

Knowledge Management in Polish Enterprises

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Managers are recognizing the role and importance of knowledge management in shaping the competitiveness of their enterprises. One of the reasons for low competitiveness of Polish enterprises is the unsatisfactory level of their involvement in the implementation of knowledge management concepts. This paper aims to diagnose the state of knowledge management in Polish enterprises. The paper presents the results of an empirical research conducted among 170 enterprises operating in Poland in 2016. The results indicate a low degree of advancement of Polish enterprises towards current challenges of knowledge economy. A small number of Polish enterprises uses the concept of knowledge management. One of the main reasons is the lack of knowledge and awareness of managers concerning the importance of using this concept in enterprises. Definitely big enterprises prefer using knowledge management as well as its elements. Recently, an increase of interest in the implementation of this concept has been observed among the managers of Polish enterprises.

Introduction

Knowledge is now treated as a strategic resource of an enterprise. Functioning in conditions of constant changes facing challenges has given rise to the need of continuous learning. The knowledge-based perspective indicates that intellectual resources are the key organizational assets that enable sustainable competitive advantage (Teece, 2000 and 2003; Wenger and Schneider, 2000; and Hansen and Oetinger, 2001). Despite the growing interest of knowledge management concept among both researchers and practitioners in Poland, there is inadequate research conducted in this area.

The number of enterprises whose worth is determined by their capital and material possessions is constantly decreasing; increasingly, however, success is ensured by the fact that a company has very special assets like collected knowledge, know-how, or utility models (Bitkowska, 2016).

Knowledge management involves creation of conditions for knowledge sharing and its use for improving the functioning of the organization. Knowledge management is a part of organizational management and encompasses all the processes related to localization, acquisition, creation, transferring, application and retention of knowledge, which serve the purposes of an organization, including analyses, planning, operational activity and control (Tiago *et al.*, 2007). There are three main phases of knowledge management: acquisition (creation) of knowledge, sharing knowledge and transforming knowledge into decisions.

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Knowledge management based on the principle of a spiral is a repeating cycle of four processes of knowledge conversion: internalization, socialization, externalization and combination. The Process model used mainly by large organizations is based on the methods proven in practice. There is also the so-called Japanese model (Nonaka and Takeuchi, 1995).

More and more organizations take action in implementing the concept of knowledge management and the employees are motivated to share their experiences. Knowledge management in a company allows to determine the value of an organization as a whole and not just its material assets. There are implemented IT solutions, knowledge base, data warehouses to prevent loss of valuable knowledge resources and supporting communication between employees.

It is crucial to use knowledge that is varied, acquired in various ways, often hidden or even out-of-date; it is thus necessary to adopt a systemic approach to knowledge and its everyday application (Bitkowska, 2016). Knowledge should be managed by means of a system that may offer the possibilities for its application at the right time and by appropriate people. The management staff is of considerable importance to an organization. The organization should hold a belief that knowledge is a very significant asset and it is worth managing it, for it may translate into the pace and power of growth and development of an organization. A knowledge management system that is properly built, used and supervised certainly contributes to the ultimate success of the organization.

The main objective of this paper is to identify the implementation of knowledge management and causes of interest in knowledge management in Polish enterprises.

Literature Review

Davenport and Prusak (1998) define knowledge as a fluid mix of framed experience, values, contextual information and expert insight that provide a framework for evaluating and incorporating new experiences and information. According to Grudzewski and Hejduk (2002), knowledge is an application of information in practice. Bender and Fish (2000) consider that knowledge originates in the head of an individual (the mental state of having ideas, facts, concepts, data and techniques, as recorded in an individual's memory) and builds on information that is transformed and enriched by personal experience, beliefs and values with decision and action-relevant meaning. According to Bukowitz and Williams (1999), knowledge management is a process that helps the organization to generate richness according to its resources or based on knowledge assets. All issues related to knowledge management and innovation should be integrated into the organizational knowledge strategy if organizations are keen on sustaining their competitive advantage (Ordóñez de Pablos, 2010). Research into knowledge management has intensified in recent years, and knowledge is increasingly regarded as one of the most important assets in organizations (Stankosky, 2005; and Albors-Garrigos *et al.*, 2010). Any organization that wishes to acquire sustainable competitive advantage must make the most of all the knowledge it possesses and put it to good use (Mas-Machuca and Martínez Costa, 2012).

