

Article

Selected Aspects of Evaluating Knowledge Management Quality in Contemporary Enterprises

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Abstract: The main aim of the article was to estimate select aspects of knowledge management quality evaluations in contemporary enterprises from theoretical and practical perspectives. Measuring knowledge management is the biggest challenge for both theoreticians and practitioners. The survey was addressed to organizations conducting business activity in Poland. The research was carried out in 2019 in the form of an online survey. For international organizations, the survey was intended for representatives of these companies' local branches. It has been shown that the factors that most strongly affect the quality of knowledge are directly related to infrastructure and information technology systems (IT systems). The article contributes to managerial practice by pointing out the importance of evaluating knowledge management quality from the process perspective. The article's originality lies in the contribution to the literature of evaluating knowledge management quality by empirically analyzing it in contemporary enterprises. The results of research in the field involving assessing the quality of knowledge management have shown the need to focus not only on information technology tools (IT tools) related to infrastructure, but also on the processes approach, taking into account the priority role of the employees.

Keywords: knowledge; knowledge management; knowledge management quality

1. Introduction

The concept of knowledge management is currently perceived by modern organizations as an important element in building a competitive advantage [1–5]. Methods and strategies used until now to gain a competitive edge, such as launching new products and continuously improving processes, are becoming increasingly less effective, given that products and processes are now easier to duplicate. Adaptation to the needs of competitive enterprises through a knowledge-oriented organization management approach is aimed at increasing the effectiveness and efficiency of the organization [6–12]. The idea is to bring about improved effectiveness across all areas and processes, using to this end a specific set of instruments and tools in a continuous and permanent manner [13].

The fundamental approach to knowledge management is the process approach [3–5]. Identification of key knowledge management processes and existing relationships between them is extremely important for proper knowledge management in an enterprise [6]. The literature on the subject distinguishes various approaches to the classification of the most important knowledge management processes [9,11,13]. These processes are multidimensional; they relate to various aspects of knowledge and relate to various levels of analysis. The important area is knowledge quality, which is a vaguely defined concept because of its abundance and variability [14].

However, knowledge is an important resource in contemporary organizations; its effective use will depend, to a large extent, on its quality [15]. Chakrabarti, Arora and Sharma underlined that research on knowledge quality should grow in scope and prominence [16]. In the manuscript we

focus on knowledge quality within the knowledge management process in contemporary organizations. A framework is proposed that uses a process approach in knowledge management and checks some aspects of knowledge quality in a detailed process. The main research question was: what are the aspects of evaluating knowledge management quality in contemporary enterprises? The issues were discussed in both theoretical terms, by analyzing the literature, and practical terms, by looking into the results of empirical research studies conducted in 2019.

2. Literature Review

2.1. Knowledge Management-Process Approach

Knowledge management is becoming an increasingly popular concept and one that is being eagerly implemented in contemporary enterprises. Companies are starting to recognize the significant resources of both internal and external knowledge that should be used to build a competitive position in the market. On one hand, knowledge management has become a challenge to be faced by modern enterprises, but on the hand, it has served as a springboard for organizational activities [17]. A company's success is conditional, among other factors, on its ability to use explicit and implicit knowledge. Implicit knowledge has a technical (know-how) and cognitive dimension, consisting of a belief model and perception patterns. It is the source of the company's future successes, which is why it is so important to reach it and use it [17–19].

Organizations that have implemented and consciously used knowledge management concepts have seen a number of benefits resulting from them [12]. Most importantly, these are: improved performance and target-reaching; streamlining of processes and organization-wide adoption of good practices; development of business activity and increase of innovation; and more ease in launching new products and services [20–27]. In addition, there is also: increased adaptation of products/services to customer requirements; better customer and employee satisfaction; increased employee productivity and performance; improved communication and cooperation; and finally, improved trust [28,29]. In what concerns knowledge management in organizations, it is necessary to point out aspects concerning the use of technology and the social elements of knowledge workers and knowledge distribution. Activities related to knowledge management should be carried out in a systematic and cyclical fashion; focus on processes such as the acquisition, transfer, use, identification and creation of knowledge; and be based on linking knowledge management processes with commercial processes. At the same time they cannot be independent, must align with organizational goals, use technology to support processes and bring benefits to the organization [13]. Noteworthy as well are hard elements—systems and tools; and soft elements—organizational culture [30–32].

