategies had

to be adjusted to the new market conditions, but the concept of knowledge management was then unknown. Currently the Polish market is still growing and developing in the knowledge management area. What is more, Polish enterprises are starting to notice the importance of knowledge management in achieving a competitive advance on the market. The range of this issue has been shown in the results of the research conducted among the biggest American companies. According to IDC in 2003 American companies from the list of "Fortune 500" companies have lost even 12 billion USD because of a lack of a proper strategy of knowledge transfer among employees. What is more, 97% of managers agreed that the financial results of their enterprises could be better if they had implemented a proper knowledge management strategy; 87% of them thought that many misunderstandings and errors are caused by a lack of some specified knowledge in the right time [1, p. 37]. This means that the correct implementation of knowledge management can help enterprises get more benefits but if they do it incorrectly, it will cause many losses. The next research prepared by KPMG shows a range of knowledge management in the world. It shows that 81% of companies from USA and Western Europe are interested in the implementation of knowledge management [1, p. 38]. Which means that they are planning or already have implemented some knowledge management strategies.

3. INVESTIGATION OF THE LEVEL AND AWARENESS OF KNOWLEDGE MANAGEMENT AMONG ENTREPRENEURS FROM POZNAN COUNTY

3.1. Research methodology

For the purpose of research a questionnaire form with 18 questions has been prepared. Its intent is to help in the initial identification of the current state of knowledge management in the enterprises and to identify problems related to this topic. The first part includes a few questions about basic information of enterprises and their owners. The next part consists of questions which help to define how the owners try to implement the knowledge management strategy in their enterprises and what attitude they have to this area. This part helps also to find the threats and weaknesses which impede proper knowledge management in enterprises. The second set of questions is a multiple choice section.

3.2. Sampling and data collection

The main purpose of the pilot research which was conducted on 20 enterprises was to learn their level and involvement in the development of knowledge mana-

gement. The study was attended mainly by small enterprises (56%) which hire up to 9 employees. In addition 38% of respondents hire from 10 to 49 employees, whereas only 10% is occupied by medium-sized enterprises which employ over 250 people. Moreover, enterprises coming from various business types such as: engineering and construction (36%), sales and customer service (27%), design (18%), manufacturing (14%) and healthcare (5%) were audited.

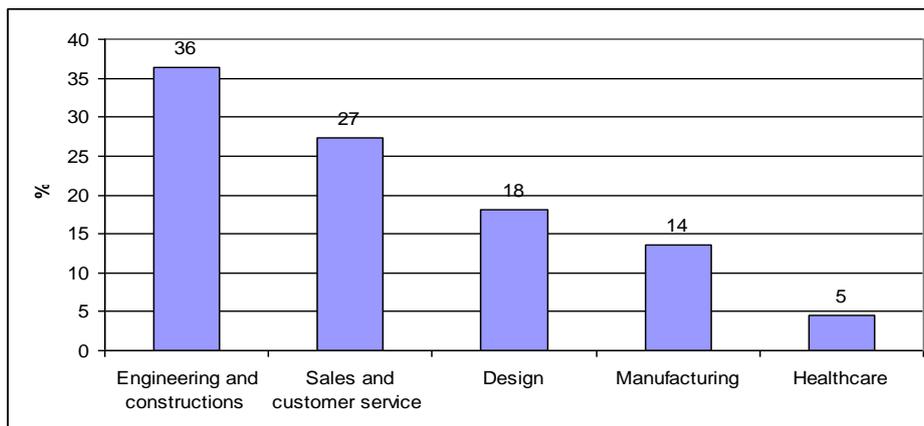


Fig. 1. Types of enterprises which participated in the research (own calculations based on survey results)