As a result of the study of the main factors of building a permanent position as market leader, it was found that, of the four main paradigms of knowledge, innovation, trust and organizational culture (organizational entrepreneurship), the first three paradigms are most appreciated (Hejduk, 2005). Organizations should also analyze their situation first, before introducing the changes, as that crucial step helps plan it better. Obviously, companies cannot be working day-to-day, they need to have a clear strategy. Basing on the strategy, as well as on mission, vision and main objectives, the appropriate method and tool to introduce any changes is matched (Weiss, 2010; Bitkowska and Weiss, 2011; and Bitkowska, 2015). Employees of the knowledge-based organizations must have high professional qualifications and organizational skills and a high level of perception and understanding of the real world. They must be confident in their views, but also open to criticism and other viewpoints. They should develop their awareness and be able to manage stress and solve problems creatively (Chang and Lin, 2015).

Enterprises should use modern technology solutions for collecting, storing, transferring and sharing of information and flexibly respond to the environment demands. Important roles are played by the knowledge workers, defined as specialists, who are highly qualified professionals with organizational skills (Bitkowska and Weiss, 2011).

Knowledge sharing is regarded as the informal communication process involving sharing of knowledge between co-workers (Siemsen *et al.*, 2008). Organizational members are better equipped with skills and knowledge when they engage in knowledge sharing (Sitko-Lutek *et al.*, 2010). It is difficult to enforce knowledge sharing because knowledge is created and stored within the organizational members (Chow and Chan, 2008). At the workplace, the problem of knowledge sharing is relatively common where individual employees with knowledge are less inclined to share their knowledge (Ho *et al.*, 2009). Knowledge sharing does not occur if one does not intend to share knowledge (Siemsen *et al.*, 2008). The cultural patterns influence the employees' attitudes and their common relations, which have repercussions on the processes of knowledge sharing (Walczak, 2012). Knowledge sharing behaviors are generally unnatural because individuals perceive their knowledge as a valuable asset, and open sharing of knowledge with others is limited by their natural tendency to keep information to themselves (Davenport and Prusak, 1998; and Hsu *et al.*, 2007). Teh and Sun (2012) indicate that it is important to understand how the individual attitudinal and behavioral outcomes may have a differential impact on employees' knowledge sharing behaviors. The job attitudes (i.e., job involvement, job satisfaction and organizational commitment) may influence the employees' knowledge sharing behaviors.

Many studies in the literature focus on knowledge management principles (Leonard-Barton, 1995; and Nonaka and Takeuchi, 1995) and knowledge management practices (Davenport and Klahr, 1998; Scott, 1998; and Zack, 1999). These efforts lead many organizations to establish knowledge management-related organizations or positions. In today's global marketplace, firms not only outsource tangible resources, but also acquire tacit knowledge. Based on this, the study attempted to construct a knowledge outsourcing model

from the base of decision analysis and making in order to help firms consider whether, what, and how to outsource knowledge (Pawlowski and Bick, 2012; Tarn and Chien-Chih, 2012; and Pirkkalainen and Pawlowski, 2013).

Holsapple and Wu (2008) have indicated that knowledge management is a field in its own right, provides an integrative context for explaining a myriad of interactions between individuals, teams, organizations, systems and their surrounding environment across disciplines as varied as accounting, marketing, human resources, strategic management, operations management and information systems. As such, Nonaka and Peltokorpi (2006) have suggested that there is an ongoing debate in terms of establishing knowledge management as a separate discipline of study altogether.

Data and Methodology

The study was conducted in 2016 on a group of 170 enterprises operating in Poland. The study was carried out by direct interviews, based on a questionnaire (see Appendix). The firms were selected based on the following criteria: company size, scope of operations, origin of capital, position in the market and startup years (Table 1). 44% of surveyed enterprises were into manufacturing, trading constituted 33.2%, while 32.4% were into services.

Most of the surveyed enterprises operated in the local market, which constituted 35.5%. While 23.5% are enterprises of domestic reach, and 22.2% with an international reach. The fewest of the examined enterprises (18.8%) operated in regional markets. Most of the enterprises were established between 1991 and 2000 (43.6%). A significant part of the sample comprised of enterprises created after 2000 (24.5%). 16.1% of the surveyed enterprises were set up before 1971. The smallest number of firms (15.8%) were those established between 1971 and 1990.

The respondents were also asked about the company's position in the market. 62.3% of surveyed enterprises stated their position in the market as good and 30.6% as strong. Only 7.1% of the surveyed enterprises assessed their position as poor. By the criterion of the capital origin, the survey covered 84% of enterprises exclusively of Polish capital and 16% of foreign-owned or mixed capital.

