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A CONCEPTUAL MODEL OF ASSESSMENT OF KNOWLEDGE TRANSFER TO CONSUMER

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Abstract. Due to changing needs of knowledge consumers in the context of globalization organizations find it important to search out the way of effective application of the process of knowledge sharing and distribution in their activity in order to create and/or select proper means of communication with consumers on purpose of effective satisfaction of their knowledge needs. In order to address the problems of such nature it is important to assess the process of knowledge transfer and consumer purchase, knowledge needs, knowledge transferred to meet of consumer needs, channels and means of knowledge transfer. Also, to select purposefully channels of communication with consumers and tools of e-marketing that are suitable for satisfaction of consumer needs, i.e. channels and tools that affect self-determination of consumer to take a decision to acquire a product or service of specific organization.

Keywords: knowledge management, knowledge transfer, conceptual model.

JEL Classification: M1, M3, D83.

1. Introduction

When the society transforms from information society to knowledge society this leads to change of external environmental conditions, information and knowledge needs of consumers and this also leads to changes in communication of organizations with target consumers.

In context of transformations a significance of knowledge management, as an effective tool of increase of efficiency of activity of public management institutions and business organizations in communication with target consumers is based on the fact that it is not enough to manage traditional resources by organizations seeking to develop and maintain their uniqueness that could not be quickly comprehended by other organizations. Not only effective management of knowledge inside the organization becomes an

important aspect but also communication of organization with target consumers: how to choose proper tools of communication with consumers in order to meet their knowledge needs without spending much money.

How to effectively manage the existing knowledge and to transfer it without spending much money when there are limited resources, how purposefully communicate and select tools of communication with consumers. The problems of such nature are systematically analysed in disciplines of knowledge management and Marketing and can be implemented through procedural model of knowledge management that forms a cycle of processes and forms a chain of knowledge value development.

In this case knowledge management is a purposeful and systematic management of knowledge processes, methods and tools in order to make a full use of knowledge potential for communication with target consumers.

The purpose of the article is to develop a conceptual model of assessment of transfer of organization's knowledge to consumer that makes assumptions to assess a process of knowledge transfer and consumer purchase, knowledge need, knowledge transferred to meet consumer needs, channels and tools of its transfer, to purposefully select channels of communication with consumers and tools of e-marketing that are suitable for satisfaction of consumer knowledge needs in order to meet the changing consumer knowledge needs that influence self-determination of consumer to make a decision to acquire a product or service of organization.

The research methods applied for the study are as follows: analysis of scientific literature, the principles of multi-criteria assessment method.

2. Importance of knowledge sharing and distribution in communication with consumers

2.1. The concept of knowledge sharing and distribution

How to manage the existing knowledge effectively, to develop new knowledge and to transfer it, what obstacles and difficulties are faced, what are the managing methods, factors, assessment criteria. The problems of such character are systematically analysed by scientists (knowledge management system) and implemented through procedural model of knowledge management (knowledge management processes) that forms a cycle of processes and forms a chain of development of knowledge value.

A cycle of knowledge management in the scientific literature consists of particularly different processes of knowledge management (Wiig 1993; Meyer, Zack 1996; Bukowitz, Williams 2000; Rollett 2003; Awad, Ghaziri 2004).

Wiig (1993) presents such processes of knowledge management as development, acquisition, selection, transformation, distribution, application of knowledge and realization of value.

Meyer and Zack (1996) distinguish such processes of knowledge management as acquisition, improvement, preservation, distribution and presentation of knowledge.

Bukowitz and Williams (2000) analyse such processes of knowledge management as receipt, use, training, distribution, assessment, development of knowledge and refusal from it.

Rollet (2003) distinguishes the following processes of knowledge management: planning, development, integration, organising, transfer, preservation and assessment of knowledge.

Awad and Ghaziri (2004) distinguish recording, organising, improvement and transfer of knowledge.

Agarwal, Islam (2014, 2015) who analysed and studied processes of knowledge management of different scientists (Wiig 1993; Meyer, Zack 1996; Bukowitz, Williams 2000; Awad, Ghaziri 2004) claim that a cycle of knowledge management is the evolving process that starts from acquisition of necessary knowledge resources and lasting until their proper use. Scientists who have summarized results of other researches present eight processes of knowledge management: development of knowledge; acquisition of knowledge; accumulation of knowledge; organising, perfection, transformation and storage of knowledge; dissemination, transfer of and access to knowledge; learning and application of knowledge; assessment of knowledge and realization of value; a repeated application or transfer of knowledge (Agarwal, Islam 2014, 2015).

Other scientists distinguish a complex spectrum of components of knowledge management that determines effective solutions of knowledge management: processes and sub-processes of knowledge management, systems of knowledge management, mechanisms and technologies of knowledge management, infrastructure of knowledge management (Becerra-Fernandez *et al.* 2004).

The processes of knowledge management are described as those helping to find, identify, share knowledge and to apply it, and are divided into processes of new knowledge finding, identification of existing knowledge, knowledge sharing, application of knowledge.