An important factor is the long term experience of the enterprise, as up to 45% of organizations which took part in the research exist on the market more than 20 years. What is more, the work experience of 25% of enterprises varies between 17 and 20 years, so these enterprises have already reached a stable position on the market. Although 60% of the owners are older than 51, 30% of them are younger than 40 years old. What is more, the age of 30% of respondents was equal to 40 years old. The smallest group were the owners with the age between 41 and 50 years old (10%). Nevertheless, only 25% of the owners felt as experts in their specialty. The next 25% of owners who participated in the research believe that they have an advanced knowledge about their market. However the biggest number of the owners is of the opinion that their knowledge is on an intermediate level (45%). Only 5% feels that their knowledge about the market is at a beginner level. Probably it is caused by a constant and dynamic development of the market but also by new available technologies, which require continuous improvement of offered products and services from entrepreneurs but also continuous learning in order to keep a stable competitive advance.

It needs to be pointed out that the activity area of most of the enterprises that participated in the research are cities with less than 10 000 residents (40%). Next, 25% of enterprises are from cities with 50 000 residents and only 10% belongs to

organizations from bigger cities which have from 101 to 250 thousand residents. Enterprises in cities above 250 000 residents amounted to 25% of respondents.

3.3. Results of the research

The research shows that the most important type of knowledge for enterprises is the knowledge about customers' needs and expectations (23%). For 18% it is very important to have knowledge about available technologies and expert knowledge. However for 15% of respondents the most important is knowledge about business partners but also about the market where they are working. For other enterprises it was significant to gain knowledge about competitors (13%) and also information about available consulting and training enterprises (8%). For the other 7% of respondents the political and legal factors were important.

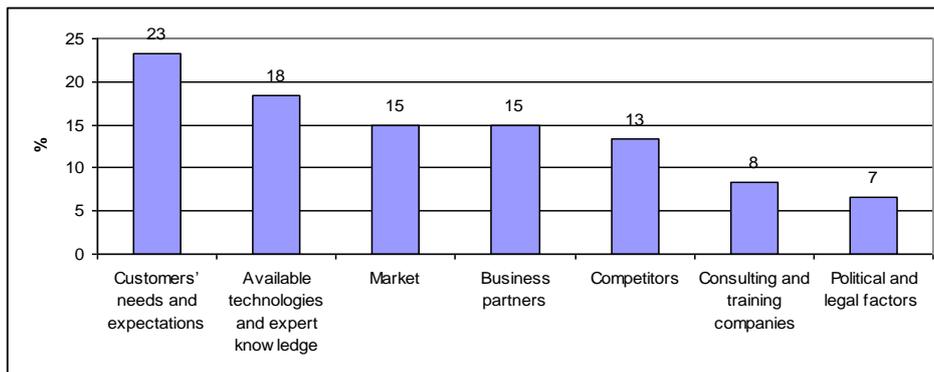


Fig. 2. The knowledge which is the most important for entrepreneurs (own calculations based on survey results)

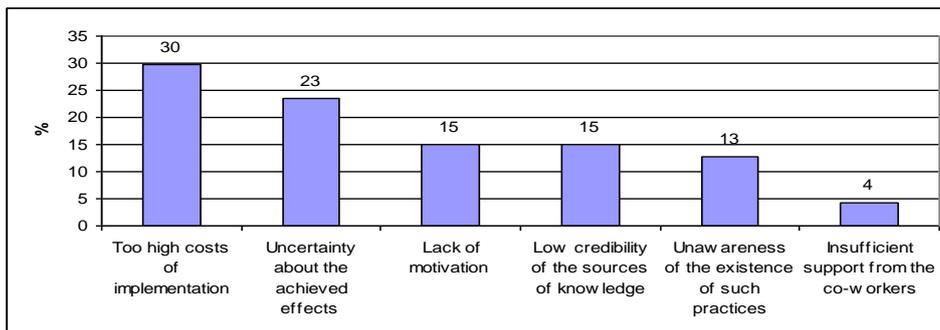


Fig. 3. Difficulties of knowledge management in the enterprises (own calculations based on survey results)

Interesting results are delivered by the analysis of factors which hinder an implementation of knowledge management solutions. The results of research in this area are shown in Figure 3.