In enterprises centering their activities around knowledge resources, the following aspects of knowledge management can be distinguished: functional, process-oriented, instrumental and institutional [17,33–36].

One of the proposed solutions for knowledge management is a process approach [33,37]. Under this approach, knowledge management is understood as the entire process of creating, disseminating and using knowledge to achieve organizational goals [37–39]. Knowledge management should thus include the complementary processes of creating, collecting, organizing, disseminating, using and exploiting knowledge in the course of business activity. Most often, processes are identified that make up knowledge management, such as identification, acquisition, development, distribution and dissemination, use and preservation [37,38]. An important aspect of the process approach applied to knowledge management is that it enables better operationalization of individual processes [40,41].

In process terms, knowledge management is a normative and disposable proceeding aimed at creating the right conditions that will enable efficient implementation of operational functions, thereby optimizing the main processes related to knowledge, climate, culture, trust, leadership and organizational structure [15,29,42–44]. This will then allow employees to focus on developing knowledge, distributing it, acquiring it and using it correctly [45,46].

In the instrumental approach, knowledge management consists of the appropriate selection and use of instruments and tools contributing to the course of major processes involving knowledge at all

levels and areas of the organization. The set of instruments is quite extensive, ranging from financial and legal to organizational and technical. These instruments may include: organizational systems, including an incentive, information, monitoring system, etc., plus a number of different tools, such as databases, IT systems and internal communication networks [13,36,47,48].

In the institutional approach, knowledge management includes a system of job positions and employee teams (strategic and operational level of the organization, formal and informal organization) who perform relevant knowledge management functions [17,38,49,50].

Strategic and operational knowledge management perspectives should also be indicated. A knowledge management strategy usually involves one of two approaches: codification or personalization, or a combination of the two. The choice of knowledge management strategy depends on the nature of the processes that take place within the company. When employee intuition and skills are used, personalization is the one that most often works given its reliance on tacit knowledge. Codification, meanwhile, tends to be reserved for standard products [51–53]. In the context of the process approach to knowledge management, the question arises: how can one measure knowledge management in order to obtain tangible effects of its use with reference to organizational goals?

2.2. Knowledge Management Quality

Evaluation of knowledge management quality and its measures is a recurring problem in the literature. It applies to all aspects of human life [54–57]. In this respect, the authors agree that the problem of defining quality is invariably an open topic for research and discussion. There is no doubt that each and every quality evaluation comes burdened with a certain degree of subjectivity—hence the necessity, as authors universally agree, to clarify the broad organizational context for knowledge management measurement.

Evaluation of knowledge management quality in the literature [16,58,59] indicates the importance of testing data quality and information quality; knowledge codification; and the exchange of knowledge, experience and intuition between employees and teams, all while taking into account the use of information technology systems. However, the biggest challenge for managers is to determine measures of knowledge quality in a knowledge management system. Knowledge quality has different levels of detail, and depending on the situation, it can be understood as either product readiness, a resource for active use, compliance with requirements or a degree of proximity of excellence [57].

The literature on the subject include research on the quality of a formalized knowledge management system [16,58,59]. According to the Deepankar, Arora and Sharma, it is important to introduce the principle of basic quality management that support knowledge management processes [16]. The authors have created a hierarchical structure of knowledge quality and described its elements and their attributes, and created a valid and reliable instrument to measure the relative importance of the elements. This model has a hierarchical approach to address the dependence relationships of knowledge quality with its elements of inherent (accurate, complete, consistent, current, relevant), contextual (culture, structure, dependence, clarity, responsive) and actionable (useful, accessible, interpretable, volatile, secure) knowledge quality [16]. The research indicated that actionable knowledge quality is the most important area of concentration for business managers in the knowledge management system (KMS). The authors Deepankar, Arora and Sharma underlined that KMS is just a tool to support organizational knowledge processes, especially for explicit knowledge, but on the other hand, organizational knowledge is implicit, context-dependent, difficult to imitate, and noncodified [16].