Probst, Raub and Romhardt (2000) offer an integrated system of knowledge management designed to manage knowledge resources. Such system is based on the following processes of knowledge management: determination of knowledge purposes, identification, acquisition, development, sharing of knowledge and its distribution, application, preservation, assessment (Probst *et al.* 2000).

A process of knowledge sharing and distribution is closely related to processes of knowledge development (internal knowledge) and acquisition of knowledge (external knowledge) since existence of knowledge is the essential condition in this stage as well the fact that knowledge must be timely transferred to right individuals or knowledge must be accessible when necessary. This process facilitates speeding up of performance

of organization's functional activities and quality of work as not only good practice or factors of success but also lessons learned that help avoid repeating mistakes are transferred. Thus, not only knowledge is shared, but it is also possible to contribute to the process of its preservation in organization. It is necessary for executives to understand what knowledge and to what individual must be distributed or restricted. Financial, organisational problems, personal problems of employees, technological and legal problems are usually faced in this process.

Financial problems are associated with the fact that organizations do not always have sufficient financial resources for development and maintenance of infrastructure of knowledge sharing and distribution. In such case efficiency of the process depends only on motivation of employees to transfer knowledge.

Organisational problems are associated with the fact that the existing structures are not fully customized for satisfaction of knowledge needs or knowledge is isolated and can be accessed only by a particular group of individuals. In such way a flexibility of the process of knowledge sharing and a speed to reaction to changes are often lost.

Personal problems of employees are associated with the fact that employees either reluctantly share knowledge for personal aspects (e.g. because of fair to lose influence) or poor motivation aspects, or lack ability to transfer knowledge.

Technological problems relating to incompatibility of information technologies used in organizations (e.g. problems of data transfer due to application of different versions of software).

Legal problems manifest by the fact that knowledge sharing and distribution may be restricted due to confidentiality conditions for executors provided in agreements, threat due to information leak or possibilities of imitation (copying) of other organizations, etc.

A process of knowledge sharing and distribution and assessment of its efficiency is applied for dealing with problems of such nature. It is important in this process not only to know what are the internal and external knowledge, where knowledge is, who possesses that knowledge, but also how to transfer the existing knowledge not only for performance of activity functions but also to meet knowledge needs of consumers. It is important for executives of organization to find ways and tools for formation of favourable culture of knowledge sharing in organization that increases trust and how to motivate employees to actively participate in this process.

Knowledge can be distributed in a centralized way (a fast copying of knowledge to employees of entire organization based on a hierarchical "top-down" principle) or in a decentralized way (development of infrastructures by distributing knowledge according to the need; such development is based on horizontal principle) (Probst *et al.* 2000).

Maryam and Denford (Easterby-Smith, Lyles 2011) distinguish three types of knowledge sharing: exchange of knowledge between individuals; exchange of knowledge between individuals and knowledge storages (e.g. download of report from storage of

documents or improvement of report and keeping in the storage of documents); exchange of knowledge through the existing storages of knowledge.

O'Dell and Hubert (2011) suggest four ways of knowledge sharing: self-service, lessons learned, practice of communities, and transfer of the best practices. These ways are identified by two dimensions: knowledge and the level of its expression (from the expressed to not expressed) and communication, the level of interaction between employees (from low to high) (O'Dell, Hubert 2011).

Self-service is oriented to technological aspect of knowledge management and is associated with an opportunity to access information and encoded knowledge. This way is designed for performance of work activity through dialogues and discussions using a variety of tools, such as intranet, portals, email, the internal system of experts, search tools, etc. Lessons learned make assumptions for employees of organization to record, share, repeatedly use knowledge that is based on the previous experience for implementation of specific processes or projects. This way is designed to avoid previous mistakes, to identify factors of success, correction of behaviour of employees and dissemination of good practice.

Practices of communities are designed for employees of organization having a common goal to transfer experience, insights, a good experience, to learn from each other by sharing knowledge. These communities develop in an informal way.

Young (2012) analyses types of virtual communities and classifies them into practices of communities, micro-communities (knowledge is developed and shared in a small group, a group consists of five to six members) and communities of wisdom (learning using a reflective thinking, dialogues, trust, respect, commitment to innovative and transforming learning in order to achieve an active process of development and sharing of knowledge is promoted), e-learning communities, knowledge communities and network communities (Young 2012).

Winkelen and Mckenzie (2011) distinguish three main reasons why individuals participate in practice of communities: intellectual reasons – development of experience, knowledge of opportunities in organization, perception of different attitudes, improvement of status, increase of influence, sharing of common interests; emotional reasons – satisfaction in helping others, mutual recognition, greater confidence, development of relations; a tool for goal achievement (Winkelen, McKenzie 2011).

Maryam and Denford (Easterby-Smith, Lyles 2011) distinguish the following benefit of practices of communities: reduce a learning curve (new members are allowed to find experts and to find out the rules); reduce corrections (promote searching for products, to perfect and analyse them); increase innovations (develop common interests, test new ideas).

Transfer of the best practices encompasses dissemination of successful demonstrative examples and processes in the whole organization. A value created in this way is elimination of operational gaps of separate structural units of organization, standardiza-

tion of certain global processes and pursuance to unify the activity results of structural units to the same qualitative level.