It turns out that the biggest problem for small businesses is too high cost of implementing a knowledge management system (30%) and the uncertainty about the achieved effects (23%). Probably the reasons for it can be the too small budget for enterprise development, which prevents the positive implementation of a knowledge management system or the fact that enterprises are looking for too expensive solutions rather than focusing on a few smaller ones and implementing them gradually. Moreover, they could also have too high expectations regarding the results of deployments.

However, for the question whether enterprises see threats of losing business opportunities due to difficulties in the effective use of knowledge, 61% of respondents have answered positively. Therefore it can be concluded that most of the enterprises are aware of the advantages given by proper knowledge management of a business. Nevertheless, due to certain factors they are not able to implement the whole strategy correctly. According to benefits of deployment of such solutions entrepreneurs defined the elements which have been shown in Figure 4.

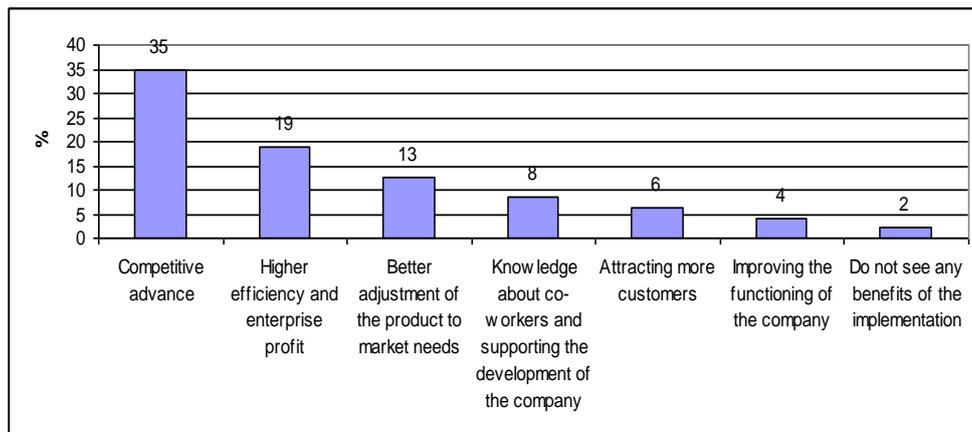


Fig. 4. Benefits of knowledge management implementation (own calculations based on survey results)

The most important added value for businesses was to increase a competitive advance on the market (35%), and also to increase the efficiency and enterprise profit (19%). Only a few enterprises do not see any benefits to implementing the knowledge management system (2%).

Nevertheless during the research entrepreneurs have confirmed that their employees have permanent access to knowledge resources in their organizations in different forms. The most popular was the internet, which gives quick access to

global resources of information. What is more, good relations with external specialists and also with business partners who conduct trainings about products were crucial for respondents as well. Entrepreneurs emphasized that regular business meetings also have a good impact for knowledge gathering in their organizations.

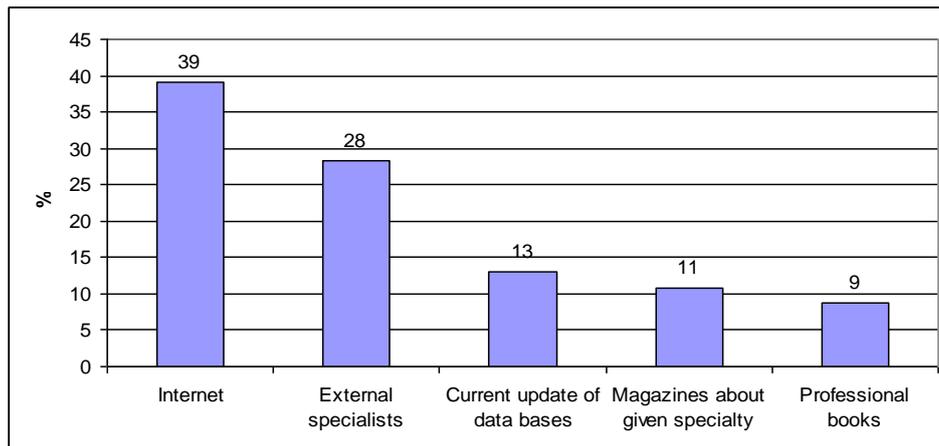


Fig. 5. The methods of acquiring knowledge by employees (own calculations based on survey results)