The very evaluation of knowledge quality is invariably a subjective assessment, as in cases of commercial and other organizations. It is a derivative of the evaluation of employees' abilities to perform tasks assigned to them. Once again referring to the arguments raised earlier in the paper, perceived knowledge quality can be said to be determined by knowledge management processes occurring in organizations [37,60–64]. Knowledge management processes and cycles consist of subsequent activities undertaken in organizations. These are: the search for knowledge (identification), acquiring knowledge resources necessary for the organization, developing

knowledge while adapting it to local conditions, distributing knowledge within the organization and using knowledge effectively. In the literature cited earlier, knowledge preservation is also indicated as an important aspect of the knowledge management process. All these stages constitute a closed management cycle found in a more or less structured way in virtually every organization (Figure 1).

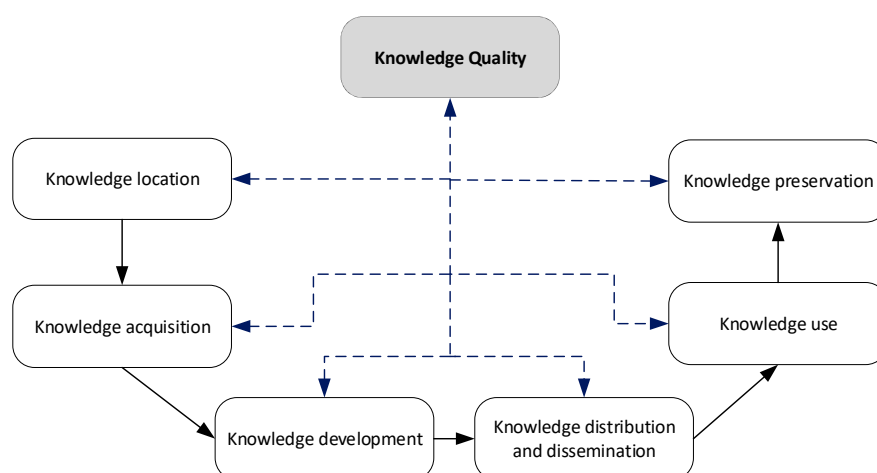


Figure 1. Elements of the knowledge management process Source: own elaboration based on [37].

In relation to knowledge management in theory, elements influencing the evaluation of knowledge quality were defined. Select aspects of the entire knowledge management process can be referred to under the process approach.

3. Materials and Methods

The research was carried out between November and December 2019 in the form of an online questionnaire. The aim of the study was to identify factors that have a positive impact on the quality of knowledge in knowledge management processes in the contemporary organization. The assessment of the quality of knowledge, which was indicated earlier in the article, is a subjective assessment. Tactical managers in organizations were invited to the study. The authors concluded that tactical managers have knowledge about the effectiveness of the implementation of the tasks entrusted to them and how to implement these tasks. Managers are able to assess the factors included in the knowledge management process, which are listed in Table 1. The authors' particular interest is the relationship between knowledge quality and modern IT tools and technical infrastructure available in modern organizations. Therefore, the research hypothesis is that the quality of knowledge is positively influenced by the technical infrastructure available in organizations, including IT tools, knowledge bases and repositories. The survey was addressed to organizations, both registered and conducting business activity in Poland. For international organizations, the survey was intended for representatives of these companies' local branches.

Table 1. Elements influencing evaluations of knowledge quality in knowledge management processes in contemporary organizations.