Adaptation of the best practices in organization may also have certain problematic areas relating not only to a lack of motivation but also with insufficient knowledge of employees seeking to understand a value of the best practice and to use for implementation of goals. Scientists suggest to apply the methods of internal and external comparison (thus conditions of competition are created) and motivation systems to solve these problems.

Winkelen and Mckenzie (2011) distinguish three types of external knowledge sharing: suppliers, alliances, consortia.

Suppliers represent the connections that exist in the supply chain and that are necessary for improvement of business. Alliances represent relations between two organizations in order to reduce costs of organizations for development of new knowledge. Consortium represents relations between organizations in order to use an experience accumulated during supply of products (provision of services) to consumers.

Maryam and Denford (Easterby-Smith, Lyles 2011) suggest two ways of information technologies for distribution and share of knowledge:

– a network model that is focused to process facilitation *a person to a person* by creating links between them;
– a model of resources of knowledge that is focused to electronic exchange of encoded knowledge in computer storages of knowledge.

Many scientists suggest using of hybrid systems, i.e. combinations of human and technological resources and development of network of knowledge (infrastructure) for distribution of knowledge.

2.2. Classification of knowledge

Scientists define knowledge in extremely diverse way and treat it in aspects of various sciences (Psychology, Management, Information, etc.). In opinion of representatives of the science of Psychology, when seeking to perform physical and emotional actions individuals use a memory and perceive the environment through senses. Perception of stimuli of individual is associated with continuous processes of cognition in the brain. Changes in the memory represent the result of cognition. A relation between cognition and action is defined as learning of individual that together with a memory is like a subsystem of cognition. Thus, knowledge of individual is defined as a set of all possible conditions of a memory (possible actions) that diverts a potential of an individual to act.

In opinion of scientists, knowledge can be treated as a resource of organization and must meet the principles of management of resources: presented in a required time and in a proper form, accessible in the required place, meeting the requirements of quality, obtained at the lowest cost. Scientists note that compared to other resources of

organization knowledge has certain attributes of exclusivity: it is intangible and difficult to measure, is characterised by inconstancy; it cannot completely used since a quantity of knowledge increases using it; it cannot be acquired at any time in the market, there is often no other choice but to wait for results; knowledge can be used at the same time for different processes (Wiig *et al.* 1997).

Many scientists present various attitudes ways and aspects of classification of knowledge: by the place of existence (subjective, objective, and social), by a form of expression (expressed, not expressed), by a character (declarative, procedural), by transfer and purpose (general, specific), by the level (individual, group, organization, state), etc.

According to Wiig (1993), for knowledge to be used it must be systematized. The author suggests the following three forms of knowledge: public knowledge (expressed knowledge that is publicly available), a shared expertise (personal knowledge that can be patented) and personal knowledge (not expressed knowledge applied at work and in everyday activity) associated with four types of knowledge: actual (associated with data, assessments, a content of which was checked), conceptual (associated with systems, concepts, perspectives), probable (associated with hypotheses, decisions) and methodological (associated with reasons, strategies, the methods of decision making) knowledge (Wiig 1993).

Zins (2007) states that three types of knowledge are distinguished in traditional epistemology, i.e. practical, cognitional, asserted (bases on statements). Declarative knowledge can be also called an experience based knowledge. A term "experience" is often used together with knowledge and training. Experience as a state (having experience) is a subset that is described by some scientists as empirical knowledge. Experience that is construed as a process (acquisition of experience) is often analysed as a learning process and is identified as empirical training. Knowledge based on experience is closely related to knowledge of individual (subjective feelings, emotions), individual experience of situations and procedural knowledge ("I know how to do"). Employees of organization having knowledge that is based on experience can quickly assess situations, to make proper decisions and initiate actions (Zins 2007).

Knowledge can be assessed according to subjective and objective attitude, the nature of existence and shall be divided in to subjective and objective knowledge (Becerra-Fernandez *et al.* 2004, 2010; Chen 2005; Zins 2007; Kebede 2010).

Subjective attitude is based on the fact that a reality is socially constructed due to interaction with individuals and knowledge is perceived as continuous winnings relating to experience of human (internal world of human, e.g. thoughts) determining a social practice. Kebede (2010) suggests also to distinguish social knowledge that is socially constructed due to interaction with the social environment when individuals accept a certain perception or model of the world (Kebede 2010).

Objective attitude differs by the fact that it does not depend on perception of individual and is focused to the primary categories and conceptions. Knowledge is perceived

as objects or items (external world of individual, e.g. knowledge published in the book, presented to library and stored in electronic medium).

Zins (2007) states that when dividing knowledge into subjective (reflections that are subjective) and objective (like objects, however, this is biased knowledge) an aspect of fairness is ignored. Therefore, this gives rise to many discussions. The scientist suggests to divide in a more accurate manner: to treat objective knowledge as universal (general), collective knowledge (that is present in collective area that is presented in writing or orally) (Zins 2007).

Knowledge by the way and form of expression can be divided into expressed and not expressed knowledge (Polanyi 1966; Nonaka 1994; Nonaka, Takeuchi 1995). Many scientists emphasize that a ratio of not expressed knowledge, compared to expressed knowledge, is greater. Not expressed knowledge forms a basis for emergence of creativity, innovations, uniqueness because it is difficult to imitate and copy by other organizations.