Results and Discussion

The implementation of knowledge management was declared only by 10.2% of surveyed enterprises but its elements were used by 11.3%. Also, 11.3% of enterprises intend to implement knowledge management in the future. It is disturbing to note that 24.3% of the enterprises stated that the concept was not known to their management, and for 11.2% there was no possibility for its application. As many as 30.06% are of the view that there is no need to use this concept. The individual results are presented in Table 2.

The implementation of knowledge management is determined by many factors which include, among others, the size of the business or sector of activity (Table 2). Large enterprises willingly use knowledge management (20.6%) as well as its components (16.7%). However,

Table 1: Characteristics of the Sample		
Criterion		%
Industry Activity	Production	44.4
	Trade	33.2
	Services	32.4
Company Size (Number of Employees)	Up To 9	28.9
	10 to 49	25.0
	50 to 249	25.3
	Above 249	20.7
Scope of Operations	Local	35.5
	Regional	18.8
	Nationwide	23.5
	International	22.2
Origin of Capital	Exclusively Polish	84.0
	Foreign/Mixed	16.0
Position in the Market	Poor	7.1
	Good/Average	62.3
	Strong	30.6
Startup Years	Before 1971	16.1
	1971 to 1990	15.8
	1991 to 2000	43.6
	After 2000	24.5

only 6.8% of microenterprises, 5.9% of small enterprises and 9.7% of medium-sized enterprises have implemented the knowledge management concept. Further, the elements of this concept were used in 10.2% of microenterprises, 9.2% of small enterprises and 10.4% of medium-sized enterprises. A significant group of these enterprises intend to apply this concept in the near future: 8.5% of microenterprises, 7.9% of small enterprises and 13.6% and 16.7% of medium and large enterprises. Also less number of large enterprises when compared to smaller ones, declared a lack of knowledge of the concept.

Table 2: Knowledge Management Implementation in Polish Enterprises							(in %)
	Knowledge Implementation	Implementation of Knowledge Management Components	Only Plans Connected with Implementation of Knowledge Management	No Need for Knowledge Management	No Possibility of Knowledge Management Implementation	Company Business Leaders Do Not Know About the Knowledge Management Concept	
Industry Activity	Production	10.7	10.0	11.5	27.8	12.2	26.3
	Trade	10.3	12.8	11.8	30.5	7.9	26.1
	Services	8.1	12.2	13.2	33.5	10.7	21.3
Company Size (Number of Employees)	Up To 9	6.8	10.2	8.5	35.2	13.1	26.1
	10 to 49	5.9	9.2	7.9	32.2	11.8	31.6
	50 to 249	9.7	10.4	13.6	31.8	11.0	21.4
Scope of Action	Above 249	20.6	16.7	16.7	20.6	7.9	16.7
	Local	7.4	7.9	11.1	35.6	11.1	26.4
	Regional	8.8	11.4	7.9	29.8	8.8	33.3
	Nationwide	9.1	10.5	11.9	31.5	15.4	20.3
	International	17.0	17.8	14.1	22.2	8.9	17.8

Table 2 (Cont.)

	Knowledge Implementation	Implementation of Knowledge Management Components	Only Plans Connected with Implementation of Knowledge Management	No Need for Knowledge Management	No Possibility of Knowledge Management Implementation	Company Business Leaders Do Not Know About the Knowledge Management Concept
Origin of Capital	Exclusively Polish	10.0	11.0	32.7	12.5	25.0
	Foreign/Mixed	18.6	13.4	19.6	4.1	20.6
Position in the Market	Poor	11.8	16.3	25.6	18.6	23.3
	Good/Average	9.5	9.5	33.2	13.7	25.6
	Strong	15.1	14.0	26.3	4.3	22.0
Startup Years	Before 1971	14.3	17.3	24.5	3.1	20.4
	1971 to 1990	9.4	11.5	28.1	10.4	27.1
	1991 to 2000	9.4	11.3	32.5	14.3	21.1
	After 2000	6.0	9.4	32.9	11.4	30.0

The next part illustrates the distribution of responses received from respondents taking into account the criteria such as the scope of action, origin of capital, market position and the year of startup. In the case of the origin of the capital, the implementation of the knowledge management was declared by 20.6% enterprises with foreign and mixed capital, while those with the Polish capital constituted only 8.2%. The enterprises with international scope of operations (17%) used knowledge management to a greater extent than others. In addition, enterprises with medium and strong market position are more likely to apply this concept than enterprises with a weak position. The year of startup plays an important role. The knowledge management implementation was declared by those enterprises that arose before 1971 and between 1991 and 2000. Plans of applying the concept in the future were indicated by large and medium-sized enterprises operating in local and international markets, with foreign capital and with a weak market position. Enterprises can take this as an opportunity to improve their situation.