Construct	Characteristic
Knowledge quality (KQ)	Knowledge is evaluated taking into account aspects such as its quantity, quality and availability for the implementation of tasks [16,57–59,61,62,64,65]
Identification (IDT)	There are knowledge repositories (databases, IT systems, etc.) or formal job positions related to knowledge management, e.g., knowledge manager, knowledge management specialist. Informal knowledge managers or dedicated knowledge specialists may also appear. [62,64,66]
Acquisition (ACQ)	Managers and non-executive employees have access to knowledge bases and are able to use them. In addition, knowledge managers support the work of other organization members by showing willingness to cooperate and distribute knowledge. Knowledge can

	be acquired from external sources (training, courses, access to external repositories). [46–48, 65–69].
Development (DEV)	The organization develops resources, actively responds to the training needs of employees and organization members. Organization supports independent acquisition of knowledge by members [36,63,67–71]
Distribution (DST)	The organization creates mechanisms enabling knowledge distribution and supports knowledge-sharing processes between employees, e.g., through a mentoring, coaching system or cooperation in the task or project teams. Organization also provides tools to support distribution and exchange of knowledge between employees. [33,36,62,68–71].
Use (USE)	The organizational knowledge, including employee knowledge, is properly used to carry out specific tasks. Tasks are assigned based on employee competences, enabling full use of their knowledge and of the knowledge existing in repositories [36,66,68,69]

The companies invited to the study were organizations with which the authors of the article had previously collaborated. The key criterion that was used to select the organizations invited to participate in the survey was the economic efficiency of the organization. The initial assumption verifying economic efficiency was obtaining a positive financial result for the last 3 years, i.e., in the period 2016–2018. All organizations invited to the study met this condition, which indicates effective management of resources in the organization, including knowledge resources. The requirement of achieving economic efficiency during a period of three consecutive years was the criterion for choosing an organization for research. For this reason, the research sample cannot be considered as completely random and it has been chosen in a targeted manner.

The companies invited all operate in modern industries (Table 2). Such activity requires them to have extensive experience and process efficiency, but also to continually develop knowledge resources. They are both international and Polish enterprises. They differ not only in industry, but also in organizational structures, market coverage and size. Both small companies, i.e., those employing up to 25 employees, and large companies, i.e., those employing more than 250 employees, were invited to the study.

The aim of the study was to determine the factors influencing the quality of knowledge management in organizations, and to identify those of them with the strongest impacts based on subjective evaluation of responses. Research questions focused on factors influencing knowledge management in business organizations. Respondents were asked to respond using a five-point Likert scale, where 1 was the lowest score and 5 the highest.

The survey was addressed to organization managers. For larger organizations, several managers representing different branches of the organization were allowed to complete the survey, as evidenced by the size of the research sample, which is larger than the number of organizations invited to participate in the study. A total of 58 organizations selected in a non-random way were invited. Out of those, 4 did not complete the survey and 12 completed it either incorrectly or not in full. The remaining 84 surveys were used for further analysis. Table 2 shows the characteristics of the analyzed organizations.

Table 2. Description of research sample.

Organization's Characteristic	N = 58	%
Organization size		
Large	23	39.66%
Medium	26	44.83%
Small	9	15.52%
International organization		
Yes	23	39.66%
No	35	60.34%
Industry		
ICT	21	36.21%
FMCG	10	17.24%
Manufacturing	8	13.79%
Electric power	7	12.07%

Services	7	12.07%
Pharmaceutical and cosmetics	3	5.17%
Other	2	3.45%
Participant's characteristic	N = 84	%
Respondent age		
Under 30	11	13.10%
30–40	31	36.90%
40–55	24	28.57%
55+	18	21.43%
Sex		
Female	38	45.24%
Male	46	54.76%
Position		
Owner/CEO	19	22.62%
Manager	65	77.38%

The questions addressed to survey participants were intended to indicate the factors influencing their perceived and subjectively evaluated quality of knowledge. For organizations whose goals included achieving tangible financial results, knowledge quality was evaluated through the prism of how effective a company is in achieving their goals. Therefore, the knowledge quality factor (KQ) is estimated in the study as a component of the quantity, quality and availability of knowledge for tasks implemented in the organization. Knowledge quality in the study is a response variable, influenced by the explanatory variables listed in Table 2. Each of the factors was assigned to one of the stages of the knowledge management cycle described earlier in the paper. The study assumes that knowledge management in organizations, regardless of their size or scope of activity, encompasses elements such as conscious identification of knowledge sources and knowledge acquisition, knowledge development for the needs of the organization and its processes and projects, knowledge distribution within the organization and its effective use. Since the vast majority of respondents were managers performing job duties at the tactical level of the organizational structure, the survey was completed by team managers, functional managers and project leaders in organizations. It was therefore not addressed to those involved in organizational management at the strategic level (management board, senior management). The survey does not cover knowledge preservation issues, as this element is directly related to the implementation of organizational strategy.