Zander and Kogut (1995), who used the results of studies performed by other scientist, i.e. the study of the aspects of dissemination of innovations performed by Rogers (1980) and the study of classification of knowledge performed by Winter (1987), suggested five dimensions of description of knowledge, i.e. in the level of abilities of individual, group and organization (Zander, Kogut 1995):

- knowledge that can be encoded: related to the level and form of knowledge expression, a possibility to encode and accumulate knowledge using technologies;
- a learned knowledge: acquired during learning and depend on abilities of individual;
- complex knowledge: related while combining competences of different types;
- knowledge belonging to a system: relating to knowledge of experienced employees of organization and its creation;
- knowledge seen in the product: relating to an opportunity to perceive that knowledge, to copy or imitate it by other organizations.

These five dimensions of knowledge are the ways to assess how abilities can be easily transferred and perceived not only by employees of organization but also by other organizations.

Knowledge can be classified as general and specific (also known as exclusive) knowledge according to a number of individuals who use knowledge and a way of transfer (Maier *et al.* 2009; Becerra-Fernandez, Sabherwal 2010).

Specific knowledge can be divided into specific technical (also known as operational) knowledge and knowledge of specific content (Becerra-Fernandez, Sabherwal 2010).

Knowledge can be divided into declarative (e.g. facts) and procedural (e.g. how to work with computer) (Maier *et al.* 2009; Becerra-Fernandez, Sabherwal 2010).

Becerra-Fernandez and Sabherwal (2010) suggest to combine various ways of knowledge classification. For example, procedural knowledge can be expressed and not expressed, or general and specific. The latter, same as declarative knowledge, can be divided into expressed and not expressed, or general and specific knowledge.

Maier, Hädrich and Peinl (2009) have combined various combinations of knowledge classification offered by scientists and have presented four aspects. Knowledge is classified taking into account these four aspects, specifically by a content, organizations, individual, and information technologies.

Knowledge is divided by a content into abstraction (based on facts/specific, scientific/theoretical), transfer (specific and general), and representation (declarative and procedural). Knowledge is divided by organization taking into account importance, suitability (suitable, not suitable), authorization (official, unofficial), security (private, public), and ownership (internal, external). Knowledge is divided by individual taking into account a value (valuable, worthless), comprehension (expressed, not expressed), support (supporting/dominant and not supporting/forming a minority), existence (knowledge, not knowledge). Knowledge is divided by information technologies taking into account accessibility (accessible, not accessible), medium (electronic, not electronic), encoding (to be encoded, not to be encoded).

Maier, Hädrich and Peinl (2009) also suggest to divide knowledge of organization into types by source, accessibility, protection, formality.

Knowledge of higher quality can be identified as erudition, expertise that can be possessed by specialists-experts of a certain field (knowledge of different levels, abilities in professional or training area) and it can be divided into three categories (Becerra-Fernandez *et al.* 2004, 2010): associative, movement skills and theoretical knowledge.

Knowledge can be classified by levels of management of organization and decisions made in that level (Becerra-Fernandez, Sabherwal 2010): strategic, tactical and operational knowledge.

Knowledge can be classified by level into knowledge of individual, group, organization, sector, state, region, etc. Knowledge can be divided by entity that possessed knowledge into knowledge of individual and organization. Knowledge of individual is knowledge of one person. Its control does not necessarily depend on a person and it does not necessarily must be related to a specific content.

Young (2012) analyses a concept of management of personal knowledge by emphasizing assumption of responsibility by individual for development of own personal knowledge. Inter-disciplinary this concept can be defined as integration of a content, methods and strategies of research of existing fields of different studies. Analysis of a concept of management of personal knowledge was started in 2000 by a researcher Cope (2000), and this concept was analysed through the principle of "a head", "a heart" and "a hand": "a head" is associated with cognitive process, "a heart" is associated with

intuition and "a hand" is associated with actions and behaviour (Cope 2000). Later studies were associated with dynamic work environment of individual by motivating an employee to manage personal knowledge and to associate it with organizational needs. Young (2012) connects insights of different scientists related to a concept of management of personal knowledge and presents the concept of a capital of individual's knowledge that encompasses both internal and external aspects (Young 2012).

Internal aspects are associated with a value of inexpressibility of different forms ("I know how to do", it is a high level of awareness of individual, insights, ideas, emotions) that can be shares between the employees of organization. External aspects relate to technologies of Internet network (development of trust networks, interactivity of communities) which facilitate creation of knowledge and help to feel a value of intangibility. The internal and external personal capital helps a knowledge employee to be more productive, creative and innovative and to share ideas and insights with others using interactive and virtual possibilities of Internet technologies. Knowledge of organization is related to a certain content. It is important for organization to connect knowledge of individuals and to use it for management of business processes and creation of a value. Thus, a basis of knowledge of organization is formed when important aspects represent interaction with the members of organization and communication. Organizational knowledge in this context is perceived as a set of all possible actions of organization by including abilities of perception of the environment and reaction to changes. A collective basis of knowledge can be defined as a subset of cognition of a social system (organization). A basis of knowledge of organization consists of knowledge of individuals and a structure of its interaction and organizational culture to share knowledge. Changes in the basis of knowledge of organization are possible through training of individuals or groups, and this makes assumptions to assess environmental changes (e.g. technological) and to react duly (e.g. to improve business processes).