The current update of data bases was not so popular during the research because only 13% of enterprises take care of constant access to data bases for employees and keep the information up to date there. Probably the reason may be the fear of entrepreneurs that if they grant employees access to all resources of knowledge, this knowledge might be used against the employer when the co-workers move to another, competitive enterprise. Important is the fact that in 74% of surveyed enterprises the atmosphere between employees and employers is based on trust and promotes knowledge sharing. However in 21% of enterprises the trust for employees is limited or even does not exist (5%).

The consoling result is the fact that 53% of entrepreneurs who have data bases in their enterprises use them to implement new project or business solutions. Therefore it is not a surprise that most of enterprises are based on their long-term experience (33%) or even on substantive knowledge (23%). What is more, a larger number of entrepreneurs base their decisions on intuition (26%) which is also directly connected with their long-term experience.

A surprisingly high percentage of the surveyed enterprises (63%), seeks to acquire unique knowledge through their own research and experiments to gain a competitive advantage. On the other hand, 32% of respondents do not engage in such activities or do so seldom. The question regarding whether enterprises create new products or implement new projects gave an interesting result: 42% of respondents have claimed that such activities occur frequently in their enterprises.

However, the same amount of respondents answered that this happens only occasionally or rarely (16%). Comforting is the fact that such activities take place at all. None of the surveyed enterprises have answered negatively to this question.

In the context of cooperation between employees, both individual work (48%) and team work (52%) has the same role in the implementation of tasks. To the question: what factors are favorable to create new solutions, the respondents mostly chose close collaboration with customers (25%). The second most common answer was employees' experience (19%) and informal meetings or "brainstorming" (17%) were chosen by fewer people.

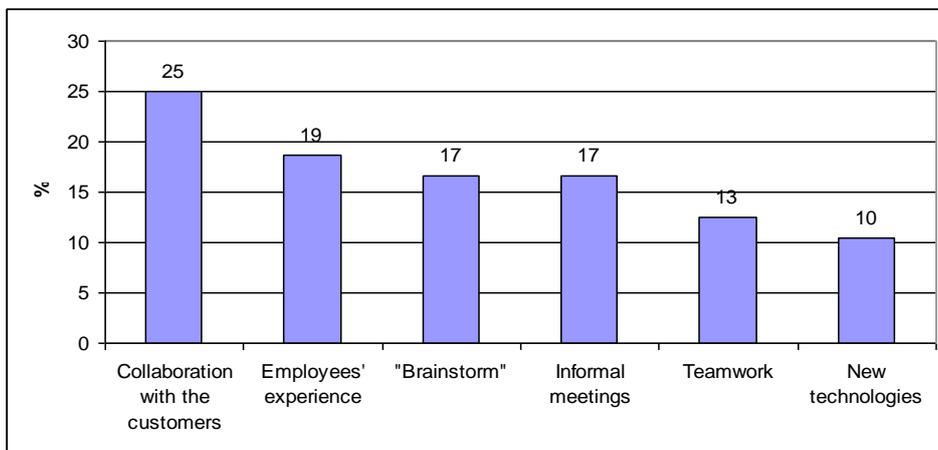


Fig. 6. Factors which have a good impact on the creation of new solutions in enterprises (own calculations based on survey results)

Additionally, entrepreneurs quite often mentioned as a factor the collaboration with suppliers with whom they can exchange experiences and opinions about the available solutions.