4. Results

According to obtained responses, knowledge quality scores highest in small organizations and lowest in large organizations. Figure 2 shows the weighted averages of the responses to the question about the quality of knowledge that each organization has and manages. The measure of the coefficient defining the quality of knowledge (KQ) is a value that is the arithmetic average of the answers given by the survey's participants to the questions regarding the amount of knowledge available to the employee, the degree of matching this knowledge to the current needs of the employee and ease of access to the necessary knowledge. Ease of access applies to both knowledge accumulated in the internal repositories of the organization and access to external knowledge.

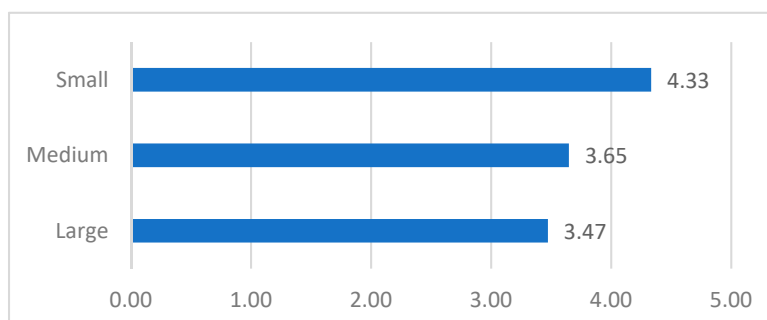


Figure 2. Evaluation of knowledge management quality in organizations by size.

All the factors described in Table 2 sprang directly from knowledge management processes taking place in organizations. To indicate the existence of a linear correlation between the factors, the Pearson linear correlation coefficient was used. The results presented in Table 3 refer to the relationship between the knowledge quality variable (KQ) and the explanatory variables. The correlation coefficient indicates the degree and direction of correlation between the variables.

Table 3. Results of linear correlation analysis measured with the Pearson coefficient.

Construct	KQ Knowledge Quality
KQ Knowledge quality	1
IDT_1	0.358366
IDT_2	0.127963
IDT_3	−0.14069
ACQ_1	0.367336
ACQ_2	−0.00077
ACQ_3	0.311507
DEV_1	0.497355
DEV_2	0.099847
DST_1	0.058817
DST_2	0.499505
USE_1	−0.08177
USE_2	0.510323

Correlation coefficient values can take values from −1 to 1, with extreme values meaning direct correlations between negative and positive factors. For example, the IDT_3 factor, which says that informal knowledge managers exist in organizations, depends on the quality of knowledge management. However, the value of the coefficient shows that this impact is negligible. Table 4, which presents the results of the correlation analysis, indicates factors whose value are > 0.25; i.e., it can be assumed that the coupling with them and with the response variable is visible. The analysis lacks coefficients for which the correlation is very strong; i.e., it is close to the value of 1, which may be partly explained by the limited research sample. A correlation analysis carried out in this way shows that knowledge quality is correlated significantly and also positively with the following factors:

- IDT_1—knowledge repositories (databases, IT systems, etc.) exist in the organization and employees are aware of the need to use them as part of duties arising from their job position
- ACQ_1—organization members have access to knowledge bases, and more importantly, are able to use them
- ACQ_3—organization enables members to acquire knowledge from external sources. In practice, this means the organization conducts training and courses, while employees have, if necessary, access to external knowledge repositories.
- DEV_1—organization actively responds to the training needs of employees, organization members. This is when employees have the opportunity to indicate to the employer a type of knowledge that may be useful to them in order to better perform job duties. In particular, they may indicate courses, training or study that correspond to their career and development paths.
- DST_2—organization provides tools to support distribution and exchange of knowledge. These tools can be technological solutions, networks, repositories, disks or software supporting knowledge and communication management within the organization.
- USE_2—employee knowledge is well used in the implementation of tasks. This is related to the employee's subjective feelings and personal satisfaction with the tasks assigned to him/her, and the possibility of using his/her knowledge and experience in the implementation of the tasks he or she is entrusted with.