Studies of Ahuj and Novelli (Easterby-Smith, Lyles 2011) that are designed for description of a basis of knowledge integrate three attitudes: cognitive, content, transactional knowledge. Organisational basis is described by researchers as knowledge of organization consisting of:

- knowledge of content on technologies, markets, products (services), consumers, procedures;
- cognitive knowledge as beliefs, models, cognitive systems;
- transactional knowledge how to access knowledge of content or to update it.

A basis of knowledge can be stored in electronic or physical medium and encompass employees, procedures of organization, its well-established order, organisational structures.

Ahuja and Novelli (Easterby-Smith, Lyles 2011) distinguish the following six primary criteria for determination of differences of a basis of knowledge: size, content, certainty, differentiation, integration and consolidation.

A size of a basis of knowledge reflects "how much" organization knows, what are the opportunities of creation of new combinations, potential of innovations, what resources are available to achieve a goal.

A content reflects what organization knows. Certainty shows compliance of informational environment of organization to outside and its reflection in the basis of knowledge of organization of that particular environment because decisions in organization depend on a content of information.

Differentiation shows division of a basis of knowledge into groups and this makes assumptions to facilitate search, specialization and expand them between each other, to divide into innovative activities and to find new ways of activity connection.

Integration reflects opportunities of formation of interfaces for differentiated components.

Consolidation of knowledge shows a degree to what extent it is formal, notable, encoded, expressed in the particular basis of knowledge compared to informal knowledge, i.e. not expressed knowledge. This criterion is associated with ability to learn, perceive or monitor knowledge, ability to copy knowledge of organization taking into account a nature of its expression.

Knowledge can be received and stored in various sources: in memory of a person (individual, group); in products created by a human: in practice, technologies, storages; in organizations: in all organizations (e.g. valuables, norms, culture) in a part of organization (e.g. in a certain unit of business, subdivision), in networks between organizations (e.g. keeping in touch with suppliers, consumers, improving properties of products).

2.3. The factors of assessment of effectiveness of the process of knowledge sharing and distribution

In order to ensure an effective process of information sharing and distribution in organization, it important to identify the factors of assessment of effectiveness of the process of knowledge sharing and distribution. The factors that affect efficiency of the process of knowledge sharing and distribution are analysed by scientists for several decades now. However, there is no general attitude how to objectively determine the factors having the greatest impact on efficiency of this process. The process of knowledge sharing and its components represent a complex and ambiguous object of research. Therefore, different attitudes of scientists regarding the way of identification of the essential factors and their assessment can be found in scientific literature. Based on analysis of scientific literature, the factors that affect efficiency of the process of knowledge sharing can be divided into three main groups (Grant 1996; Connelly *et al.* 2003; Lee, Choi 2003; Becerra-Fernandez *et al.* 2004, 2010; Taylor, Wright 2004; Cabrera *et al.* 2006; Hartini *et al.* 2006; Sun, Hao 2006; Claver-Cortés *et al.* 2007; Mariano, Casey 2007; Aujirapongpan *et al.* 2010; Wang, Noe 2010; Allameh *et al.* 2011, 2012; Ansari,

Khadher 2011; Noor, Salim 2011; Shafia *et al.* 2011; Ansari *et al.* 2012; El-Den 2012; Krishnaveni, Sujatha 2012; Wu, Zhu 2012; Naaranoja, Uden 2013; Raudeliūnienė *et al.* 2016): individual, organizational and technological factors.

Individual factors represent a group of factors that determine efficiency of knowledge sharing. This group describes a totality of personal qualities of the employees of organization in implementation of the process of knowledge sharing.

Organisational factors represent a prevailing organizational policy, interpersonal interaction of employees, the peculiarities of management that make assumptions to share knowledge accumulated inside and outside the organization.

Technological factors represent a whole of technologies applied in organization that makes assumptions for effective execution of the process of knowledge sharing.

More than 60 primary factors affecting efficiency of the process of knowledge sharing were identified in such way. In order to determine the factors that affect efficiency of the process of knowledge sharing, a multi-criteria and expert assessment was performed in 2013 (Raudeliūnienė *et al.* 2016).

Experts from partial integrated groups of assessment factors have distinguished individual (0.39) and organisational factors (0.32) as the most significant group. Whereas technological factors (0.29) were distinguished as those that are less significant for efficiency of a process.

A level of benefit in knowledge sharing perceived by employees (0.14), practical experience of employees (0.13), communicational skills of employees (0.12), importance of the processor knowledge sharing perceived by employees (0.12) were identified by scientists as the essential primary factors of assessment in the group of individual factors. A degree of self-expression of employees (0.06), age of employees (0.06) and occupancy of employees (0.05) were identified as the least significant factors. Assessment of employees (0.11), dynamics of staff turnover (0.10), a team work (0.09), control measures (0.09) were identified as the most significant primary assessment factors in the group of organisational factors. Development of innovations (0.05), organising of work regime (0.05), social networks (0.05), solidarity (0.05) were the least significant primary assessment factors. Adaptation of information technologies for assurance of the process of knowledge sharing (0.19), the system of registration of visit of bases of knowledge (when an administrator has an opportunity to follow a number of login of consumers to the database, the level of knowledge distribution) (0.18), accessibility of information technologies (0.17) were distinguished as the most significant primary assessment factors in the group of technological factors. Administration of databases (0.12), infrastructure of organization (0.11), Internet access (0.18) were less significant factors.