4. SUMMARY

The study of the level and awareness of knowledge management among enterprises from Poznan county shows that entrepreneurs are well informed and know the importance of knowledge management for the proper functioning of their enterprises. Nevertheless, they still face many difficulties which can be caused by the lack of trust for modern methods of knowledge management. The reasons for that

can be the lack of sufficient funds for development or satisfaction with the current situation of the enterprise. Entrepreneurs often think that if something works well, it is not worth being changed. They are afraid of risk. The stability of the enterprise is nonetheless more important to them than uncertain profit.

All things considered, entrepreneurs should be educated and supported by certain domestic and also foreign associations or institutions such as the European Union and thus encouraged towards dynamic and sustainable development by implementing an effective knowledge management strategy. It is worth to point out that entrepreneurs have to motivate their employees and show them the importance of such a venture. It is necessary to create a culture of sharing knowledge inside an organization which is based on trust and proper motivators. Sometimes it can take even a few years but thanks to that the enterprise would be able to increase profit, reduce unnecessary costs and achieve a stable position on the market.

Therefore, enterprises should try to implement one of the known models of knowledge management. The Japanese model seems to be an interesting choice. It was created by I. Nonaka and H. Takeuchi who defined it at the beginning of the 1990s and named it the “spiral of knowledge.” The model shows a repeated cycle of four knowledge conversion processes: socialisation – change tacit knowledge to tacit knowledge, externalisation – change tacit knowledge to explicit knowledge, combination – change explicit knowledge to explicit knowledge and internalisation – change explicit knowledge to tacit knowledge.

It is one of the most innovative and forward-looking approaches to knowledge management. It is based on the statement that knowledge is not merely a data and information base that can be gathered, but according to it values, emotions and feelings are also part of knowledge. Moreover, knowledge management should go hand in hand with knowledge creation and every employee should be involved in that. It is also worth to mention that it is middle managers who should get an important role in the process of knowledge creation.

What is more, entrepreneurs should be more open to intelligent technologies. Nowadays the availability and presence of many IT solutions such as learning platforms, the internet, intranet networks or data bases can help enterprises properly store and transfer knowledge among co-workers. Knowledge management tools and platforms will surely evolve in the future but it shouldn't be forgotten that they are used only as a tool which supports knowledge management. The most important are still people.

The research showed that it is worthwhile to investigate knowledge management in the Polish micro, small and medium-sized enterprises also on a bigger number of entities. Therefore, further research will involve more enterprises from different regions of Greater Poland what will allow a deeper verification of the state of knowledge management on the Polish market.

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**ZARZĄDZANIE WIEDZĄ W MIKRO, MAŁYCH I ŚREDNICH
PRZEDSIĘBIORSTWACH. STUDIA PRZYPADKU Z POWIATU
POZNAŃSKIEGO**

Streszczenie

Niniejsza publikacja przedstawia wyniki badań na temat poziomu zarządzania wiedzą w mikro, małych i średnich przedsiębiorstwach z powiatu poznańskiego oraz świadomości właścicieli firm jak ważną rolę odgrywa ona do poprawnego funkcjonowania ich podmiotów gospodarczych. Po wstępnym wprowadzeniu w tą problematykę oraz podziale wiedzy na różne typy przedstawiono wyniki badania ankietowego przeprowadzonego wśród dwudziestu przedsiębiorstw. Przedsiębiorcy mieli możliwość dokonywania wielokrotnego wyboru w zadawanych pytaniach, niemniej jednak bardzo często dodawali własne komentarze bazując na swoim wieloletnim doświadczeniu. Warto nadmienić, iż w przyszłości badanie obejmie większą ilość przedsiębiorstw, również z innych regionów Województwa Wielkopolskiego.

Słowa kluczowe: zarządzanie wiedzą, mikro-, małe i średnie przedsiębiorstwa, metoda badawcza, organizacja

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