Table 4. Elements influencing evaluation of the state of knowledge management quality in organizations.

Construct	Questions—Elements of Quality in Processes
Knowledge quality (KQ)	Organization members are satisfied with the quantity, quality and availability of knowledge for the implementation of tasks
Identification (IDT)	IDT_1—Knowledge repositories (databases, IT systems, etc.) exist in the organization
	IDT_2—Formal knowledge manager position exists in organizations
	IDT_3—Informal knowledge manager positions exist in organizations
Acquisition (ACQ)	ACQ_1—Organization members have access to knowledge bases and are able to use them
	ACQ_2—Knowledge manager supports the work of other organization members (availability, willingness to cooperate)
	ACQ_3—Organization enables members to acquire knowledge from external sources (training, courses, access to external repositories)
Development (DEV)	DEV_1—Organization actively responds to the training needs of employees, organization members
	DEV_2—Organization supports independent knowledge acquisition by organization members
Distribution (DST)	DST_1—Organization supports processes of knowledge distribution between employees, e.g., through a mentoring system or cooperation in task teams
	DST_2—Organization provides tools to support distribution and exchange of knowledge
Use (USE)	USE_1—Tasks are assigned according to the employee knowledge criterion
	USE_2—Employee knowledge is well used in the implementation of tasks

Factors that correlate the most strongly with knowledge quality perceived by organization members can be divided into two basic groups: one is knowledge repositories and systems supporting knowledge management in the organization, and the other is factors directly related to employees—the fact of appreciating and using their knowledge and experience, along with each employee’s ability to influence their further development path. This is reflected in those factors that pointed to the importance of choosing training, developing and using individual knowledge. Tools and infrastructure—which includes knowledge bases, repositories and software—support individual employees in their work and can help improve workplace performance overall, but they can also be favorable to group learning and group use of knowledge. However, while the correlation only shows the relationship between the factors, it fails to clarify the underlying causal relations between them. To this end, a linear regression analysis was performed for the analyzed variables. Regression equation, taking into account all analyzed and specified factors at a coefficient level of $R^2 = 0.69$ (meaning that the model explains the phenomenon in 69%), is a measure of the model’s goodness-of-fit and is shown in Table 5 with a standard error of 0.47.

Table 5. Result of linear regression analysis for the initial model.

	Coefficient	t-stat	p-value
Intercept	−0,308710889	−0.4335395	0.665937255
IDT_1	0.121414573	1.307279	0.195335799
IDT_2	0.127159787	1.7628235	0.082233532
IDT_3	−0.084539155	−1.1245182	0.264580681
ACQ_1	0.131808493	1.5799756	0.118557558
ACQ_2	0.007576083	0.0799111	0.936532757
ACQ_3	0.143755295	1.5631931	0.122453746
DEV_1	0.13420902	1.3625544	0.177329519
DEV_2	−0.053968672	−0.6171196	0.539129916
DST_1	0.024655134	0.3469759	0.729635749
DST_2	0.295615007	3.1969216	0.002074733
USE_1	−0.077286052	−1.0307937	0.306136259
USE_2	0,326967829	3.6582281	0.000484185

As a result of subsequent iterations, the following factors were removed from the model based on the lowest t-statistic values (in order of removal):

- ACQ_2—knowledge manager supports the work of other organization members (availability, willingness to cooperate).