In summary of results of the study of assessment of factors that affect efficiency of the process of knowledge sharing and distribution it can be said that individual and organisational factors are more significant for efficiency of a process compared to

technological factors. Such factors as a benefit perceived by employees in knowledge sharing, a practical experience and communicational abilities were important for experts in the group of individual factors. Mechanisms of assessment of employees, staff turnover and its dynamics and influence on the process of knowledge sharing were the most significant factors in the group of organisational factors that affect efficiency of the process, whereas adaptation of information technologies and opportunities provided by them to share knowledge, bases of knowledge and visit in them and accessibility of information technologies were the essential factors in the group of technological factors.

It is important for leaders of organization to find ways and measures how to motivate employees of organization not only to share knowledge inside organization but also how to find a proper form and ways of expression for efficient transfer of knowledge to target consumers by selecting efficient communication measures to meet ever changing knowledge needs of consumers.

3. The peculiarities of consumer life cycle and the buying process

Interfaces of transfer of knowledge and satisfaction of knowledge need of consumer can be assessed invoking a life cycle of consumers and a process of purchase as the ways and measures that help identify knowledge needs of consumer, goals, time and place and the needs when creating a value both for consumer and organization. Scientists present different stages of state and life cycle of consumer (Payne 1994; Cutler, Sterne 2000; Chaffey, Ellis-Chadwick 2012; Buttle, Maklan 2015).

Payne (1994) presents "a loyalty ladder" where a partner is the top state of consumer. Therefore, stages according to strength of relations with organization are set from bottom to top, i.e. a stage of the weakest relations in on the bottom whereas the stage of the strongest relations is at the top: partner is someone who has the relationship of a partner switch you; advocate is someone who actively recommends you to others, who does your marketing for you; supporter is someone who likes your organization, but only supports you passively; client is someone who has done business with you on a repeated basis but may be negative, or, at the best, neutral towards your organization; customer is someone who has done business just once with organization; prospect is someone who you believe may be persuaded to do business with you.

Cutler and Sterne (2000) present a life cycle of five stages: reach – refers to potential to gain attention of your target audience; acquisition – customer participation is the goal; conversion – turning of consumer into purchaser or achievement of a goal established; retention – encouragement to make repeated purchases or conversions; loyalty – intellectual or emotional affection of consumer.

Chaffey and Ellis-Chadwick (2012) present a consumer life cycle of four stages in which attention is focused not on states of consumer but on sequence of actions of organization in order to achieve a lifetime value of consumer: select – selection of a

target group of consumers; acquire – acquisition of consumers, an activity during which relations are established with target consumers and as result conversion happens; retain – retention of consumer, assurance of repeated purchases from the same consumer; extend – expansion of the range of products acquired by a consumer.

Buttle and Maklan (2015) describe a life cycle of consumer as transformation of states of consumer representing a course of consumer transformation from "consumer who has never purchased (suspect)" to "advocating consumer (advocate)" where an advocating consumer is the consumer state pursued by organization. A life cycle of consumer consists of stages in which the relation consumer-organization, the need for information and an effect differ:

- suspect: a consumer that meets the attributes of a target audience;
- prospect: a consumer that meets the attributes of a target audience and who has demonstrated intentions to acquire a product and having possibilities for that;
- first time customer: a consumer who has acquired the product for the first time;
- repeat customer: a consumer who has repeatedly acquired a product (a consumer not yet gets affiliated with organization in this phase and organization plays a minimum role in portfolio of a consumer);
- majority customer: a consumer selects organization as a supplier that occupies an important place in the consumer mind;
- loyal customer: a consumer becomes "resistant" to alternative offers and selection of other supplier and a strong positive position is formed in regard of a supplier;
- advocate: in this stage a consumer is not only in the state of a complicated switch to alternative suppliers but can also recommend an organization, a product or a brand and to argue on a content.

In summary of the analysed stages of consumer state and a life cycle, the following essential peculiarities of these stages could be mentioned: the stages of relations of consumers with organization dominate from unknown consumer (this is identical to absence of any relation with organization) to a strong relation with organization that is expressed by states of loyalty, advocacy and partnership. These states of consumers represent an aspiration in the context of maintenance of relations with consumers in order transfer of knowledge to consumers would be associated with development of a positive experience of consumers on purpose of achievement of as favourable states of consumers in terms of loyalty as possible.

Life cycles of consumers are divided into two parts, i.e. stages of a cycle prior to the first acquisition and stages of a cycle after acquisition. Thus, knowledge in regard of a life cycle of consumer can be divided into knowledge that influence self-determination to buy and knowledge influencing continuity of relations with organization. And should be emphasized that knowledge influencing continuity consist of knowledge and experience obtained prior to the first purchase, obtained after purchase and during cycles of repeated purchases.