The concept of knowledge management was not known to a large number of micro and medium enterprises with good market position, operating in local and regional markets.

The reasons that led the company to implement knowledge management seem to be important (Table 3). The research shows that enterprises are guided by a number of reasons. First of all, they expect better relations with customers (42.5%), improvements in the competitive position (41%), staff development (38%) and increase in the income and profits (35.5%). In addition, the surveyed enterprises also expected improvement in marketing activities (31%), increase in innovation (22.5%) and the growth of operational flexibility (20%).

Further, the findings concerning the reasons for implementing knowledge management concept indicate that for large enterprises the most important reasons were: improvement in competitive position (50%) and staff development (42.6), while better cooperation with customers was the most significant factor for micro (46.7%) and small-sized enterprises (42.9%).

In the case of industry activity, for manufacturing enterprises the major reasons to implement knowledge management were concerning improvement of the competitive position (44.8%), improvement of marketing activities (37.9%), and increasing the income and profits (36.8%). For commercial enterprises, the most important reason was the growth in revenues and profits (45.1%), followed by improvement in competitive position (38%), better cooperation with customers (38%) and staff development (38%). In turn, service enterprises expect greater cooperation from customers (54.5%) and improvement in their competitive position (39.4%).

With regard to the knowledge management solutions, the following actions were mainly concerned: the knowledge and experience exchange system (19.6%), supporting the cooperation and the reuse of the existing knowledge (10.9%) and using computer systems supporting the knowledge management (10.7%). The activities in accumulating the knowledge for the purposes of all projects carried out in the organization were also significant

Table 3: The Causes of Interest in Knowledge Management in Polish Enterprises							(in %)	
		Improvement of Competitive Position	Improvement of Marketing Efforts	Better Cooperation with Customers	Innovation Increasing	Income Growth and Profits Growth	Staff Development	Improvement of Flexibility
Industry Activity	Production	44.8	37.9	35.6	28.7	36.8	35.6	23.0
	Trade	38.0	16.9	38.0	15.5	45.1	38.0	16.9
	Services	39.4	28.8	54.5	24.2	31.8	37.9	21.2
Company Size (Number of Employees)	Up To 9	35.6	22.2	46.7	15.6	42.2	33.3	26.7
	10 to 49	22.9	20.0	42.9	31.4	36.1	40.0	14.3
	50 to 249	46.2	36.5	42.3	21.2	38.5	34.6	21.2
	Above 249	50.0	38.2	39.7	23.5	27.9	42.6	17.6
Scope of Action	Local	31.6	17.5	52.6	21.1	33.3	40.4	22.8
	Regional	40.6	34.4	50.0	18.8	43.8	37.5	15.6
	Nationwide	42.2	22.2	46.7	15.6	37.8	42.2	24.4
	International	48.5	47.0	7.3	30.3	31.8	33.3	16.7

Table 3 (Cont.)

	Improvement of Competitive Position	Marketing Efforts	Better Cooperation with Customers	Innovation Increasing	Income and Profits Growth	Staff Development	Improvement of Flexibility
Origin of Capital	Exclusively Polish	28.9	43.6	17.4	38.3	36.9	19.5
	Foreign/Mixed	37.3	39.2	37.3	27.5	41.2	21.6
Position in the Market	Poor	21.4	42.9	21.4	35.5	21.4	7.1
	Good/Average	24.8	41.6	19.8	39.6	38.6	25.7
	Strong	40.0	43.5	25.9	30.6	40.0	15.3
The Startup Years	Before 1971	42.0	44.0	10.0	32.0	38.0	16.0
	1971 to 1990	33.3	33.3	18.2	45.5	33.3	34.4
	1991 to 2000	49.4	39.5	29.6	38.3	39.5	18.5
	After 2000	27.8	27.8	55.6	27.8	38.9	13.9

(9.2%), followed by introducing the idea of the knowledge sharing (8.2% of enterprises). 62.2% of enterprises did not apply the solutions in the knowledge management.