- DEV_2—organization supports independent acquisition of knowledge by organization members.
- DST_1—organization supports processes of knowledge distribution between employees, e.g., through a mentoring system or cooperation in task teams.
- IDT_3—informal knowledge managers exist in organizations.
- USE_1—Tasks are assigned according to the employee knowledge criterion.
- IDT_1—knowledge repositories (databases, IT systems) exist in the organization and employees are aware of the need to use them as part of duties arising from their job position.
- ACQ_3—organization enables its members to acquire knowledge from external sources.
- DEV_1—organization actively responds to the training needs of employees, organization members.

Let us note that the last three factors were taken into account earlier at the correlation stage. This means that true linear correlations exist between them and the quality of knowledge evaluated by the respondents, but the same cannot be said with confidence about the impact between them and knowledge quality. The final regression model, after the elimination of factors with the lowest values in Student's t-statistics, at the level of $R^2 = 0,72$ and with a standard error rate of 0.59, indicates three factors directly influencing subjective knowledge quality as evaluated by the respondents (Table 6).

Table 6. Results of regression analysis after rejection of factors with lower significance as measures by Student's t-statistics.

	Coefficients	Standard Error	t-stat	p-value
Intercept	0.094806	0.426412483	0.222333	0.824621
ACQ_1	0.214223	0.076037598	2.817336	0.006098
DST_2	0.416954	0.082605271	5.047541	2.75E-06
USE_2	0.352535	0.082910821	4.251979	5.7E-05

Factors indicated in the course of regression analysis point to the existence of and employee access to databases and knowledge bases (ACQ_1) and to information systems supporting knowledge management (DST_2), also indicating the awareness that employees' knowledge is used in their work in a way that satisfies them (USE_2).

5. Discussion and Conclusions

Knowledge management is commonly applied in both large international enterprises and SMEs (Small and Medium Enterprises) [72]. It is a multifaceted concept requiring the use of appropriate systems and tools. An important issue taken up in our theoretical and empirical deliberations was to examine knowledge management quality while taking into account individual knowledge management processes, such as knowledge identification, acquisition, development, distribution and use. The biggest challenge for both scholars and active entrepreneurs is measuring knowledge and management knowledge from a quality perspective. Knowledge quality assessment is a current issue in the context of new technologies (Industry 5.0, Internet of Things, Technology of Blockchain] and social solutions [73,74].

The aim of the study was to identify factors that have a positive impact on the subjectively evaluated quality of knowledge, against the assumption that knowledge is generally held in high esteem when it enables efficient and effective implementation of entrusted tasks. This selected representatives of business organizations answered questions related to whether knowledge available to them was sufficient, timely, up-to-date, appropriate and free of errors that ultimately affect the quality and comfort of work. An interesting conclusion that can be derived from the research is that companies tend to evaluate their knowledge well, and most interestingly, that knowledge quality scores overall higher in large than in small companies. Another thought-provoking conclusion, which nonetheless requires further research, is that among the factors that most markedly affect knowledge quality are those directly related to infrastructure, i.e., access to knowledge bases and repositories, and to IT systems. This could be an interesting diving board for

more in-depth research into tools and their actual applications in business organizations. Access to tools supporting knowledge management is indeed a determinant of modern management, which fully fits into the process-oriented research stream.

The research hypothesis that the quality of knowledge is positively influenced by the technical infrastructure available in organizations, including IT tools, knowledge bases and repositories, has been confirmed.

Closely related to the human, the non-technical aspect was the third factor singled out in the analysis; namely, employee satisfaction—the awareness that their knowledge is used in a proper and exhaustive way that allows them to experience fulfillment with work. This indicates the need to focus not only on tools, but also on management processes themselves, with employees at the center of considerations. The findings of this study have several important implications for managers in contemporary organizations to measure the knowledge quality in knowledge management processes and initiate successful practices within their projects.

Some limitations of the conducted research need to be acknowledged at this point, and they concern our examining of a specific group of respondents who were representatives of both local and international companies. Future research into knowledge management quality may want to draw on a larger sample and on issues related to the use and the actual impact of technical infrastructure on knowledge management processes. The issues discussed in this paper require further in-depth theoretical and empirical studies.

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