The analysed life cycles of consumer make assumptions to provide the need for and purpose of information and knowledge as one of the measures during development of relations of organization and consumers. However, they do not make assumptions to identify and assess the nature of required knowledge in every stage of a life cycle of consumer and the ways of knowledge transfer. Therefore, the need to form a conceptual model of assessment of knowledge transfer to consumer that would make assumptions to assess in a complex way the consumer knowledge needs, to perform a detailed analysis of consumer transformation in every stage of consumer purchase, occurs.

Kotler *et al.* (2001), Laudon and Traver (2013) present five stages of consumer purchase: occurrence of the need to search for information, assessment of alternatives, a decision to purchase and behaviour of consumer after acquisition of the product (service) of organization.

Chaffey and Ellis-Chadwick (2012) expand the purchase process up to six stages: problem recognition, information search, evaluation, decision, action and post-sale.

Laudon, Traver (2013) emphasizes that consumer behaviour after acquisition of a product is identical to loyalty. It should be emphasized that the first model of consumer purchase represents purchase of high inclusion products.

In the stage of occurrence of the need (identification of problem) a consumer is affected by various internal and external stimuli realises the need to change the existing (unsatisfactory) situation to a desired situation. Stimuli consist of various factors of macro and micro environments. Factors of macro-environment are associated with social, cultural, technological and economic stimuli. In the micro-level this can be executed through marketing activity of organization expressed through elements of a marketing complex.

In the stage of search for information a consumer takes certain actions to acquire a required knowledge.

In the stage of assessment of alternatives analysis and assessment of alternative decisions takes place.

In the stage of decision to purchase decisions relating to selection of a place and proper ways to acquire a desired product are formed.

In the stage of behaviour after purchase is experience of a consumer relating to the purchase process and post-purchase service of consumer. These aspects may lead to repeated purchases, selection of organization to be the main supplier, loyalty and patronage or advocacy of organization.

In every stage of consumer purchase it is important to meet the knowledge needs of consumer in a timely manner and at the right place. Knowledge acquired makes assumptions for consumer to properly assess alternatives, to compare particular parameters of products and to take a proper decision. When assessing knowledge needs in every stage

of purchase processes it is possible to distinguish the following stages of knowledge: knowledge that helps to recognise as problem; knowledge that helps understand alternatives of problem solving and criteria and indicators of assessment of alternatives; use of knowledge for assessment of alternatives; knowledge relating to implementation of purchase; knowledge about use of product; knowledge that is necessary for formation of behaviour after purchase.

In order to assess opportunities of transfer of knowledge by Internet it is expedient to analyse the existing measures of interaction with consumer or online communication.

Internet communication tools are classified into: website, email, instant messaging, search engines, online forums, online chats, streaming media, social networks, blogs, RSS, podcasting, wikis, music and video services, internet telephony, video conferencing and telepresence, intelligent personal assistants and other (Chaffey, Ellis-Chadwick 2012; Laudon, Traver 2013; Davidavičienė *et al.* 2017; Oze 2017; Radu *et al.* 2017; Luo *et al.* 2017).

Analysis of measures and their properties make assumptions to state that measures of online communication can be selected depending on information transferred and a type of knowledge, a form of information and the selected way of transfer. It is also important to have regard to consumer priorities in terms of use of measures for communication. Since there exist many and various measures of online communication and this requires a complex assessment by selecting the most suitable measure for a specific case, for this reason, the ways and models of their selection can serve as objects of further studies.

4. Assumptions of assessment of knowledge transfer to consumer

Based on results of scientific studies completed a conceptual model of assessment of effective knowledge transfer to consumer consisting of the following main stages was prepared: (1) assessment of consumer need for knowledge and evaluation in which process of purchase a consumer is; (2) assessment of a type of knowledge required by consumer; (3) assessment of channels of knowledge transfer; (4) assessment of target e-market measures of communication with consumers (Fig. 1).

In the stage of assessment of knowledge needs of consumer organization assesses what are knowledge needs of consumer in every stage of a purchase process, i.e. what knowledge is required by consumer in every stage of a purchase process in order a consumer could move to the next stage of a purchase process. The determined knowledge need of consumer in every stage of a purchase process is the result of this process.

Knowledge needed by consumer and it types are assessed during the process of assessment of a type of knowledge needed by consumer in order to meet his needs. The determined type of knowledge needed by consumer is the result of this process.