In the case of manufacturing enterprises, they mainly introduced the solutions in the system of the knowledge and experience exchange (20.4%), using of computer systems supporting the knowledge management (10.4%), introducing the idea of the knowledge sharing (10%) and accumulation of knowledge for all projects implemented in the organization (10%). A similar situation existed also in the case of trading and services enterprises. In the case of micro, small and medium enterprises, the areas of the knowledge management and innovative solutions chiefly focused on: a system of the knowledge and experience exchange, supporting the cooperation and the reuse of the existing knowledge. In the case of large enterprises, the innovations related to: a system of knowledge and experiences exchange, 28.6%; using of computer systems supporting the knowledge management, 23.8%; accumulation of knowledge for all projects implemented in the organization, 19%; and supporting the cooperation and the reuse of the existing knowledge, 16.7%.

For modern organizations, there is a chance for development through appropriate use of the employees' knowledge and skills. One of the reasons for low competitiveness of Polish enterprises is an unsatisfactory degree of involvement in the implementation of the knowledge management concept. A small number of enterprises in Poland uses this concept. Lack of knowledge and awareness amongst managers is one of the main reasons for their inability to understand the significance of using this solution in the enterprise. Large enterprises are more willing to use knowledge management as well as its components. The initiative of implementing knowledge management mainly lies in the hands of the management board, owners or top management. One of the main reasons for implementing knowledge management is to improve the company's competitive position. The practice of most enterprises indicates a lack of awareness about the existence of strategic knowledge resources and the knowledge management process. One of the reasons for the enterprise's low competitiveness is the lack of implementation of their knowledge management processes.

Conclusion

The knowledge-based economy raises new challenges to the enterprises for effective and efficient development of organizational learning processes. The scope of forming and implementing the knowledge management has a decisive influence on the competitive enterprises' predominance. The analysis of the results point to the unsatisfactory degree of Polish enterprises' ability for adaptation to current challenges of the knowledge economy. Too small a number of enterprises in Poland uses the concept of knowledge management. One of the main reasons is the lack of knowledge and awareness of managers with regard to the importance of using this concept in enterprises.

The results indicate that awareness of the role of the knowledge management among Polish managers is slowly increasing. It has been observed that there is an increase of interest

in the implementation of this concept among managers. It is important to focus the attention of managers and employees on the role of knowledge in the operation of their enterprises, including knowledge sharing, stimulation, motivation, and also development of knowledge workers.

The research was concerned with the state of knowledge management in Polish enterprises. This theme of research is worthy of continuing, with an aim to make comparisons between Polish and European enterprises in the following areas: training managers and employees on the role of knowledge in the operation of their enterprises, being open to knowledge sharing, stimulation, motivation and also development of knowledge workers.

Despite the growing interest among researchers and practitioners in the concept of knowledge management, there is a narrow range of current researches in this area in Poland. The issue of exploitation of innovation in other areas of business management and its influence on the processes of competition in the market or shaping the competitiveness of enterprises operating in Poland is almost too poorly resolved from the empirical point of view. ■

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Appendix

Questionnaire

1. The state of knowledge management in the enterprise.

Knowledge management implementation	
Knowledge management components implementation	
Only plans connected with implementation of the knowledge management	
No need for the knowledge management	
No possibility of the knowledge management implementation	
Company business leaders do not know about the knowledge management concept	

2. The causes of interest in the knowledge management in the enterprise.*

Improvement of competitive position	
Improvement of marketing efforts	
Better cooperation with customers	
Innovation increasing	
Income and profits growth	
Staff development	
Improvement of flexibility	
Other	

3. Areas of solutions in the knowledge management in the enterprise.*

Accumulation of knowledge for all projects in the organization	
Supporting the cooperation and the reuse of the existing knowledge	
System of the knowledge and experience exchange	
Create and use the directory of experts	
Creating solution systems for remote work	

Note: * The possibility of more answers.

Appendix (Cont.)

Creating a forum of the information exchange/exchange of ideas	
Creating a workflow system	
Introducing the idea of knowledge sharing	
Use of Customer Relationship Management (CRM)	
Using the data warehouse	
Using of computer systems supporting the knowledge management	
None of the above	

Metrics

Industry of Activity	Production	
	Trade	
	Services	
Company Size (Number of Employees)	Up to 9	
	10-49	
	50-249	
	Above 249	
Scope of Action	Local	
	Regional (a few provinces)	
	Nationwide	
	International	
Position in the Market	Poor	
	Good/Average	
	Strong	
Startup Years	Before 1971	
	1971 to 1990	
	1991 to 2000	
	After 2000	

Reference # 29J-2017-07-01-01

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