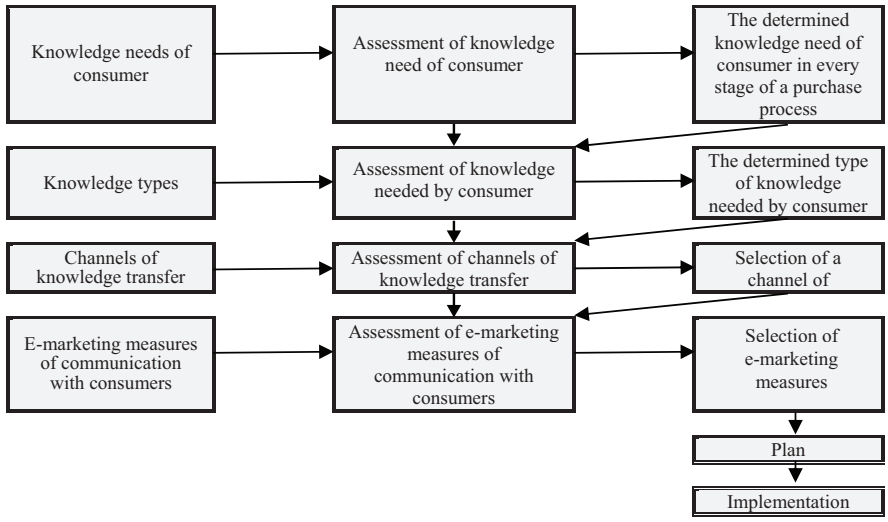

Fig. 1. A conceptual model of assessment of knowledge transfer to consumer (created by authors)

In the stage of assessment of the channels of knowledge transfer organization, having regard to preferences expressed by consumer, assesses channels of knowledge transfer and selects a channel that is the most suitable for transfer of the identified type of knowledge.

In the stage of assessment of e-marketing measures of communication with consumers' organization, having regard to peculiarities of communication measures and adaptability for different channels of knowledge transfer and for satisfaction of knowledge needs of consumer, selects purposeful e-marketing measures for transfer of knowledge.

After selection of purposeful e-marketing measures of communication with consumer a plan is prepared and organization moves to the stage of implementation of the plan.

Since assessment of knowledge need of consumer, assessment of knowledge needed by consumer, assessment of channels of knowledge transfer, assessment of e-marketing measures of communication with consumers are characterised by complexity of assessment and a variety of factors, it is suggested to apply multi-criteria assessment methods for assessments, i.e. the methods that form a part of a group of decisions making and make assumptions for a complex assessment of processes of knowledge transfer to consumer and to take decisions relating to improvement of this process.

The offered effective conceptual model of assessment of knowledge transfer to consumer makes assumptions to take the following steps when applying the methods of decision taking: to assess in a complex manner knowledge needs, knowledge transferred to meet consumer needs, channels and measures of its transfer; to select purposefully channels and e-marketing measures of communication with consumers that are suitable for satisfaction of knowledge needs of consumer; after effective satisfaction of knowledge needs by consumer he should move to the next purchase process.

5. Conclusions

In order to effectively meet changing knowledge needs of consumers in different stages of consumer purchase, it becomes important to analyse a process of knowledge sharing and distribution, types of knowledge and factors affecting efficiency of a process of knowledge sharing and distribution. When an effective process of knowledge sharing and distribution exists in organization, it is assumed that employees will be motivated to transfer the required knowledge to consumers of organization in order to meet their knowledge needs and to create conditions for consumers to move from one purchase process to another and finally to motivate a consumer to acquire a product (service) of organization.

Existence of knowledge and the fact that knowledge must be timely transferred to required individuals or that knowledge must be accessed when necessary from the essential condition in the process of knowledge sharing and distribution. This process forms conditions for increase of a speed of execution of functional activity of organization and a quality of work. In order a process of knowledge sharing and distribution would be effective in organization, it is important to identify the factors of assessment of efficiency of a process of knowledge sharing and distribution. Based on analysis of scientific literature, the factors affecting efficiency of a process of knowledge sharing can be divided into three main groups: individual, organizational and technological factors. A benefit of knowledge sharing perceived by employees, a practical experience and communicational skills are the essential factors distinguished in the group of individual factors. Mechanisms of assessment of employees, staff turnover and its dynamics and influence on a process of knowledge sharing are the most significant factors in the group of organisational factors. Whereas adaptation of information technologies and opportunities provided by them in knowledge sharing, bases of knowledge and visits in the bases of knowledge as well accessibility of information technologies are important factors in the group of technological factors.

A completed theoretical analysis of a life cycle of consumers revealed that a life cycle of consumers can be divided into consumer relations with organization prior to the first purchase and after it. It was also determined that loyalty, advocacy and partnership are to be achieved states of relations of organization with consumers. In order to analyse in more detail transfer of consumer to first time customer in the life cycle of consumer, the analysis of a purchase process of consumer was performed. This analysis revealed that knowledge distributed to consumer can be conditionally divided into knowledge that influences the first purchase and knowledge that influences continuity of relations. The latter also encompasses knowledge received from the first purchase.

After having assessed abundance and variety of measures of communication that are available online and their properties, it was concluded that the following factors must be considered when selecting the measures for transfer of knowledge: a type of knowledge transferred and a form of information provision, the way of knowledge transfer,

consumer preference and needs. Selection of measures of knowledge transfer by Internet serves as an object of further studies in order to create models and ways of selection of measures for knowledge transfer.

A model of knowledge transfer to consumer that makes assumptions to assess knowledge needs in a complex way by applying the methods of decision taking, knowledge transferred to meet consumer needs, channels and measures of its transfer was formed; to select purposefully channels and e-marketing measures of communication with consumers that are suitable for satisfaction of knowledge needs of consumer; after effective satisfaction of knowledge needs by consumer he should move to the next purchase process.

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